# PROJECT COMPILATION REPORT

*2015*

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नेपाल सरकार
कृषि विकास मन्त्रालय
राष्ट्रिय कृषि अनुसन्धान तथा विकास कोष
सिंहदरवार प्लाजा, काठमाडौं

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मिति :

# FOREWORD

Need-based and demand-driven agricultural research and development are crucial for sustainable agricultural development. Realizing this, the technological and knowledge gap among Nepalese farmers with respect to various dimensions of agriculture should be addressed properly taking into account of our huge agro-ecological diversity and diverse potentialities. In this context, the National Agricultural Research and Development Fund (NARDF) is adding some efforts to fight against poverty and improve the agricultural sector by implementing research, development and mixed projects through competitive grant system.

NARDF has mandate to seek proposals from governmental and nongovernmental organizations, cooperatives, academic/educational institutions, private sector, civil society and community based organizations, who are interested in contributing to the agricultural research and development of Nepal. NARDF focuses on action/adaptive researches and collaborative/partnership development for result oriented outcome aiming to achieve tangible results within a period of maximum of three years. in support of national goals and priorities.

NARDF, since its inception in 2001, has so far provided financial support for the implementation of 252 Research, Development and Mixed Projects through various implementing organizations and/or development partners directly to the concerned beneficiaries. Out of these, 160 projects have been completed so far under various calls up to the ninth. The remaining 92 projects are ongoing. From the 12$^{th}$ call, a total of 98 out of 507 Project Concept Notes (PCNs) have been selected and are undergoing through remaining selection procedures. NARDF has also introduced the Thesis Grant Program under its funding umbrella mainly targeting the Post-Graduate level research students. Up to now 218 thesis grants have been awarded.

An attempt has been made in this report to provide some introductory notes, summary and progress status of those projects that are under implementation. I believe this publication will provide useful information about various NARDF funded projects. I would like to thank all the Project Coordinators who have timely submitted their progress reports for incorporating their project-related information in this publication. I would also like to thank all the Officers of NARDF, Mr. Keshab Adhikari, Mr. Ishwari Pd. Neupane, Mr. Ashok Kumar Yadav, Mr. Sirish Pun, Mr. Bhismakanta Ghimire, Mr. Madhav Dhakal, Mr. Ganesh Pd. Dhakal, Mr. Umesh Nepal, Accountant Mr. Uddav Lamichhane, Junior Technician Ms.Gita Kafle and Computer Operator Mr. Samir Gautam, who contributed from their parts in the publication of this report. It is my humble request to all concerned readers for your kind perusal of this report with critical views, comments and suggestions so that betterment could be done in the future.

.....
(Suresh Babu Tiwari)
Member Secretary, NARDF
July 2015

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# INTRODUCTION

In the context of the current worldwide wave of achieving goals relating to agricultural research and development programs by increasing the participation of the governmental, private and non-governmental sectors and the civil society through the Competitive Grant System (CGS), it has become imperative in our country also to give momentum to the overall development of the agricultural sector by launching action/applied agricultural research and development programs through the private sector, the non-governmental community, the academic institutions and the civil society, in addition to the governmental sector.

In exercise of the power conferred by Section 3 of the 1986 Working Fund Act, the Government of Nepal has established National Agricultural Research and Development Fund (NARDF) on 10 December, 2001, with the objective of carrying out functions aimed at contributing to the development of the agricultural sector by distributing its financial resources on the basis of the competitive grant system open to all development stakeholders and partners. Presently, NARDF is a government entity under the Ministry of Agriculture Development supporting and promulgating the CGS initiative which was started by HARP twelve years back. The main thrust of NARDF is to familiarize the CGS concept to a wider level of heterogeneous clients/development partners scattered all over Nepal. The CGS philosophy is to ensure the participation of the private sector, cooperatives, the non-governmental community, the community-based organizations and the civil society in planning and investment activities, increase their involvement in the tasks of diversifying and promoting the agricultural research and development sector and bringing about coordination in agricultural research, extension and training activities.

NARDF aims to promote a demand-driven and pluralistic approach, providing grants that are designed to uplift the standard of living of Nepalese farmers while at the same time it believes in capacity building of the participating institutions and those of the end- users. Thus, a call for proposals is advertised in daily newspapers each year and the award is based on a transparent process of selection through independent review by the professionals. The major steps of project selection are as follows:

- NARDF calls for project concept notes (PCNs) within the NARDF thematic and priorities areas.
- PCNs are pre-screened by NARDF Secretariat to check whether the minimum set of criteria are fulfilled.
- PCNs are forwarded to Peer Reviewers for reviewing and evaluation.
- Comments and recommendations on PCNs received from Peer Reviewers are compiled systematically and presented to the Technical sub-committee (TSC) by the Secretariat.
- TSC goes through the PCNs received from Peer Reviewers and submits to the Fund Management Committee (FMC) for approval along with recommendations.
- FMC makes the final decision regarding PCN acceptance.
- Successful applicants whose PCNs are accepted are notified by NARDF Secretariat and they are asked to submit the Full Project Proposals (FPP) within a set deadline.

- The FPP received by NARDF from the applicants follows the same cyclic process as that of PCN before the final decision is made for awarding of the Grant.
- Following the award of Grant, the successful Project Proponents (in NARDF's case, Institution head and Project Coordinator) signs the Official Project Agreement Paper on behalf of his/her institution with the NARDF Secretariat.

The advertisement for the NARDF first call was made on 2059/6/25 in National Daily newspapers Gorakhapatra and Kantipur as well as in the NARDF official website (www.nardf.org.np). The total number of Project Concept Notes [PCNs] registered in this first call were 174 out of which 116 were rejected during the prescreening phase by the NARDF secretariat. The remaining 58 PCNs were forwarded for review to the independent peer reviewers in order to pass by the process of selection as mentioned above. Out of these 58 PCNs, only 19 PCNs were accepted for submitting full proposal. Finally, fifteen (15) projects were approved for implementation. These projects are already completed.

The second call was made on 2060/6/10 in National Daily Papers Gorakhapatra and Kantipur as well as in the website of NARDF. There were altogether 277 PCNs registered in second call, out of which 65 PCNs were rejected during the prescreening phase by NARDF secretariat. The remaining 212 PCNs were forwarded to the peer reviewers for review process and only 71 PCNs were selected for submitting the Full Project Proposal (FPP). Out of these 71 full proposals, 23 projects were approved for implementation. Out of these 23 projects, two projects were merged into one, and one project was terminated without completion. So, only 21 projects of the second call were implemented. All these 21 Projects are already completed.

The third call for the PCN was made on 2061/7/12 in the National Daily Gorkhapatra and NARDF website. A total of 380 PCNs were registered in NARDF secretariat for project bidding. Out of 380 PCNs, 293 were forwarded to the peer reviewers for review after 87 PCNs were rejected during the pre-screening phase. A total of 72 PCNs were accepted for submitting the FPP out of which 68 FPPs were finally received and send to the peer reviewers for further reviewing. Among the 68 FPPs only 21 FPPs were finally approved for funding. All the 3rd call projects are already completed.

Likewise, the fourth call for the PCN was made on 2062/11/17 in the National Daily Gorakhapatra and NARDF website. A total number of 300 PCNs were registered by different proponents in NARDF Secretariat before the deadline, out of which, 39 PCNs have to be rejected after pre-screening process and the remaining 261 PCNs were forwarded to the peer reviewers for review. Out of the 261 PCNs, 80 PCNs were accepted for submitting the FPP. But only 77 FPPs were registered in the secretariat. With the same way of reviewing process as in the case of PCNs, only 26 FPPs were finally selected for funding. All the $4^{th}$ call projects are also completed.

The advertisement for the NARDF's fifth call was publicly announced on 2064/03/22 in National Daily Gorakhapatra as well as in the official website of NARDF. A total number of 266 PCNs were registered in NARDF Secretariat. After going through the prescreening phase and reviewing process a total of 47 PCNs were selected for developing the FPPs. A total of 45 FPPs were received in the NARDF Secretariat before the deadline, and were further sent to independent peer reviewers for reviewing. Finally, only 18 FPPs were prioritized for funding by the Fund

Management Committee (FMC) of NARDF. Seventeen projects are completed under 5th call and one project has not submitted the completion report.

NARDF 6th Call for Project concept notes was publicly announced on 2065/03/28 and 29 in the National Daily Gorakhapatra. A total of 347 Project Concept Notes were received in NARDF Secretariat. Finally only 28 Projects got approved for funding by the FMC. But one approved projects did not come for agreement. Therefore, total 27 Projects were implemented in 6th call. Twenty five projects of this call are completed and the rest of the projects have not submitted the completion report.

NARDF 7th Call for Project proposals was publicly announced on 2066/03/13 and 14 in the National Daily Gorakhapatra. A total of 362 Project Concept Notes were received in NARDF Secretariat. Finally only 22 Projects got approved for funding by the FMC. But one approved projects did not come for agreement in this call too. Therefore total 21 Projects were funded in 7th call. Ninteen projects of this call are completed and the rest of the projects have not submitted the completion report.

The advertisement for the NARDF's eighth call was publicly announced on 2067/03/24 and 25 in National Daily Gorakhapatra as well as in the official website of NARDF. A total number of 358 PCNs were registered in NARDF Secretariat. Finally only 13 Projects got approved for funding by the FMC. Five projects of this call are completed and the rest of the projects are currently ongoing.

The advertisement for the NARDF's ninth call was publicly announced on 2067/10/4 and 5 in National Daily Gorakhapatra as well as in the official website of NARDF. A total number of 221 PCNs were registered in NARDF Secretariat. Finally only 13 Projects got approved for funding by the FMC. These projects are currently ongoing.

The advertisement for the NARDF's tenth call was publicly announced on 2069/3/28 in National Daily Gorakhapatra as well as in the official website of NARDF. A total number of 437 PCNs were registered in NARDF Secretariat. Out of total PCN only 81 have been selected for full project proposal submission. Finally only 35 Projects got approved for funding by the FMC. These projects are currently ongoing.

The advertisement for the NARDF's eleventh call was publicly announced on 2069/3/6 in National Daily Gorakhapatra as well as in the official website of NARDF. A total number of 420 PCNs were registered in NARDF Secretariat. Out of total PCN only 107 have been selected for full project proposal submission. Out of total selected only 90 full project proposals were registered in the secretariat. Out of registered Full Project Proposals 42 projects were agreed for implementation. These projects are currently ongoing.

The advertisement for the NARDF's 12th call was publicly announced on 2070/3/26 in National Daily Gorakhapatra as well as in the official website of NARDF. A total number of 507 PCNs were registered in NARDF Secretariat. Out of total PCN only 98 have been selected for full project proposal submission.

In the Fiscal year 2064/65 NARDF has taken some new initiatives in the implementation of Small Grants and Thesis Grants Program. The Operating Manual and Guidelines of both the Small and Thesis Grants Schemes are already developed by the NARDF Secretariat. The Small Grants funding scheme is mainly targeted for supporting local/grassroots NGOs and CBOs with a maximum budget ceiling of Five lakhs and the Thesis Grants to Masters' level students who are currently undertaking Post-Graduate studies in the field of agriculture and development, matching with the priority areas of NARDF. In the Small Grants call for proposals a total of 161 FPPs were registered in NARDF Secretariat out of which only 24 projects were finally approved for funding. All the 24 projects are completed. Regarding the Thesis Grants program, altogether 12 Research grants have been awarded to Post-Graduate level students during this fiscal year. After completion of their research work, all these students have presented their findings to NARDF.

In the Fiscal year 2065/66 regarding the Small Grants, a relatively small number (35 FPPs) were received by NARDF – which was precisely targeted for 15 remote districts according to NARDF priority focus for that particular call. Due to the poor quality of proposals received only seven (7) Projects finally got approved for funding, but one project didn't come for agreement. So agreements are done with only 6 projects. All the 7 projects are completed.

In the Fiscal year 2066/67 a total of 20 Post Graduate (M.Sc.) students from Institute of Agriculture and Animal Science, Rampur have been awarded with the Research Grant to conduct their Thesis work. All of the students have presented their findings to NARDF after completion of their research work. In the fiscal year 2067/68 a total of 16 Post Graduate (M.Sc.) and 1Ph.D. students from Institute of Agriculture and Animal Science, Rampur have been awarded with the Research Grant to conduct their Thesis work. All of the 16 MSc students have presented their findings to NARDF after completion of their thesis work and one PhD is remaining. In the fiscal year 2068/69 a total of 24 Post Graduate (M.Sc.) and 1PhD students have been awarded with the Research Grant to conduct their Thesis work. Among them, 16 students have presented their findings to NARDF after completion of their thesis work and 9 thesis works are ongoing. In the fiscal year 2069/70 a total of 27 M.Sc. and 4 PhD students have been awarded with the Research Grant to conduct their Thesis work. In the fiscal year 2070/71 a total of 39 MSc students and 1 PhD students have been awarded with the thesis grants for their thesis work. Among them, 34 students have presented their findings to NARDF after completion of their research work and rests of the works are ongoing. Similarly, in the current fiscal year 2071/72 a total of 57 M.Sc. and 2 Ph.D. students have been awarded from different agricultural institutions.

In summary NARDF has provided financial support for the implementation of 252 Research & Development Projects through various implementing organizations and/or development partners directly to the concerned beneficiaries. Out of these, 160 projects have been completed so far under the first, second, third, fourth, fifth, sixth, seventh and eighth calls. The remaining 92 projects are still ongoing. Up to now 218 thesis grants have been awarded. NARDF is optimistic that the research and development grants of the FUND are being frugally utilized by its development stakeholders and implementing partners in order to leave a lasting and desired impact in the targeted communities where support is most needed to uplift the living conditions/livelihoods of the people.

**SUMMARY STATUS OF NARDF FUNDED PROJECTS UP TO 11TH CALL**

| S. No. | Project No. | Institution Name | Project Title | Agreement Date | Agreement Amount | Project Period | Remarks |
|---|---|---|---|---|---|---|---|
| **1st call projects** | | | | | | | |
| 1. | 23 | Nepal Horticulture Promotion Center, Khumaltar | Improvement in post harvest handling and ripening banana | Nov. 2003 | 2073500 | Nov. 2003-August 2006 | Project completed |
| 2. | 28 | Institute of Agriculture and Animal Science | Development and dissemination of honey production technology | Nov. 2003 | 1721550 | Oct. 2003-July 2006 | Project completed |
| 3. | 41 | Institute of Agriculture and Animal Science | Improvement in the fruits set of brinjal and chilies | Nov. 2003 | 2116000 | Nov. 2003-Nov 2006 | Project completed |
| 4. | 59 | FORWARD | Addressing food security through the identification of farmer preferred crop varieties | Oct.2003 | 2858800 | Oct. 2003-Sept. 2006 | Project completed |
| 5. | 60 | FORWARD | Study on the improvement of productivity and production of oilseed crops | Oct.2003 | 2146800 | Oct. 2003-Sept. 2006 | Project completed |
| 6. | 69 | Agricultural Promotion Center | Shitake mushroom production through entrepreneurship development of hill farmers | Nov. 2003 | 1850988 | Nov. 2003-Nune 2005 | Project completed |
| 7. | 82 | Ecological Service Center | Improvement of veg. Mkt. | Nov. 2003 | 1595463 | Nov. 2003-June 2006 | Project completed |
| 8. | 102 | NARC, ARS Pakhribas, Dhankuta | Identification of Commercial, agricultural opportunities for farmer's. | Nov. 2003 | 1760110 | Nov. 2003-June 2006 | Project completed |
| 9. | 135 | RARS Lumle | Understanding of potential and Critical Constraint of Marketing of Goats in the western Hills of Nepal | Nov. 2003 | 527583 | Nov. 2003-Nov. 2004 | Project completed |
| 10. | 141 | RARS, Lumle | Improving livelihoods of resource poor farmers through on-farm seed priming in western hills of Nepal. | Nov. 2003 | 1067200.00 | Nov. 2003-April 2006 | Project completed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11. | 145 | RARS, Lumle | Increase the income, Nutrition and Food security of Hill Farmer's through Introducing the French Beans. | Feb-04 | 827885 | Feb. 2004-Jan 2006 | Project completed |
| 12. | 148 | RARS, Lumle | Development of technologies for Year-round Production of Cucumber in the Hills of Nepal | Jan-04 | 1864150 | Jan. 2004-Dec. 2006 | Project completed |
| 13. | 155 | ARS, Pakhribass | Development of Nutrient Management Strategiess to Improve the Productivity of Pakhribass Pig | Dec.2003 | 1973837 | Dec. 2003–Sept. 2006 | Project completed |
| 14. | 164 | Out Reach Division, Khumaltar | Promotion of Integrated Wilt Management Technology on Lentil Chick pea and Pigeon Pea. | Nov.2003 | 1519265.00 | Nov. 2003-June 2006 | Project completed |
| 15. | 171 | RCDA | Exploring Formation of Well Organized Cooperativess in Jumia and Dailekh Through Federation of Farmers. | Nov.2003 | 1901806 | Nov. 2003-June 2006 | Project completed |
| | | | | | **25804937** | | |
| **2nd call projects** | | | | | | | |
| 1. | 201 | LAAS, Paklihawa Campus | Improvement of Quality Fruit Production and Postharvest Handling of Banana | March 07-2005 | 2776205 | 2005 March-Feb 2008 | Project completed |
| 2. | 202 | Agricultural Research Center Pakhribas, Dhankuta | Mitigating Poor and irregular germination of large cardamom | March 03-2005 | 1245000.00 | 2005 March-2008 March | Project completed |
| 3. | 203 | Regional Agricultural Research Center Lumle, Kaski | Improvement of commercial production techniques of off season vegetable crops in the western hills of Nepal | March 03-2005 | 1368098 | 2005 March-2008 Feb | Project completed |
| 4. | 204 | ECARDS Nepal | On Farm Evaluation of Evaporative Cool Store for seed potato Storage in Far Western Hills | March 03-2005 | 2627733 | 2005 March-2008 Feb | Project completed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5. | 205 | Aparajita Samuha, Eektapath, Anamnagar | Development of entrepreneurship among women farmers through commercialization of vegetable production for proverty reduction | March 03-2005 | 2615634 | 2005 March-2008 Feb | Project completed |
| 6. | 207 | Agri-Business and Trade Promotion Multi-Purpose Co-operative | Post harvest storage, handling and management of fruits and vegetable crops and seeds. | March 03-2005 | 2706858 | 2005 March-2007 Feb | Project completed |
| 7. | 208 | Group of environment Research and Preservation Nepal | Studies on groundwater contamination by agrochemicals and other anthropogenic sources and its Impacts on Soil and quality of raw foods | March 03-2005 | 2798799 | March 2005-Feb 2008 | Project completed |
| 8. | 209 | Green Research and Technology (GREAT), Baneshwor | Improvement of post harvest handling and marketing system of mandarin oranges in Dhading, Gorkha and Lamjung districts | 20-Nov-005 | 2660370.0 | Nov. 2005-June2008 | Project completed |
| 9. | 210 | IAAS, Rampur, Chitwan | Forage based fattening of male buffalo calves for entrepreneurial meat production. | 21-Nov-005 | 1875507.00 | Jan 2006-Dec 2008 | Project completed |
| 10. | 211 | Regional Agriculture Research Station, Lumle, Kaski | Integrated approach for alleviating infertility problem of dairy cattel in dairy pocket areas of western and central Nepal | Nov 22-2005 | 2179940.00 | 2005 Nov.-2008 June | Project completed |
| 11. | 212 | IAAS, Rampur, Chitwan | Selection and dissemination of elite genotypes of acid lime and hill lemon for off-season production in the hills and terai on Nepal | Nov 21-2005 | 2534715.00 | 2005 Nov. 2008 Oct. | Project completed |
| 12. | 213 | Hicast Sanothimi, Bhaktapur | Entrepreneural goat production system in the mid hills and terai regions of Nepal | Nov 22-2005 | 2716452.00 | 2006 Jan-2008 Dec | Project completed |
| 13. | 214 | Nepalese Farming Institute, Danchhi, Kathmandu | Introduction of High Value Low Volume Cash Crops for Income Generation in Kamali Zone | 12-Jul-006 | 2859680.00 | 2006 July-2009 June | Project completed |

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| 14. | 215 | Regoinal Agriculture Research Station, Lumle, Kaski | Promotion of fine and aromatic rice cultivation in Western Region of Nepal | 28-Dec-005 | 2384315.00 | 15 March 2006-16 July 2008 | Project completed |
| 15. | 216 | Regional Agriculture Research Station, Lumle, Kaski | Commercialization of papaya production through varietal and husbandry practices for increased farm income and nutrition | Nov 21-005 | 1825135.00 | 2006 Jan-2008 Dec | Project completed |
| 16. | 218 | Institute of Agriculture and Animal Science, Rampur Chitwan | Problems assessment and commercialization of cage fish culture in Kulekhani Reservoir and Phewa Lake | Jan 19-005 | 2470344.00 | Feb 2006-Jan 2009 | Project completed |
| 17. | 219 | FORWARD Nepal, Kshetrspur, Chitwan | Promotion of comm.. important Non Timber Forest Products [NTFPs] for enhancing income in the chepang communities in Chitwan District | Jan 09-006 | 2491005.00 | 2006 Jan-2008 Dec | Project completed |
| 18. | 220 | Agriculture Research Station [Fisheries], Pokhara, Kaski | In-situ conservation and production performance of Sahar (Tor Putitora) in different ecological regions in Nepal | Jan 08-006 | 1144152.00 | 2006 Jan-2008 Dec | Project completed |
| 19. | 221 | Agriculture Research Station [Fisheries], Kaski | Livelihood improvement of local fisher and rural community through sustainable lake fishery management by participatory user groups living around lakes of Pokhara Valley. | Jan 08-006 | 1265093.00 | 2006 Jan-2008 Dec | Project completed |
| 20. | 222 | Nepal Environment Protection Center (NEPC), Kathmandu | Improvement on quality of cheese production and development of effective marketing network. | Jan 09-006 | 2382144.00 | 2006 Jan-2008 Dec | Project completed |
| 21. | 223 | National Wheat Research Program, Bhairahawa | Participalory research on resource conservation and farm level mechanization research on resource conservation and farm level mechanization | Jan 09-006 | 2894527.00 | July 2006-June 2008 | Project completed |
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| 3rd call projects | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | 301 | Support Foundation, Mahendranagar | Participatory Varietal Selection and Community based Seed Multiplication of Maize in Darchula District of far western Nepal | 26-May-06 | 2714266.00 | June 2006-May 2009 | Project completed |
| 2. | 302 | National Citrus Research Program, Paripatle, Dhankuta | Improvement of production and quality of Citrus fruits through sustainable soil management practices in the Far-Western Development Region of Nepal | 31 May, 006 | 1745700.00 | Shrawan 2063-Aasadh 2066 | Project completed |
| 3. | 303 | Agricultural Research Station, Pokhribas, Dhankuta | Integrated organic management practices for sustainable orthodox tea production in Dhankuta and Illam districts | 31 May, 006 | 1855333.00 | June 2006-May 2009 | Project completed |
| 4. | 304 | Love Green Nepal, Lalitpur | Participatory Research on Plantation, Establishment of Marketing Channels and Commercialization for High Value Cut Flowers | 31 May, 006 | 2814171.00 | June 2006-May 2009 | Project completed |
| 5. | 305 | Ce CrED Harsandi-5, Parbat | पर्वत जिल्लमा वाला प्रणालीमा समायोजन तथा प्रवर्द्धनद्धारा आय आर्जन र माटोको गुणस्तरमा सुधार परियोजना | 06 June 006 | 2758761.00 | June 2006-May 2009 | Project completed |
| 6. | 306 | SoRDeC, Kushma, Parbat | Income Generation through the promotion of organic vegetable production and marketing in parbat | 14 June 006 | 2858510.00 | June 2006-May 2009 | Project completed |
| 7. | 307 | Institute of Agriculture and Animal Science, Rampur | Promotion of will tolerant superior guava cultivars in Nepal | 27 June 006 | 2146809.00 | June 2006-May 2009 | Project completed |
| 8. | 308 | NORMS Maitideve, Kathmandu | Livelihood improvement project by fresh vegetable production program for deprived people in Kanchanpur Distirct | 22 Aug 006 | 2781450.00 | July 2006-June 2009 | Project completed |
| 9. | 309 | Environmental Preservation Services for Development-Nepal, Parbat | पर्वत जिल्लामा सिमान्त किसानहरुका खेती प्रणालीमा खाद्य सुरक्षाकालागि घास खेती प्रवर्द्धन परियोजना | 22 Aug 006 | 2021775.00 | August 2006-July 2009 | Project completed |

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| 10. | 310 | Nepal Horticulture Promotion Center, Khumaltar | Commercialization of off season vegetables by developing appropriate post harvest technology and marketing linkage | 22 Aug 006 | 2852403.00 | Sep 2006-Aug 2009 | Project completed |
| 11. | 311 | Nepal Horticulture Promotion Center, Khumaltar | Enhancing production and productivity of crucifer vegetables through clubroot management | 22 Aug 006 | 2593542.00 | Sep. 2006-Aug 2009 | Project completed |
| 12. | 312 | ABTRACO, Nepal | Establish, operative and Promote Farmer's advocacy for a for addressing the contempory agricultural development issue and problems | 22 Aug 006 | 2863708.00 | Sep. 2006-Aug 2009 | Project completed |
| 13. | 313 | Agriculture Research Station [Fisheries] Pokhara, Kaski | Homestead fish culture in central and western terai of Nepal for improving household nutrition of deprived | 27 Aug 006 | 1103814.00 | Sep. 2006-Aug 2008 | Project completed |
| 14. | 314 | Agriculture Research Station [Fisheries] Pokhara, Kaski | Development and Promotion of indigenous exotic omamental fish for entrepreneurs of Nepal | 27 Aug 006 | 1887696.00 | Sep. 2006-Aug 2009 | Project completed |
| 15. | 315 | Aquatic Ecosystems and Fisheries Management Consult Pvt. Ltd. | Development of fish and fishery resourch of Madi River and Panchakanya Ghol through participatory mobilization of | 27 Aug 006 | 1630873.00 | Sep. 2006-Aug 2009 | Project completed |
| 16. | 316 | Regional Agricultural Research Station Lumle, Kaski | Improved Food Security Nutirtion and Livelihoods for the poor of Remote Hills through Quality Protein Malze QPM | 28 Aug 006 | 2686708.00 | Sep. 2006-April 2009 | Project completed |
| 17. | 317 | FORWARD, Nepal Chitwan | Management approaches against fruit borer and viral disease of tomato in mid western of Nepal | 28 Aug 006 | 2994538.00 | Dec. 2006-Nov. 2009 | Project completed |
| 18. | 318 | ABTRACO, Nepal | Enhancing crop-livestock productivity and farmers income through integrated soil Fertility and Water Harvesting Technologies | 28 Aug006 | 2496534.00 | Sep. 2006-Aug 2009 | Project completed |
| 19. | 319 | Regional Agricultural Research Station Lumle, Kaski | Participatory Potato production research with the application of integrated soil management practices in Parbat district | 27 Sep 006 | 1733050.00 | Sep. 2006-Aug 2009 | Project completed |

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| 20. | 320 | SEED, Nepal Parbat | Improvement of soil & crop productivity in Parbat District through the adoption of Sustainable Soil Management Practices. | Nov 006 | 2431429.00 | Dec. 2006-Nov. 2008 | Project completed |
| 21. | 321 | Nepal Agricultural Research Council, Singhdurbar Plaza | Darchula by improving the productivity and income from migratory sheep and goats. | 15 Nov 006 | 2916624.00 | Nov. 2006-Oct. 2009 | Project completed |
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| **4th call projects** | | | | | | | |
| 1. | 401 | National Citrus Programme Paripatle Dhankuta | Productivity improvement of citrus fruits through effective fruit drop management | 21 May 07 | 1993295 | June 07-May 2010 | completed |
| 2. | 402 | CIRRUS Consultant Pvt. Ltd. | Socio economic and ecological study on Yarsha Gumba in relation to people's livelihood and high land ecosystem in Dolpa district, Nepal | 21 May 07 | 1907806 | May 07-April 09 | Project completed |
| 3. | 403 | Khotang Development Forum | Improving food security and nutritional status among dalit, women, janajatis and resources poor farmine families of Khotang district | 22 May 07 | 2605627 | June 07-May 09 | completed |
| 4. | 404 | INSAF Nepal, Gurjudhara, Kathmandu | Development and dissemination of vegetable production technologies and market linkage along the Gorkha-Arughat road corridor. | 22 May 07 | 1991679 | June 07-May 010 | completed |
| 5. | 405 | Nepal Horticulture Promotion Center | Quality Improvement, post harvest losses reduction and market linkage of Kamali apple | 22 May 07 | 1997332 | June 07-May 010 | completed |
| 6. | 406 | SAERDeC Nepal Banepa, Kavre | Improving Food Availability Situation of Marginal Farmers by Productivity Enhancement of Barilands . | 22 May 07 | 2580403 | June 07-May 010 | Project completed |
| 7. | 407 | National Potato Development Program | Increasing Productivity of Potatoes through veritication and promotion of True Potato Seed (TPS) Technology | 22 May 07 | 199900 | Sept. 07-Dec. 2010 | Project completed |

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| 8. | 408 | Regional Agriculture Research Station, Lumle, Kaski | Identification and dissemination of ecofriendly seed treatment procedure in rice | May 07 | 994290 | `May 07-April 09 | Project completed |
| 9. | 409 | Rapti Agricultural Graduates Society-Dang | Scaling-up of rhizome management technology on ginger in mid hills of Nepal | 24 May 07 | 999969 | June 07-May 010 | Project completed |
| 10. | 410 | Jute Research Program, Itahari, Sunsari | Participatory quality improvement, low cost technology development, seed production and marketing of Jute.. | 24 May 07 | 2650321 | May 07-April 010 | Project completed |
| 11. | 411 | Agricultural Research Station (Hort.), Dailekh | Increasing availability of source maize seeds in the mid western hills | 24 May 07 | 2478742 | June 07-May 010 | Project completed |
| 12. | 412 | IAAS, Rampur, Chitwan | Identification and upscaling of offseason onlon production in terai and inner terai of Nawalpariasi and Chitwan District. | 09 June 07 | 1999677 | July 07-June 010 | Project completed |
| 13. | 413 | CeCRED Nepal, Parbat | गुल्मी जिल्लाको रिडि तम्घास सडक वरपर आय आर्जनका लागि दीडो भूव्यवस्थापनमुखी व्यावसायिक ताजा तरकारी तथा कोशेवाली बीउ उत्पादन .... | 16 June 07 | 1999118 | July 07-March 010 | Project completed |
| 14. | 414 | SoRdeC, Parbat, Nepal | म्यार्दी जिल्लाका कृषकहरुको लागि आम्दानी बृद्धिका लागि व्यावसायिक तरकारी खेती प्रवर्द्धन | 16 July 07 | 1999872 | July 07-march 010 | Project completed |
| 15. | 415 | Environmental Preservation services for Development, Nepal, Parbat | Income generating through bee keeping and co-operative promotion of marginalized women and poor farmers of Dailekh | 09 June 07 | 1998967 | July 07-June 2010 | Project completed |
| 16. | 416 | Group of Environment Research and Preservation Nepal | Production and Promotion of indigenous vegetables among marginalized farmers in remote VDCs of Chitwan District. | 22 July 07 | 2152752 | July 07-June 2010 | completed |
| 17. | 417 | Innovative Agricultural Inilative Pvt. Lt.d | Promoting adoption of holistic irrigation water management technology in river valley surface irrigation system. | 22 July 07 | 983202 | Aug 07-Nov 08 | Project completed |

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| 18. | 418 | Nepalese Farming Institute Pvt. Ltd. | Domestication of Non Timber Forest Products in Karnali Zone. | 26 July 07 | 2579053 | Aug 07-July 010 | completed |
| 19. | 419 | Nepal Horticulture Promotion Center | Promotion of Off-season onion production for import substitution | 26 July 07 | 1992134 | July 07-June 010 | completed |
| 20. | 420 | Sustainable Development Research Center, Kathmandu | Promoting Wider dissemination of True Potato Seed (TPS) technology in the remote hill districts for enhancing food Security | 3 Aug 07 | 1996032 | Aug 07-March 010 | Project completed |
| 21. | 421 | Voluntary Development Center, Kathmandu | Promotion of Goat Husbandary for income generation among disadvantaged community in sarlahi District | 13 Aug 07 | 2576519 | Aug 07-July 010 | completed |
| 22. | 422 | Outreach Research Division, Khumaltar | Integration of grain legumes in rice and maize based systems for enhancing food security and income generating in river basin and Tars of Central Nepal | 14 Aug 07 | 1725057 | Aug 07-July 010 | completed |
| 23. | 423 | District Agriculture Development office, Rupandehi | Water Utilization in Shallow Tube well area of Rupandehi District | 16 Aug 07 | 2513942 | Sept. 07-June 010 | completed |
| 24. | 424 | Deep Juoti Youth Club, Baglung | Addressing the second-generation problems in plastic house for reducing the poverty of small and poor women farmers of the hills | 22 Sep 07 | 1999660 | Oct. 07-Sept 010 | completed |
| 25. | 425 | Nepal Horticulture Promotion Center | Enhancing Vegetable Production through improved plastic house technologies | 13 Nov 07 | 1997982 | Dec. 07-Nov. 010 | completed |
| 26. | 426 | Agribusiriness and Trade Promotion Multipurpose cooperative (ABTRACO) | Promotion and development of agro-processing enterprises of potential agro-products in Mid-western Development Region for Live hood improvement. | 18 Nov 07 | 2608097 | Dec. 07-Nov. 010 | completed |
| | | **Total expenditure** | | | **51521428** | | |

| 5th call projects | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | 501 | Agricultural Research Institute, Dailekh | Verification and dissemination of off-season onion and annual seed production technology in mid western hills of Nepal. | 8 Jun 08 | 1500750 | jestha 065 Baishak 068 | completed |
| 2. | 502 | FIDHAPA-Lamjung | Increasing house hold income of resource poor farmers through off-season | 13 Jun 08 | 1262697 | 15 July 08-January 011 | completed |
| 3. | 503 | Multi Dimensional for Development | Utilization of Organic Wastes for agricultural production in the urban and periurban area of Chitwan District | 17 Jun 08 | 999965 | July 08- July 010 | completed |
| 4. | 504 | Initiatives for Conservation Reform and Development ICRD | Strengthing Community Based Seed Production and supply system for the measure cereal in Kailali District. | 20 Jun 08 | 1949575 | June 08-May 011 | |
| 5. | 505 | Agricultural interprises Research and Development Center | Organic Manure Production from Waste of Municipality and Agriculture Products Market Center and Utilization in vegetable farming. | 23 June 08 | 999608 | July 08-May 011 | completed |
| 6. | 506 | Himalayan Agro Enterprises and Research Center | Seed Enterprises Development to Increase the supply of Good Quality seed of Cereals and Vegetables in Nepal | 23 June 08 | 1999540 | August 08-July 011 | completed |
| 7. | 507 | Nepal Agro Forestry Foundation | Domestication of High Value Medicinal And Aromatic Plants in the Mountain Region for Improving Rural Livelihood and Env. Con. | 29 June 08 | 1989664 | July 08-June 011 | completed |
| 8. | 508 | Horticulture Research Division, NARC | Mitigation of Cirrus Decline Problem in Western Hills of Nepal through Integrated Management of Huanglongbing Disease | 25 June 08 | 2798525 | July 08- June 011 | completed |
| 9. | 509 | Innovative Agricultural Initiatives Pvt. Ltd. | Enrichment of Biogas Slurry for Production of bio-Organic Fertilizer (BOF) | 30 June 08 | 1890123 | August 08-July 011 | completed |

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| 10. | 510 | Friends for Peace Building and Development (Fir Pad) | Agriculture Based Income Generating Activities for Developing Entrepreneurship among marginalised people in Hilly areas of Chitwan District | 1 July 08 | 1993238 | July 08-June 010 | completed |
| 11. | 511 | Broad vision Research Cxanter & Data Bank Ltd. | Structural Changes and Price Parity in Agriculture | 1 July 08 | 1970000 | July 08-Dec. 09 | completed |
| 12. | 512 | Plant Pathology Division, NARC, Khumaltar, lalitpur | Integrated Management of Yellow Rust Disease of Wheat in Hills of Nepal | 26 Jun 08 | 1999886 | July 08-June 011 | completed |
| 13. | 513 | IAAS, Rampur, Chitwan | Gorwth assessment and development of culture technique of indigenous cold water fish, Asala and scaling up of Rainbow trout | 3 July 08 | 2354395 | July 08-June 011 | completed |
| 14. | 514 | Training & Human Resource Development Centre | Commercial Farming of vegetables and Enterprise development for Income Generation Along the Karnali Highway | 4 July 08 | 1982906 | July 08-Oct. 010 | complted |
| 15. | 515 | Integrated Community Development Movement | Promoting Ecotourism with Yak Biodiversity for Improving Livelihood of the farmers of Dolakha District. | 14 Aug 08 | 1979195 | Aug. 08-Nov. 010 | completed |
| 16. | 516 | National institute for Development, Extension & Research Pvt. Ltd. | Enhancing Competitive Strength of Nepalese Agricultural through Developing Farm Support System | 25 Aug 08 | 951234 | Chaitra 066 Baishak 067 | completed |
| 17. | 517 | FORWARD, Chitwan | Promotion of Community based seed production system and scaling out of farmers preferred crop varities in Eastern and Central Terail of Nepal | 4 Sep 08 | 1998028 | Sept. 08-Aug. 010 | complted |
| 18. | 518 | Institute for policy Research and Development (IPRAD) | Competitiveness of Nepalese Agricultural Products under Multilateral and Regional Trading Arrangements. | 12 Sep 08 | 2396278 | Sept. 08-Aug. 010 | completed |
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| Small grant 1st call | | | | | | | |
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| 1. | 101 | Mahila Uthan Thatha Sip Bikas Kendra | विपन्न वर्गको आय आर्जनको लागि बाखा पालन कार्यक्रम | 064/10/27 | 499810 | 064/11/01-066/02/31 | Project completed |
| 2. | 102 | Hatpate Integrated Development Society | Enhanced Productivity of major vegetables and entrepreneurship of resource poor farmers through participatory off-season fresh veg. production. | 2067/11/1 | 499912 | Feb 08 - Jan 09 | Project completed |
| 3. | 103 | SOrDEC, Parbat | पर्वत जिल्लाको दुर्गम उच्च भेगमा आय आर्जनका लागि दिगो माटो व्यवस्थापन मुखी आलु खेती प्रवर्द्धन र बजार व्यवस्थापन | 2064/11/3 | 499983 | 064/11-066/06 | Project completed |
| 4. | 104 | Lumbini Social Development Center | Improving Livelihood of rural poor farmer's through goat rearing from business development approach service and management of agricultural | 2064/11/3 | 499736 | Feb 08-Jan 09 | Project completed |
| 5. | 105 | सामुदायिक विकास मंच, दोलखा | गुण स्तरिय कृषि उत्पादकत्वको लागि सामुदायिक बीउ बीजन बैंक कार्यक्रम | 2064/11/3 | 499870 | 064/11-065/11 | Project completed |
| 6. | 106 | सामुदायिक विकास श्रोत केन्द्र, भाटखोला स्यागंजना | स्यागंजा जिल्लाको उत्तरी भेगका ३ वटा गा.वि.स.मा दलित वर्ग उत्थानका लागि सहकारी विकास आयोजना | 2064/11/9 | 499126 | Feb 08-Jan 010 | Project completed |
| 7. | 107 | नेपाल बीउ बिजन उत्पादन केन्द्र, टौखेल, गोदावरी | बीउ आलु उत्पादनमा गुणस्तर सुधार कार्यक्रम | 2064/11/9 | 499919 | 065/06-066/12 | Project completed |
| 8. | 108 | ग्रामीण विकास समाज ओखलढुंगा | Establishment of a farmer groups cooperative institution for poor and disadvantage people in Belakhu VDC of Okhaldhunga | 2064/11/9 | 499982 | 065/01-065/12 | Project completed |
| 9. | 109 | मिलिजुली महिला कृषक समूह कावासोती, नबलपरासी | केराबाट विभिन्न खाद्य पदार्थ तयार गर्ने साना उद्योग आयोजना | 2064/11/12 | 487312 | 064/11-066/10 | Project completed |

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| 10. | 110 | Deurali Development and Research Center-Nepal (DDRC) | Farmers Empowerment program through institutional development on Cardamom cultivation in Bhachek Gorkha. | 2064/11/14 | 499983 | Mar 08-Aug. 09 | Project completed |
| 11. | 111 | A warness society for Agriculture Activeness, Gorkha | Income Generation Through Goat Promotion in Gorkha District | 2064/11/14 | 498098 | Mar 08-June 09 | Project completed |
| 12. | 112 | जन चेतना सहकारी संस्था लि. | मैरी पालन व्यवसायबाट स्थानिय स्तरमा कृषि उद्यमशीलता विकास | 2064/11/16 | 499000 | 064/12-066/11 | Project completed |
| 13. | 113 | ग्रामिण कृषि तथा पशु विकास संस्था नेपाल, कपिलवस्तु | सहभागितात्मक एकिकृत कृषि अभ्यास परियोजना | 2064/11/19 | 499686 | 064/12-065/11 | Project completed |
| 14. | 114 | Young Star Club, Solukhumbu | Increasing the good quality seed production of vegetables through the scaling up of seed production technology. | 2064/11/19 | 499943 | Mar 08-Feb 09 | Project completed |
| 15. | 115 | पहाडी क्षेत्र विकास अभियान, जाजरकोट | जजरकोट जिल्लाका कृषकहरुको आयस्तर वृद्धिको लागि व्यावसायिक तरकारी खेती तथा कोशेवाली प्रवर्द्धन कार्यक्रम | 2064/11/19 | 499008 | 064/12-065/11 | Project completed |
| 16. | 116 | Mulberry Nursery Management Centre, Chitwan, Nepal | Development and management of werlculture cooperative in Korak, Chitwan, Nepal | 2064/11/20 | 489900 | Mar 06-Jan 010 | Project completed |
| 17. | 117 | जिल्ला पशु सेवा कार्यालय, लमजुङ | द्यलित तथा पिछडिएका जनजातीको गरिबी न्यूनिकरणका लागि सहकारिताको माध्यमबाट बाखापालन कार्यक्रम | 2064/11/21 | 497000 | 064/12-066/11 | Project completed |
| 18. | 118 | सामुदायिक दिगो विकास केन्द्र रौतहट | Livelihood security through development of Kharuhan technology for Rice cultivation in Rauthat District | 2064/12/5 | 493810 | 065/01-066/04 | Project completed |
| 19. | 119 | जिल्ला कृषि विकास कार्यालय, सप्तरी | Healthy and improved rice cultivation demonstration through farmer's field school at farmers field of Saptari district | 2064/12/6 | 484730 | Mar 08-May 09 | Project completed |

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| 20. | 120 | पद्म दल स्मति प्रतिष्ठान, मूलखर्क, ओखलढुंगा | Income Generation and women empowerment through improved livestock farming | 2064/12/6 | 499200 | Mar 08-Feb 011 | Project completed |
| 21. | 121 | Center for integrated Rural Community Development (CIRMOD) Nepal, Siraha | Program for Marginal and excluded fars in Siraha District | 2064/12/7 | 498000 | Mar 08-Feb 09 | |
| 22. | 122 | Floriculture Development Centre (FDC), Godavari, Lalitpur | Improving flower production and marketing practices of "Mali" community of Janakpurdham | 2064/12/10 | 499696 | 065/01-066/04 | Project completed |
| 23. | 123 | ग्रामिण समाज तथा उत्थान केन्द्र | Livelihood improvement through promoting of deprived and marginalized women participation for mushroom production in Rauthat District. | 2064/12/12 | 499852 | Apr. 08-Sept. 09 | Project completed |
| 24. | 124 | जनता दुग्ध उत्पादक सहकारी संस्था लि. | दलित महिला तथा जनजातीको आर्थिक विकासको लागि प्लाष्टिक घरमा बेमौसमी गोलभेडा खेती | 2065/2/19 | 499990 | 065-03-01-066/5/31 | completed |
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| **Small grant 2nd call** | | | | | | | |
| 1 | 201 | Shree Kushumba Devi Bal Ashram Bardiya | Increasing Farmers Income Through commercial cultivation of Onion and storability improvement of Onion seed bulbs in Bardiya | 2065/10/28 | 488750 | Feb 2009-Aug 2010 | Project Complete |
| 2 | 202 | Khaptad development Committee, Bajhang | Women focused fresh vegetable production & Technologies dissemination program to improve the livelihood of farmers in Luyata & Suveda VDCs | | 499658 | Mar 2009-Nov 2010 | Project Complete |
| 3 | 203 | HRENDC, Mugu | Strengthening community based seed production & scaling up of improved maize varieties in the food deficit and conflict affected areas in Mugu district. | | 499650 | Jan 2009-Oct 2010 | Project Complete |

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| 4 | 204 | HuDEC | गुणस्तरीय वीउ आलु उत्पादन प्रविधि विस्तार कार्यक्रम | | 499919 | Bhadra 2066-Mangsir 2067 | Complete |
| 5 | 205 | RDEPPC, Nepal | वभ्राङ जिल्लामा गरिवी निवारणका लागि माहुरी पालन आयोजना | | 499777 | Baisakh 2065-Baisakh 2067 | Project Complete |
| 6 | 206 | वलिदान जनकृषि सहकारी संस्था लि., रुकुम | रुकुम जिल्लाका कृषकहरुको आयस्तर वृद्धीका लागि खाद्य सुरक्षा जोखिममा परेका क्षेत्रमा राम्रो उपयोगमा नआएका वालीवस्तुहरुको प्रवर्द्धन कार्यक्रम | | 499520 | Asadh 2066-Jeth 2068 | |
| | | | | | **2987274** | | |
| **6th call projects** | | | | | | | |
| 1 | 601 | Institute of Agriculture and Animal Science, Rampur Chitwan | Bionomics of white stem borer of Coffee and development of eco-friendly management practices in farmers field | 066/03/11 | 1998700 | June 09-July 012 | completed |
| 2 | 602 | कृषि बहुउद्देश्यीय सहकारी संस्था लि. कपिलवस्तु | गरिवी निवारणका लागि कपिलवस्तु जिल्लामा साना पशुहरुको सुधारिएको नश्ल आपूर्त आयोजना | June 2009 | 1999879 | Shrawan 2066-Ashad 2068 | completed |
| 3 | 603 | Institute of Agriculture & Animal Science, Rampur | Microbiological assessment of post slaughter practices applied for extending the shelf life of Goat Meat at slaughter and retail market | July 2009 | 2926561 | Jan 2010-Dec 2012 | completed |
| 4 | 604 | TITAN, Kathmandu | Promoting farmers level production and utilization of Biopesticides for vegetable farming. | July 2009 | 986883 | July 2009-June 2011 | completed |
| 5 | 605 | Institute of Agriculture & Animal Science, Rampur | Scaling up of cage-cum-pond integration system of Tilapia/cat fish in cage and carp in pond | | 999900 | July 09 Feb 11 | completed |
| 6. | 606 | Agricultural Research Station Horticulture | Participatory F1 Seed Production and Marketing of Tomato cv. Shrijana thyorough seed Production Groups. | 066/03/22 | 1994000 | Sep. 09-Aug 012 | completed |

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| 7. | 607 | Youth For Sindhuli | Commercial vegetable farming at periurban area and BP highway corridor of Sindhuli District, Nepal | July 2009 | 1996600 | Aug 2009-June 2012 | completed |
| 8. | 608 | कृषि विमा कार्यक्रम | पन्चासेवचत तथा ऋण सहकारी संस्था लि, स्याङ्गजा | 7 July, 09 | 999708 | Sravan 066-Ashad 068 | completed |
| 9. | 609 | CeCred, Parbat | अर्घाखाची जिल्लामा सहकारीको माध्यमद्धारा कृषिजन्य बजार व्यवस्थापन आयोजना | 12 July, 09 | 2997817 | Sravan 066-Falgun 068 | completed |
| 10. | 610 | UNYC, Nepal, Bardiya | Improving the Productivity of Resource poor farmer's pig herds through promotion of genetically improved pig genotypes in Bardiya Districts | July 2009 | 1926000 | August 2009-July 2012 | completed |
| 11. | 611 | National Organization for Millennium Society, Nepal Norms Nepal | Livelihood Improvement of small farmers through promoting of commercial Pointed gourd of odhara Chandini VDC. | 066/03/30 | 998600 | Shravan 066-Kartik 067 | completed |
| 12. | 612 | FORCAST Nepal | Climate Change effects on Rice-wheat system and its mitigation options in terai region of nepal | July 2009 | 2999480 | July 2009-Dec 2011 | completed |
| 13. | 613 | सामूदायिक जनजाति कल्याण विकास परिषद्, महोत्तरी | Improvement of quality Production and Marketing network of Pointed Guard | July 14,09 | 991519 | Sravan 066-Ashad 068 | Complete d |
| 14. | 614 | Central Fish Laboratory, Balaju, Kathmandu | Fish Health management Approaches for the Quality Supply of Rainbow Trout | 066/03/30 | 2875000 | 066/4/1-068/7/30 | completed |
| 15. | 615 | Nepal Environment Protection Centre | Fresh vegetable Production and Developing Agricultural Marketing Network | July 15, 09 | 2852783 | July 09-June 012 | completed |
| 16. | 616 | महिला उत्थान तथा सिप विकास केन्द्र मनहरी मकवानपुर | Smale Scale pig farming for generation of self employment in Makawanpur | 066/04/01 | 1994100 | July 09 March 12 | completed |

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| 17. | 617 | Lumbini Social Dev Centre | Improved Forage based Jersey cattle Rearing Program in Sandhikharka and its adjoining VDC to promote dairy industries | 16 July, 09 | 1979500 | Shravan 066-Ashad 069 | completed |
| 18. | 618 | ENPRED, Nepal | पाल्पा र अर्घाखांची जिल्लामा गुणस्तरीय घाँस खेती बीउ प्रवर्द्धनबाट आय आर्जन सहित किसानहरुको पशुपालन र खाद्य सुरक्षाबाट गरिबी न्यूनीकरण परीयोजना | July 2009 | 1979500 | Shrawan 2066- Falgun 2068 | completed |
| 19. | 619 | Regional Agricultural Research Center RARS Lumle | Scaling up of Sustainable Soil. | 066/4/4 | 999810 | July 09-June 011 | completed |
| 20. | 620 | PWEDO | Development of Agricultural entrepreneurship among Rural Youth for self-employment in Nuwakot | 20 July 09 | 1786813 | July 09-June 012 | completed |
| 21. | 621 | SDRC-Nepal | ग्रामीण कृषकहरुका कृषिजन्य उत्पादनहरुको बजारसम्म पहुँचवृद्धिका लागि कृषि बजारको संजाल | 20 July 09 | 2916006 | Shravan 066-Ashad 069 | completed |
| 22. | 622 | RAADO, Nepal | गुणस्तरिय बिउको सर्वसुलभ आपुर्तिका लागि बिउ बैङ्क कार्यक्रम | July 21, 09 | 1999883 | Shravan 066-Poush 068 | completed |
| 23. | 623 | Quality and Environmental Service Pvt. Ltd. Teku | Implemination of GMP in Selected 3 Dairy Industries. | 066/4/6 | 1999512 | Shravan 066-Kartik 068 | completed |
| 24. | 624 | Environment Conservation and Development Forum, Taplejung | Market Promotion of Large Cardamon Through Quality Improvement | July 23,09 | 1962400 | Aug. 09-July 010 | completed |
| 25. | 625 | Khotang Development Forum | उन्नत बंगुर पालौ महिला रोजगारी र आम्दानी बढाऔं | July 28,09 | 1988133 | Shravan 066-Aasad 069 | Not reported |
| 26. | 626 | Agriculture Research Center, (Fisheries) Pokhara, Kaski | Development of Fisheries Enterprises for livelihood improvement of freed kamaiyas and women along the highway coriidor in far western dev region, Nepal | August 2009 | 1989500 | Sep 2009-Aug 2011 | completed |

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| 27. | 627 | दोलखा दुग्ध उद्योग लि. | दोलखा-सिंगटी-लामावगर सढक दाँया वाँया नमुना गाई पालन सहयोग कार्यक्रम | Jan 2010 | 1998631 | Jan 2010-Dec 2012 | completed |
| | | | | | **53137218** | | |
| **7th call projects** | | | | | | | |
| 1 | 701 | तीन स प्रतिष्ठान, अनामनगर ८१७, काठमाण्डौ । | Management of Degraded Agriculture Land Through Cooperative Lease Farming | Sep 2010 | 2,995,000.00 | Two Years (2067 Shrawan to 2069 Asadh). | completed |
| 2 | 702 | समाज विकास केन्द्र (सोडेक), संखुवासभा खाँदवारी न.पा. १ | Establishment of Resource Centre of Pakhribas Black Pig in Sankhuwasabha District | Sep 2010 | 1,929,760.00 | Sept 10 to Aug 13 | |
| 3 | 703 | Centre for Community Resource and Environmental Development (CeCRED), Nepal | Degraded cultivated land management to improve the Agricultural product and productivity for food security in the Arghankhachi District | Sep 2010 | 2,998,596.00 | 32 Months (2067 Bhadra to 2069 Chaitra) | completed |
| 4 | 704 | ग्रामीण सामुदायिक विकास संस्था, सिराहा | Improving household income and livelihood of rural farmers groups through postharvest handling and processing of HVC in Kusaha Laximiniya, Hanuman nagar pra-dha and Pipra pra-dha VDCs of Siraha district of eastern Nepal | Sep 2010 | 1,996,032.00 | 2 Years (Sep 2010 to Aug 2012) | completed |
| 5 | 705 | महिला उत्थान तथा सीप विकास केन्द्र, मकवानपुर | Women Entrepreneurship Development on Vegetables Production using Value Chain Approach in Makwanpur | Sep 2010 | 1,995,000.00 | 3 Years (Sep 2010 to June 2013) | |
| 6 | 706 | सामुदायिक उर्जा तथा पर्यावरण विकास मञ्च, मकवानपुर | मकवानपुर जिल्लाका दलित महिलाहरुको आय वृद्धिका लागि कुखुरा पालन परियोजना | Sep 2010 | 999,100.00 | 1 & Half Years (Ashwin 2067 to Falgun 2068) | completed |
| 7 | 707 | Rural Society Promotion Center | Promotion of Floriculture (gladiolus and chrysanthemum) for income generation in the Highway Corridor VDCs in Sarlahi | Sep 2010 | 999,316.00 | 2 Years (Sept 2010 to august 2012) | completed |

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| 8 | 708 | विकासका लागि वातावरणिय संरक्षण सेवा, नेपाल | कृषकहरुद्वारा व्यावसायिक रुपमा महको गुणस्तरीय उत्पादन साथै वजारीकरणमा दिगो संजालीकरण परियोजना | Sep 2010 | 2,999,857.00 | 3 Years (Bhadra 2067 to Shrawan 2070) | completed |
| 9 | 709 | Rural Development Centre (RDC), Gorkha | Promotion of Organic vegetable farming and cooperative marketing for income generation in Gorkha District | Sep 2010 | 1,997,981.00 | 3 Years (September 2010 to July 2013) | completed |
| 10 | 710 | Population Women and Environmental Development Organisation (PWEDO) | Conservation of Degraded Agricultural Land and Livelihood Improvement of Marginalised Farmers in Dhading | Sep 2010 | 2,997,947.00 | 3 Years (October 2010 to September 2013) | completed |
| 11 | 711 | कृषि अनुसन्धान केन्द्र, पाखीबास, धनकुटा | Sustainable white grubs management through the use of indigenous entomopathogenic fungi *Metarhizium anisopliae* | 21 Sep 2010 | 999,600.00 | 3 Years (September 2010 to August 2013) | completed |
| 12 | 712 | Practical Solution Consultancy Nepal Pvt. Ltd | Utilization of Organic Solid Waste for Organic Oriented Vegetable Farming in Madhyapur Thimi Municipality Ward no. 3 & 12 | 23 Sep 2010 | 1,986,085.00 | 2 & Half Years (October 2010 to March 2013) | completed |
| 13 | 713 | Peace Society Center, Gaighat, Udaypur | गरिबी निवारणका लागि स्टेभिया प्रवद्धन परियोजना | 23 Sep 2010 | 1,998,355.00 | 2 Years (Kartik 2067 to Ashoj 2069) | completed |
| 14 | 714 | Youth Manpower Mobilisation Center | Commercial Vegetable Farming for Income Generation in Chhinchu-Jajarkot Road Corridor of Jajarkot District | 27 Sep 2010 | 1,997,451.00 | 3 Years (September 2010 to August 2013) | completed |
| 15 | 715 | National wheat Research Program, Bhairahawa, Rupandehi | Conservation Agriculture for Long Term Sustainability, Natural Resource Management and Environmental Protection (CA Project) | 30 Sep 2010 | 1,995,250.00 | 3 Years (October 2010 to September 2013) | completed |
| 16 | 716 | Natural Resource and agriculture Management Center (NaRAM) | Conservation and Promotion of Lulu Cattle: A Pioneer Program in Livestock Improvement and Utilization of Underexploited Livestock Breeds | 1st Oct 2010 | 1,988,200.00 | 3 Years (October 2010 to September 2013) | completed |

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| 17 | 717 | Rastriya Rojgar Prawardhan Kendra, Malangwa-9, Sarlahi | Promotion of Exportable Honey through Beekeeping Enterprise in Sarlahi District | 4th OCT 2010 | 2,996,000.00 | 3 Years (Jan 2011-Dec 2013) | completed |
| 18 | 718 | Janaki Women Awareness Society (JWAS), Janakpur JV | Utilization of River basin for commercial off season vegetable farming in Mahottari, Sarlahi and Rautahat district | 4th OCT 2010 | 2,997,322.00 | 3 Years (October 2010 to June 2013) | completed |
| 19 | 719 | Open Didactic Coterie (ODC) | Uplifting Farmers Income through Organic Oriented Tomato Production Cultivation In Shankarpur, Rajghat and Hajariya VDCs of Sarlahi District | 5th OCT 2010 | 1,966,500.00 | 3 Years (October 2010 to September 2013) | |
| 20 | 720 | Samyukta Mahila Saving and Credit Cooperative, Kahule, Nuwakot | A Small Scale Giriraja Chicken farm development for the supply of quality meat and eggs in Nuwakot district | 6th Oct 2010 | 1,999,997.00 | 3 Years (October 2010 to September 2013) | |
| 21 | 721 | Society for Environment & National Development (SEND) | Management of Infertility in Dairy Animals | Oct 2010 | 999,919.00 | 3 Years (Kartik 2067 to Aswin 2070) | completed |
| | | | | | **4,38,33,268.00** | | |
| **8th call projects** | | | | | | | |
| 1 | 801 | सोनाई विज भण्डार एण्ड सप्लायर्स राजविराज, सप्तरी, | Commercial Seed Production and Entrepreneurship Development | 24th Aug 011 | 1998349 | Bhadra 068 Shrawan 070 | completed |
| 2 | 802 | NARC, Agriculture Research Station, Jumla, | Promotion of Foxmillet and Jumli Simi to Increase Farm Income and Improve Living Standard of Small and Marginal Farmers in Jumla | 30th Aug 011 | 2999630.4 | Aug 011- Aug 014 | Ongoing |
| 3 | 803 | NARC, Agriculture Research Station(Goat), Bandipur, Tanahun, | Promotion of Small Scale Rural Dairy Enterprises through Participatory Verification and Scaling-up of Some Technologies in the Catchment Areas of Private Dairy Industries | 2nd Sept 011 | 989000 | Nov 011 - Oct 013 | completed |

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| 4 | 804 | NARC, Agriculture Research Station Bhagetada, Dipayal , Doti. | Improving Livelihoods of Far Western Mountain People through Increasing Production by Assuring their Access to Improved Technology of Maize and Wheat | 4th Sept 011 | 2996335.8 | Sept 011-Aug 014 | Ongoing |
| 5 | 805 | EVEREST CONSULTANCY , Kupondole, Lalitpur, | Citrus (Mandarin Orange) Orchard Management, Post Harvest Handling and Processing Program at Kusadevi VDC, Kavre | 13th Sept 011 | 199800.05 | Sept 011-June 13 | completed |
| 6 | 806 | Community Development Program, Branch Office, Dailekh, | Commercial Seed Production & Entrepreneurship Development | 14th Sept 011 | 1998565 | 068/6/1 to 070/5/31 | Ongoing |
| 7 | 807 | ग्रमिण दलित तथा कृषि विकास केन्द्र, जटहरा , रौतहट, | Enhancement of carp fish production for livehood improvement and income generation of fisher communities at Dumaria, Jatahara & Rampurkhap cillages in Rauthat District | 15th Sept 011 | 998400 | 1st Aswin-last karkik 2069 | completed |
| 8 | 808 | Multi-dimensional Agriculture for Development (MADE) Nepal, Chitwan, | Improving the Livelihoods of Small Holding Rural HHs through Introduction and Dissemination of Low Cost Rainbow Trout Fish Production Technology in Makwanpur District. | 16th Sept 011 | 999174 | Sept 011-Aug 13 | completed |
| 9 | 809 | Multidimensional Agriculture for Development (MADE) Nepal, Chitwan, | Development of Novel Means of environment friendly Red Ants (Dorylus orientalis Westwood) Management technology in Potato Crop in Makwanpur District, Nepal | 16th Sept 011 | 999316 | Sept 011-Aug 013 | completed |
| 10 | 810 | NARC, Natianal Grain Legume Research Programme, Rampur, Chitwan | Promotion of Grain Legume to Enhance Food Security and Management of Degraded Land in Mid hills of Nepal | 26th sept 011 | 2990400 | Oct 011-Sept 14 | Ongoing |

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| 11 | 811 | NARC, Animal Breeding Division Khumaltar, Lalitpur | Conservation, Utilization and Promotion of Endangered Achhami Cattle | 27th Sept 011 | 1998248 | 07/067 - 06/070 | completed |
| 12 | 812 | NARC, Outreach Research Division, Khumaltar, Lalitpur | Food Security Program in the Mid Western Mountains of Nepal through Promotion of Underutilised Crops of Buckwheat, Naked Barley and Foxtail Millet in Patmara & Tatopani VDCs of Jumla Distrct | 2nd oct 011 | 2990650 | Kartik 01, 068 - Asoj 30,071 | Ongoing |
| 13 | 813 | Nature and human development centre, Birgunj, Parsa | Promotion of low cost and water saving irrigation technologies for enhancing small farmers' productivity | 18th oct 011 | 1998631 | Oct 011-Aug 013 | completed |
| **Total** | | | | | **24156499** | | |
| **9th call projects** | | | | | | | |
| **SN** | **PP** | **Organization** | **Project Title** | **Agreement date** | **Agreement Amount** | **Project duration** | **Status** |
| 1 | 901 | Bhagwati multipurpose Service Center, Deuri Bharua, Saptari | Use of resource saving cultivation practices for sustainable agriculture development. | 1st.Jan. 2013 | Total= 21,07,461 NARDF=19,97,461 | Jan. 2013-Dec. 2014 (2 years) | Ongoing |
| 2 | 902 | CeCRED-Nepal, Parbat | बैकल्पिक सिंचाई प्रणालीको विकासद्वारा व्यावसायिक प्राङ्गारिक तरकारी प्रवर्द्धन आयोजना | | Total= 24,70,221 NARDF=19,97,721 | माघ,२०६९ देखि आषाढ, २०७२ सम्म - २ वर्ष ६ महिना | Ongoing |
| 3 | 903 | Saipal Bajhang Integrated community Environment Preservation and tourism Promotion Service Center, Bajhang | Rural Poultry Farming | | Total = 9,99,315.50 NRADF =9,99,315.50 | Feb. 2013-Sept.2014 (20 Months) | Ongoing |
| 4 | 904 | Technical Training and Research Institute, Kanibahal, Lalitpur | Development of disease management strategy of dairy animals to improve income and livelihood of small holder dairy farmers | | Total=19,98,630.00 NARDF= 19,98,630.00 | Jan. 2013-Dec.2015 (3 years) | Ongoing |

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| 5 | 905 | Lumbini social development center, Arghakhanchi | Improvement on livelihood of resource poor and marginalized farmers of northern arhgakhanchi through organized milk marketing based on value chain approach | | Total= 24,62,000.00 NARDF=19,88,000 | Jan 2013-Dec 2014 (2 Years) | Ongoing |
| 6 | 906 | Janani Gramin Samaj Nepal, Bhotebahal, Kathmandu | विपन्न कृषकहरुको आय स्तर वृद्विका लागि समुदायमा आधारित अन्न बाली र तरकारीको बिउ उत्पादन कार्यक्रम | | जम्मा १९,९९,९३१।०० नार्डेफ १९,९९,९३१।०० | माघ,२०६९ देखि आषाढ, २०७२ सम्म ( २ वर्ष ६ महिना० | Ongoing |
| 7 | 907 | ABTRACO, Battisputali, Kathmandu | Promoting underutilized indegenous common and Tartary Buckwheat production and productivity for food security and income. | | Total= 32,32,353.00 NARDF= 29,82,353.00 | Feb. 2013-Jan.2016 (3 years) | Ongoing |
| 8 | 908 | MADE-Nepal, Bharatpur-9, Chitwan | Community based seed production (CBSP) of maize for food security and householdsn income in Sindhuli district. | | Total=19,94,733.00 NARDF= 19,94,733 | Feb 2013-Aug. 2015 ( 2.5 Years) | Ongoing |
| 9 | 909 | अपराजिता समूह, अनामनगुर काठमाण्डौ | Promoting Commercialization of Vegetables Through value chain for improving living standard of Farmers of Parsa District | | Total=22,04,992.00 NARDF=19,68,483.00 | Jan. 2013-Aug.2015 (2 years 8 months) | Ongoing |
| 10 | 910 | Sustainable Development and research Center-Nepal, kharibot, Lalitpur. | Promotion of agriculture and livestock business practice for women through self-help approach. | | Total= 9,99,186.00 NARDF=9,99,186.00 | Jan. 2013-April 2014 (one year 4 months) | Ongoing |
| 11 | 911 | एकीकृत सामुदायिक विकास अभियान, दोलखा | सामुदायिक वनमा अलैंची खेति प्रवर्धन तथा छिर्के फुर्के रोग नियन्त्रण कार्यक्रम | | Total= 29,62,860.00 NARDF=29,62,860 | माघ,२०६९ देखि पुष, २०७२ सम्म ( ३ वर्ष | Ongoing |
| 12 | 912 | Three S Foundation, Anamnagar, Kathmandu | Value chain approach model development on market promotion of commercial quality vegetable with agricultural residue management through private and cooperative sector involvement | | Total=23,75,000 NARDF=20,00,000 | माघ ,२०६९ देखि पुष, २०७१ सम्म ( २ वर्ष | Ongoing |

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| 13 | 913 | Rural Community Development Service Council, Baluwatar, Kathmandu | Management of degraded agricultutural land in 4 VDCs of Mahottari District. | | Total=33,56,121.00 NARDF=29,99,246 | Feb. 2013-July 2015 (30 months) | Ongoing |
| **Total** | | | | | **19125055** | | |
| **10th call projects** | | | | | | | |
| **SN** | **PP** | **Organization** | **Project Title** | **Project Coordinator** | **Agreement Amount** | **Project duration** | **Status** |
| 1 | 1001 | जिल्ला पशुसेवा कार्यालय डढेलधुरा | Conservation and Promotionof Gaddi Buffalo for Livelihood Improvement of Farmers of Far Western Hills of Nepal | Dr. Jagat Bdr.Nepali | **1998700** | Jan 2014/Dec 2016 | Ongoing |
| 2 | 1002 | Eco Initiatives Kathamandu | समुदायमा आधारित तरकारी (मुला र सिमी) र गहुँबालीको बीउ उत्पादन कार्यक्रम | Mr. Dhurba Neupane | **1999411** | Paush 2070/Jestha 2073 | Ongoing |
| 3 | 1003 | विलसन बहुउद्येश्य सहकारी संस्था लि., गोलवजार सिरहा | Livelihood Improvement Project by Off Season Vegetable Production Program For Deprived People(Poor, Women, Educated and Uneducated, Unemployed Youth) Living Near Mahendra Rajmarg Corridor in Eastern Development Region Of Nepal | Mr. Anil Mahato | **1992134** | March 2014/Feb 2016 | Ongoing |
| 4 | 1004 | ग्रामिण कृषि तथा पशु विकास संस्था नेपाल, कपिलवस्तु | अर्घाखाँची जिल्लामा प्राङगारिक तरकारीको बजारमुखी उत्पादन तथा बजार प्रर्वद्धन आयोजना | विश्व चन्द्र पोखरेल | **1999926** | Poush 2070/Mangsir 2073 | Ongoing |
| 5 | 1005 | Community Development Society, Morang | Improving the Livelihoods of Poor and Marginalized Farmers Through Fresh Vegetable Production in Dhankuta District | Mr. Ganesh Kumar KC | **1995383** | Jan 2014/Dec 2015 | Ongoing |
| 6 | 1006 | सामुदायीक श्रोत तथा वातावरणीय विकास केन्द्र पर्वत | टीमूर, कुरीलो र चिराईतोको दिगो उत्पादन, प्रशोधन तथा बजार व्यवस्थापनद्धारा पर्वतका गोर्ल्याङ क्षेत्रका विपन्न किसानहरुको जिविकोपार्जनमा सुधार | हरिश्चन्द्र सापकोटा | **1999931** | Falgun 2070/Magh 2073 | Ongoing |

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| 7 | 1007 | आपसि सहयोग केन्द्र स्याङ्जा | प्रांगारिक बाली प्रवर्द्धन आयोजना २०७० | रुकुमदत्त शर्मा | **1999995** | Falgun 2070/Falgun 2073 | Ongoing |
| 8 | 1008 | ग्रामिण सामुदायिक विकास संस्था, सिराहा | Promotion of Organic Vegetable Production and Marketing for Income Generation in Siraha District. | Mr. Satya Narayan Shah | **1996032** | March 2014/Feb 2016 | Ongoing |
| 9 | 1009 | त्रिवेणी स्वास्थ्य वातावरण समूह, बैतडि | Enhancing Food Security of Poor Households Through Off Season Vegetable Production and Market Promotion in 3 VDCs of Baitadi District | Mr. Deepak Bhusal | **1999736** | Feb 2014/Jan 2016 | Ongoing |
| 10 | 1010 | पद्धति विकास सेवा केन्द्र, गोरखा नेपाल | Promotion of Quality Protein Maize Seed in Gorkha District | Mr. Prakash Bastakoti | **19,98,988** | March 2014/Oct 2015 | Ongoing |
| 11 | 1011 | ग्रामिण कृषि तथा पशु विकास संस्था नेपाल, कपिलवस्तु | व्यवसायीक बेमौसमी तरकारी उत्पादन आयोजना | दिना वन्दु पौडेल | **1999995** | Chaitra 2070/Falgun 2072 | Ongoing |
| 12 | 1012 | CARE Consultancy Pvt. Ltd., Dhanusha | Commercial Production, Value Chain, and Sustainable Market Development of Ginger in Kavre District of Nepal | Mr. Chan Bahadur Gurung | **19,96,032** | March 2014/Aug 2016 | Ongoing |
| 13 | 1013 | पर्वतफेदी सृजना युवा क्लव बैतडी | Enhancing Livelihood of Poor Farmers Through The Promotion of Sustainble Goat Husbandary | Mr. Shankar Prasad Gaire | **19,99,931** | March 2017/Fev 2017 | Ongoing |
| 14 | 1014 | एग्रो इन्टरप्राईजेज डेभलवमेन्ट सेन्टर, काठमाण्डौ | Promotion of Underutilized Crop Buckwheat for Ensuring The Foof Security and Improving the Livelihood of the Marginalized Farmers | Mr. Hari Prasad Subedi | **2998850** | March 2014/Feb 2016 | Ongoing |
| 15 | 1015 | नेपाल वातावरण अनुसन्धान तथा संरक्षण समुह, काठमाण्डौ | Promotin of Indigenous Yam and Sweet Potato Cultivation to Improve the Livelihood of Poor and Marginalized Chepang Community of Dhading District | Budhiman Shrestha | **2956687** | March 2014/Oct 2016 | Ongoing |

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| 16 | 1016 | Vikash Darpan, Bara | Enhancing the Adaptive Capacity of Farming Communities to the Impacts of Climate Change in Central Terai Region Nepal | Mr. Indra Hari Paudel | **1999931** | March 2014/Feb 2016 | Ongoing |
| 17 | 1017 | ग्रामिण दलित तथा कृषि विकास केन्द्र रौतहट | Promotion of Buffalo Fattening For Commercial Meat Production | Dr. Kamrullah Ansari | **2999931** | March 2014/Feb 2017 | Ongoing |
| 18 | 1018 | Chaudhary Biosis Nepal PVT. LTD, Kathmandu | Income Generation Through Domestication of High Value Medicinal and Aromatic Plant "Patchouli" | Mr. Lok Nath Prasad Pathak | **1989534** | March 2014/Feb 2016 | Ongoing |
| 19 | 1019 | कृषि उद्यम अनुसन्धान तथा विकास केन्द्र, धरान | Enhanching the Commercilization of Goat Farming System By Increasing Goat Meat Production | Mr. Jiwan Kumar Shrestha Shambhu Katwal | **1999990** | April 2014/ March 2017 | Ongoing |
| 20 | 1020 | समाज कल्याण श्रोत विकास केन्द्र पर्वत | सल्यान जिल्लामा प्राङ्गारीक ताजा तरकारी उत्पादन आयोजन | कृष्णमान् श्रेष्ठ | **1999638** | Chaitra 2070/Falgun 2072 | Ongoing |
| 21 | 1021 | श्री जनसेवा यूवा उत्थान केन्द्र, धनुषा | Use of Resource Saving Cultivation Practices For Sustainable Agriculture Development | Mr. Ram Sogarath Mandal | **1994733** | March 2014/Feb 2016 | Ongoing |
| 22 | 1022 | सामाजिक परिचालन समाज, सुर्खेत | Promotion of Indigenous Crops Like fingermillet,Buckwheat and Junilo For Ensuring Food Security and Improving Livelihood Condition of People Of Humla District | Mr. Yadav Sapkota | **2999960** | March 2014/June 2016 | Ongoing |
| 23 | 1023 | नेपाल वातावरण अनुसन्धान तथा संरक्षण समुह, काठमाण्डौ | Improvement in the livelihood status of poor and marginal Farmers Through introduction of Improved Commercial Vegetable Cultivation and Marketing Practices in Gorkha District | Mr. Ishworman Shrestha | **1989859** | March 2014/June 2016 | Ongoing |

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| 24 | 1024 | नेपाल स्कुल परियोजना , काभ्रे | Conservation and Promotion of Local Sweet Potato Production For Food Security and Livelihood Improvement of Smallholder Farmer | Mr. Ganga Ram Yadav | **29,45,577** | April 2014/ March 2017 | Ongoing |
| 25 | 1025 | महोत्तरी दलित जनजाती उत्थान संघ, महोत्तरी | Promotion of Value Chain Approach Based Technology of Oilseed Crop(Sarson and Toria) For Income Generation of Farmers in Mahottari District | Mr. Umesh Mahato | **1999820** | Chaitra 2070/Chaitra 2072 | Ongoing |
| 26 | 1026 | ECARDS Nepal Kathmandu | Development of Organic Pest Management in Peri Urban Agriculture of Nepal | Dr. Chirnjivi Regmi | **1995382** | March 2014/Feb 2017 | Ongoing |
| 27 | 1027 | ECARDS Nepal Kathmandu | Goat Fattening Technology By Introducing Legume Fodder Shrubs *(Tephrosia Candida)* dn Flamingia Macrophylla and Boer Goats | Dr. Shree Ram Prasad Neupane | **1997332** | March 2014/Feb 2017 | Ongoing |
| 28 | 1028 | Community Human Development Centre. Rautahat | Exploration For Value Added Fish Products and Its Small Scale Application in Malahi VDC of Rautahat District For Domestic Consumption and Export Market | Mr. Shiva Narayan Mehta | **998308** | April 2014/ Sep 2015 | Ongoing |
| 29 | 1029 | Natural and Organizational Resource management Services, Kathmandu, Nepal | Enabling Low Income Farmers of Okhaldungha District to Identify and Reduce Climate Change risks by Adaptation Measures. | Mr. Ngamindra Raj Dahal | **22,06,462** | Chaitra 2070/Falgun 2073 | Ongoing |
| 30 | 1030 | दलित उत्थान महिला विकास वालअधिकार नेपाल रौतहट | Verification and Dissemination of Off Season High Value Vegetable Production Technology in Rautahat District | Mr. J.N. Chaudhary | | March 2014/Feb 2017 | Ongoing |

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| 31 | 1031 | भैरवदर्शन सजिवन उर्जा प्रर्वद्धन नेपाल, पाल्पा | Agricultural Mechanization in Mid Hills of Nepal (Halo Sudhar Karyakram) | Mr. Jiwan Gyawali | **1991483.75** | April 2014/March 2017 | Ongoing |
| 32 | 1032 | Agro Enterprises Development Center Kathmandu | Improvement of Rangeland in Mugu for Increasing Livestock Production | Dr. Dharma Raj Giri | **2999246** | April 2014/March 2016 | Ongoing |
| 33 | 1033 | नव प्रभात युवा संघ, गुल्मी | Action Research on Small Watershed Development for Climate Adaption in Gulmi District | Mr. Deepak Lochan Adhikari | **1999930** | Baisakh 2071/Chaitra 2073 | Ongoing |
| 34 | 1034 | ग्रामिण महिला उत्थान केन्द्र, काठमाण्डौ | Promotion of the Underutilized Sweet Potato Crop in Sarlahi District | Mr. Keshav Prasad Shrestha | **2962860** | April 2014/March 2017 | Ongoing |
| 35 | 1035 | ग्रमिण उत्थान बहुमुखि सेवा समिति काभ्रे | Promoting Appropriate Package of practices for commercial goat farming in Kavre District of Nepal. | Mr. Sudeep Humagain | **1997331** | May 2014/April 2016 | Ongoing |
| **11th call projects** | | | | | | | |
| 1 | 1101 | Rural Development Management Services, Nepal (RDMS), Rajbiraj-6, Saptari | Group Managed Sustainable Commercial Vegetable Farming System | Biveka Nand Singh | 2996646 | January 2015 to May 2017 | Ongoing |
| 2 | 1102 | बाल संरक्षण सामुदायिक अध्ययन केन्द्र, जनकपुर ४ धनुषा, नेपाल | नदी कटान क्षेत्रको संरक्षण र उपयोग मार्फत दिगो आयआर्जन तथा कृषि व्यवसायीकरण परियोजना | Ram Bilas Thakur | 1999930 | Magh 2071 To Poush 2073 | Ongoing |
| 3 | 1103 | Hamro Krishi Sahakari Sanstha Ltd, Luyata-2 Bajhang | Commercial Vegetable Production and Marketing for Income Generation | Sundar Gurung | 2999246 | February 2015 To May 2017 | Ongoing |
| 4 | 1104 | Grassroot Mithila (GRAM), Janakpur Municipality, Ward No.11 Dhanusha | Enhancing Capacity of Small Farmers for Commercial Production of Safe and Healthy Onion During Off-Season | Sabitri Baral | 2999506 | January 2015 to December 2016 | Ongoing |
| 5 | 1105 | Mission Nepal Development Management (MNDMS), Rajbiraj-9, Saptari | Commercial Vegetable Production Program in Saptari District | Mr Raj Kant Jha | 2999999 | February 2015 to May 2016 | Ongoing |

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| 6 | 1106 | Rojgar Tatha Sip Bikas Kendra Pvt. Ltd, Birgunj 10 Parsa | Self Employment of Rural Youth Through Commercial Vegetables in Parsa District | Mr. Mahendra Chaudhary | 2999246 | Februaty 2015 To July, 2017 | Ongoing |
| 7 | 1107 | Gramin Vikas Sahayogi Sanstha, Bagbazar Kathmandu | Demonstration and dissemination of Drought and Flood Tolerant Technology for Rice Cultivation in Terai District | Mr. Krishna Bahadur Shrestha | 2999342 | February 2015 To January 2018 | Ongoing |
| 8 | 1108 | Krishi Udyam Prabardhan Tatha Paramarsha Kendra, Kapan-3, Kathmandu | Production of High Quality Seed Potato by Using Pre-Basic Seed (PBS) and True Potato Seed (TPS) in Dolakha District | Mr. Krishna Prasad Paudel | 1999931 | February 2015 to January 2018 | Ongoing |
| 9 | 1109 | Environmental Development Society Birendranagar-10 Surkhet | Seed Production of Stress Tolerant Rice Crop in Context of Climate Change to Enhance Food Security of Deprived Community | Mr. Prabesh Joshi | 1999801 | February 2015 to January 2017 | Ongoing |
| 10 | 1110 | Bidhya Laxmi Trade Enterprises, Baneshwor Kathmandu | Promotion of Modern Irrigation Technology for Commercial Vegetable Production and Income Generation | Mr. Hari Prasad Subedi | 2999246 | February 2015 To May 2017 | Ongoing |
| 11 | 1111 | Gramin Dalit Tatha Krishi Bikas Kendra, Jatahara-3 Rautahat | Achieving self-reliance of Farmers through Sustainable Production, Processing and Marketing of Paddy, Wheat and Lentil Seeds in South Parts of Rautahat District | Mr. Bishnu Pandey | 1996032 | February 2015 To May 2017 | Ongoing |
| 12 | 1112 | Modal Agriculture Cooperative Limited, Sukatiya-1, Kalikot | Production of Potato for Food Security and Income Generation through True Potato Seed For Marginal Farmers of Kalikot District | Indra Dungana | 1999931 | February 2015 to January 2017 | Ongoing |
| 13 | 1113 | Environmental Preservation Services for Development (ENPRED),Nepal Parbat, Kushma | Off-season Tomato production through plastic house Technology in road corridor of Myagdi District | Uttam Panday | 2999116 | February 2015 To May 2017 | Ongoing |

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| 14 | 1114 | Rural Infrastructure and Management Consultancy Pvt. Ltd. Lokanthali, Madhyapur Thimi Municipality, Bhaktapur | Development and Application of Climate Field school model to enable farmers for climate resillient Agricultural Practices in Jhapa District | Dr. Sabin Basi | 1999491 | March 2015 To February 2017 | Ongoing |
| 15 | 1115 | Natural Resources Management and Sustainable Development Program (NRMSDP), Manbhawan-5, Lagankhel Lalitpur | Icome Generation of Farmers through Commercial Vegetable Production in Dhungkharka VDC of Kavrepalanchowk District | Mr. Ravi Kiran Adhikari | 2997714 | February 2015 To January 2018 | Ongoing |
| 16 | 1116 | Bidhya Laxmi Trade Enterprises, Baneshwor Kathmandu | Production, Processing and Marketing of Vegetable Seed | Ms. Bidhya Gautam | 2999936 | February 2015 To March 2017 | Ongoing |
| 17 | 1117 | Jilla Krishak Samuh Sangh, Rajbiraj-5, Saptari | Group Managed Seed Production and Supply System for Rice and Wheat to Enhance Food and Livelihood Security in Saptari District | Bidya Sagar Yadav | 1998955 | February 2015 to May 2017 | Ongoing |
| 18 | 1118 | Directorate of Research and Extension Agriculute and Forestry University, Rampur Chitwan | Promotion of Bio Fertilizer cum Bio-Pesticides for Eco-Friendly Agriculture | Ram Hari Timilsina | 1999648 | February 2015 to January 2018 | Ongoing |
| 19 | 1119 | Technical Training and Research Initiative (TTRI) Khumaltar Lalitpur Nepal | Quality Seed Production of Maize for Increased Food Security in Different Village Development Committees of Lalitpur Distirct | Krishna Kumar Shrestha | 1999995 | February 2015 To December 2016 | Ongoing |
| 20 | 1120 | Population, Women and Environmental Development Organization (PWEDO) 398 Chetana Marg, Tahachal, Kathmandu, Nepal | Improvement in Goat Keeping for Promoting Resource Centre and Livelihood of Disadvantaged Small Farmers in Lamjung District | Dr. Tara Nath Pande | 2999246 | February 2015 To January 2018 | Ongoing |

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| 21 | 1121 | Namuna Krishi Utpadak Tatha Rin Sahakari Sanstha Ltd, Barabis-3, Bajura | Ensuring Seed Security of Rice, Wheat and Maize Through Community Based Seed Production Program in Bajura District | Mr. Dil Bahadur Bista | 1994733 | February 2015 TO September 2018 | Ongoing |
| 22 | 1122 | Rural Education Development Nepal, Gaur, Rautahat | Improvement of Soil Health Through Proven Technology of Rice-Wheat System in Rautahat District | Ramlachuman yadhav | 1999931 | March 2015 to February 2018 | Ongoing |
| 23 | 1123 | Population, Women and Environmental Development Organization (PWEDO) 398 Chetana Marg, Tahachal, Kathmandu, Nepal | Integrating Interventions in Value Chain of Vegetables for Sustainable Economic Growth in Dhading District | Ms. Rama Paudel | 2999896 | February 2015 To January 2018 | Ongoing |
| 24 | 1124 | Population, Women and Environmental Development Organization (PWEDO) 398 Chetana Marg, Tahachal, Kathmandu, Nepal | Development of Commercial Vegetable Production for Improving Livelihood of Marginalized Indigenous Communities of Manahari, Makwanpur | Mr. Jagannath Adhikari | 2999246 | February 2015 To January 2018 | Ongoing |
| 25 | 1125 | Community Consciousness Center (C2C) Gauridanda, Mahottari | Improving the livelihood of Poor Farmer through Taking Up an Integreted Fodder Production and Feeding Management of Goat in Okhaldhunga District | Dr. Riddhi Shrestha | 1993417 | February 2015 to December 2017 | Ongoing |
| 26 | 1126 | Technical Training and Research Initiative (TTRI) Khumaltar Lalitpur Nepal | Adoptation of low cost improved package of practices (Improved technologies) in increasing cow milk production at Panchkhal Municipality, Kavrepalanchowk district | Mr. Shambhu Bahadur Pandey | 1999931 | March 2015 To February 2017 | Ongoing |

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| 27 | 1127 | सामुदायिक स्रोत तथा वातावरणीय विकास केन्द् कुश्मा-१० प्रगतिचोक पर्वत | दिगो भु-व्यवसथापनमा आधारित कृषि प्रणाली प्रवर्द्धन आयोजना अर्घाखाँची | Mr. Birendra Hamal | 1999670 | Falgun 2071 to Ashwin 2074 | Ongoing |
| 28 | 1128 | Nature & Human Development Centre (NHDC), Birgunj-10 Parsa | Uplifting the livelihood Improvement of Farmers of Tangaraha VDC of Rautahat District of Nepal Through Commercial Fish farming | Kalyan K.C. | 1998891 | March 2015 to February 2017 | Ongoing |
| 29 | 1129 | राय बहुकृषि तथा अनुसन्धान प्रा.लि. भीमेश्वर नगरपालिका-१०, दोलखा, नेपाल | पहाडी पोषणयुक्त घाँसेवाली उत्पादन, विक्रि बितरण तथा मासुको लागि उन्नत बाखापालन, विकास र प्रवर्द्धन आयोजना | Shiba Prakash Acharya | 2997947 | 2071/12/01 to 2071/11/30 | Ongoing |
| 30 | 1130 | Socio-economic Development and Research Centre (SODEC), Nepal | Adaptation of Climate-resilierinc rice varieties trough seed multiplecation and marketing for ensuring food security | Tapeshwor Yadav | 1996845 | 2071/12/10 To 2073/12/09 | Ongoing |
| 31 | 1131 | Practical Solution Consultancy Nepal P. Ltd., Madhyapur Thimi Kaushaltar Bhaktapur | seedm ultiplicatioan dm arketinfgo re nsurinfgo od | Dr. Bodh Prasad Parajuli | 1999625 | March 2015 to August 2017 | Ongoing |
| 32 | 1132 | Women Empowerment Mission (WEM), Pigauna-6, Mahottari | Women Empowerment Mission (WEM), Pigauna-6, Mahottari | Dr. Nitesh Kumar Yadav | 1999434 | March 2015 to June 2017 | Ongoing |
| 33 | 1133 | Gadhi Mai Krishi Sahakari Sanstha Limited | Increasing Farmers Income by Potato Seed Production and Marketing | Mr. Dipesh Neupane | 1994733 | March 2015 to February 2017 | Ongoing |
| 34 | 1134 | Agrasar Krishi Sahakari Sanstha Limited (AKSSL), Bageshwori-7, Nuwakot | Pig fattening program for food security and income generation in Nuwakot district | Dr. Shankar Pandey | 2998336 | April 2015 to March 2018 | Ongoing |

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| 35 | 1135 | Nepal Integrated Model Agro Farm Pvt. Ltd, Ugrachandi-1, Nala Kavre | Development of a Model hi-tech vegetable production system for creating economic opportunities to the Unemployed Youth of Kavre district | Kul Dip Ghimire | 2995050 | March 2015 to February 2018 | Ongoing |
| 36 | 1136 | Development Inn Pvt. Ltd, GPO-8975, EPC-2955 Kathmandu Nepal | Generation and Dissemination of irrigation technologies for small holder's high value crops, in Khalte VDC, Dhading | Er. Deepak Lochan Adhikari | 2996647 | Baishak 2072 to Chaitra 2074 | Ongoing |
| 37 | 1137 | Group of Environmental Research and Preservation Nepal (GREP-Nepal), Shamakhusi Kathmandu | Promotion of water harvesting technology for dry season irrigation in peri urban area (Lapsiphedi and Nanglebhare VDCs) of Kathmandu | Ishwar Man Shrestha | 2979754 | April 2015 to November 2017 | Ongoing |
| 38 | 1138 | Community Health and Environment Development Centre, Gongabu, Kathmandu | Promotion of low cost fodder based milk production systems for the livelihood of the smallholder dairy farmers of Kavrepalanchowk district | Dr. Rabin Acharya | 1999931 | Chaitra 2071 to Falgun 2074 | Ongoing |
| 39 | 1139 | Sunkoshi Krishi Farm, Thumpakhar-2 Dhuseni Sindhupalchowk | Integrated Approach for Commercial Goat Production | Dr. Subarna Man Pradhan | 2999757 | March 2015 to February 2018 | Ongoing |
| 40 | 1140 | सामुदायिक स्रोत तथा वातावरणीय विकास केन्द्र कुश्मा-१० प्रगतिचोक पर्वत | जलवायु अनुकुल व्यवसायिक तरकारी खेती प्रवर्द्धन आयोजना | Damodar Pokharel | 1998111 | 2071 Chaitra To 2074 Kartik | Ongoing |
| 41 | 1141 | Gramin Mahila Utthan Kendra, New Baneshwor | Commercial Cauliflower Production and Marketing in Sarlahi District | Ram Sagorath Sah | 2995348 | April 2015 to March 2018 | Ongoing |
| 42 | 1142 | Center for Sustainable Community Develoment Gaur-5, Rautahat | Export Promotion of Lentil (Masuro) Through Value Chain Approach for Income Generation of Small Farmers | Janardan Prasad Yadav | 1994337 | 2071 Chaitra To Falgun 2073 | Ongoing |

# Project Title: "Use of Resource Saving Cultivation Practices for Sustainable Agriculture Development"

**Project No. : 901**

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|---|---|
| ***Project Coordinator*** | Biveka Nand Singh |
| ***Address*** | VDC. Koilari-6, Saptari |
| ***Telephone*** | 931-520729; Mobile- 9804310977 |
| ***Fax*** | - |
| ***Email*** | sbivekanand@gmail.com |
| ***Collaboration/Partners*** | Technical Collaboration with DADO |
| ***Duration of Project*** | 2 years ( Jan.2013- Dec. 2015 ) |
| ***Project Cost*** | NRs. 1,997,461 |
| ***Location of Project*** | VDCs Ko.Madhepura and Deori Bharuwa of Saptari District. |

## Project Summary

The overall aim of the project is to decrease slowly the use of chemical inputs and increase indigenous resource saving inputs- bio-fertilizers and bio-insecticides/pesticides for improving soil and environment quality and income earning capacity of the target beneficiaries. The target beneficiaries shall gain technical know-how on proven indigenous/safe modern technologies through training, demonstration, tour and visit and technical debates/ discussions and through various activities in their active participation at their place during project period. The target group's beneficiaries shall be provided knowledge on capacity building and skill development to prepare and use of bio- fertilizers and bio-pesticides/ insecticides for sustainable agriculture development. High value vegetable crops under resource saving cultivation practices shall be grown to increase income of the beneficiaries. The total estimated budget is NRs.2107461.00. Out of which NARDF contribution will be 1997461.00

## Project's background

Obviously, since last few years, attention is being paid by the agriculturist and the end users of the products to introduce substitutes of chemical inputs and practices of suitable cropping patterns to minimize the loss of soil and environment quality. The project has focused on; ≠ increase in production and use of different bio-fertilizers and bio-pesticides/insecticides. ≠ Improvement in quality of soil and environment of the project area. ≠ slowly decrease in use of chemical inputs ≠ improvement in technical know-how and skills of the target beneficiaries. The income of the target group beneficiaries will increase thrice times and more than the present income after learning appropriate package of practices and growing of high value vegetable crops from the same piece of land. Thus, the target beneficiaries will get opportunity to reduce their poverty level from improved and safe agriculture practices. For these purpose 4 groups each consisting 20 members (a total 80

beneficiaries) shall be formed and mobilized to achieve the outputs of the project. The total estimated budget is NRs.2107461.00. Out of which NARDF contribution will be 1997461.00

## Main purpose/objectives:

The purpose of resource conservation and agro-bio-diversity promotion shall be achieved through application of resource saving cultivation practices. The use of chemical fertilizers and pesticides will be decreased by 40% by the end of FY 2013/14. Transfer of suitable resource saving cultivation technologies through carrying out training and demonstration, interaction and discussion with target groups' beneficiaries and through social mobilization processes. Preparation and use of organic manure, vermin-compost, and bio-pesticides from locally available bio-raw materials, practices of crop rotation, use of crop diversification strategy and crop management practices will serve the purpose of the project. Different approved activities will be carried out in selected two VDCs of Saptari district in time to achieve the purpose of the project.

## Expected beneficiaries:

| Particular | Direct | | Indirect | | Total | |
|---|---|---|---|---|---|---|
| | Household | Percentage | Household | Percentage | Household | Percentage |
| Dalit | 25 | 31.25 | 72 | 36 | 97 | 34.64 |
| Aadivasi +Janjati | 20 | 25 | 35 | 17.50 | 55 | 19.64 |
| Bahun+ Chhetri | 5 | 6.25 | 18 | 9 | 23 | 8.21 |
| Others | 30 | 37.50 | 75 | 37.50 | 105 | 37.51 |
| Total | 80 | 100 | 200 | 100 | 280 | 100 |

## Gender:

| Particular | Direct | | Indirect | | Total | |
|---|---|---|---|---|---|---|
| | Household | Percentage | Household | Percentage | Household | Percentage |
| Female | 40 | 50.00 | 90 | 45.00 | 130 | 46.43 |
| Male | 40 | 50.00 | 110 | 55.00 | 150 | 53.57 |
| Total | 80 | 100 | 200 | 100 | 280 | 100 |

## Objectively Verifiable Indicators (OVIs) Project:

- 80 Farm families (400 beneficiaries) directly and about 200 FF(1000 beneficiaries) will be benefited indirectly.
- Preparation and use of compost and vermi-compost as well as bio-pesticides started by at least 60 farmers for replacing at least 40% chemical fertilizers and pesticides by the end of 2014.
- The cost of production will be decreased by 25% as use of locally available biopesticides and bio-fertilizers for replacing the chemical fertilizers as well as pesticides by the end of 2014.
- Net income of the farmers shall be increased minimum by 25% than of baseline survey by at least 60 farmers through commercial vegetable farming by the end of the project.

- District level stakeholder workshop will help to disseminate the project outputs to the different stakeholders in the district.

## Up scaling pathways

The coordinator and the staffs of the projec will facilitate the target groups to use acquired knowledge and skills and incorporate them for improving their farming pattern using resource conservation technologies for improving soil quality. Collaboration with District Agriculture Development Office (DADO) will help in technical backing of the groups in future. The DADO is also agreed to expand these program activities in other parts of the district; afterwards. Moreover, the proponent being a local organization will be the best means for helping the target beneficiaries and other adjoining beneficiaries through scale up activities even after termination of the project.

## Synopsis of Project Status:

## Targeted Outputs:

### Outputs:

1. Farmers trained and be able of practicing Resource Saving Cultivation (RSC) activities.
2. Soil and environment condition improved through the decreased use of chemical fertilizers and Pesticides.
3. Production and Income of the target farm families increased
4. RSC Technology/practices Disseminated (Scale up)

### Activities Proposed:

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Stakeholders workshop | completed in Feb.2013 | All related stakeholders including the target beneficiaries took active part |
| 1.2 Group formation and mobilization | completed in Dec. 2014 | It was done in harmonic environment throughout the project period. |
| 1.3 Base line survey | completed in March, 2013 | Done smoothly |
| 1.4 Training on resource conservation | completed in March, 2014 | Carried out in time. Presence of participants remained intact in training classes. |
| 1.5 Field tour and visit | completed in May, 2013 | Remained very impressive. Increased interest of the participants in growing vegetable crops. |
| 1.6 Sapling of medicinal and fodder trees distribution | completed in July, 2013 | About 60% saplings damaged because of not proper management done by the beneficiaries. |

| Activities | Activity status | Remarks |
|---|---|---|
| 1.7 Demonstration of Compost making techniques | completed in Dec. 2014 | The target groups learned improved methods of compost making techniques. |
| 1.8 Demonstration of vermi - Compost | completed in July, 2013 | Demonstrated successfully. |
| 2.1 Soil Testing | completed in Nov.2014 | Before implementation and after completion of the project this test was done. |
| 2.2 Field demonstration on chemical vs. organic inputs application | completed in April, 2014 | Carried out for comparative study in situ of the project sites. |
| 3.1 Distribution of vegetable seed | completed in Dec. 2014 | Seeds of different vegetable crops distributed in different cropping sessions |
| 3.2 Support for the preparation and application of bio-pesticides | completed in April, 2014 | Periodically prepared for self-sufficiency in this regard. |
| 3.3 Support for the collection and utilization of livestock urine | completed in April, 2014 | The target beneficiaries have been collecting and utilizing it. |
| 3.4 Interaction workshop on vegetable production and marketing | completed in August, 2014 | Conducted and shared information with the related stakeholders. |
| 4.1 Internal and Joint Monitoring | completed in Dec, 2014 | Periodically done and advised for proper reform where ever necessary. |
| 4.2 Video documentary Preparation | completed in Nov, 2014 | Done during implementation of the project activities. |
| 4.3 District Level Workshop | completed in August, 2014 | Conducted and shared information with the related stakeholders. |
| 4.4 Public auditing (hearing) | completed in Nov. 2014 | Completed in scheduled period |
| 4.5 Publication and distribution of booklets | completed in August, 2014 | 5000 booklets regarding safe and improved cultivation practices have been distributed in related stakeholders |
| 4.6 Report Preparation | Final report is yet to complete. | Within 20 days it shall be completed. |

# Project Title: "Promoting Underutilized Indigenous Common (*Fagopyrum esculentum* Moench) and Tartary (*Fagopyrum tataricum* Gaertn.) Buckwheat Production and Productivity for Food Security and Income"

**Project No: 907 / 2012/2013**

| | | | |
|---|---|---|---|
| ***Project Coordinator:*** | Mr. Raghunath Prasad Sapkota | | |
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| ***Collaborating organisations:*** | • Western Regional Agriculture Directorate, Pokhara and District Agriculture Development Office, Mustang, Palpa and Rupandehi<br>• Hill Crop Research Programme (HCRP), Kabre (NARC),<br>• Regional Food Technology and Quality Control (RFTQC), Bhairahawa, Rupandehi<br>• Himalayan Agri-Business & Research Service Pvt. Ltd. (HARS), Bhairahawa (Head Office, Kathmandu | | |
| ***Start Date:*** | Feb 2013 | ***End Date:*** | Jan 2016 |
| ***Project Cost:*** | 2982353( NARDF contribution) + 250000 (Farmers' contribution) | | |
| ***Location of Project:*** | Mustang (High Hills), Palpa (Mountain) and Rupandehi (Terai) districts | | |

## Project Summary

## 1. Background

An agreement between NARDF and ABTRACO entitled "Promoting underutilized indigenous common (*Fagopyrum esculentum* Moench) and Tartary (*Fagopyrum tataricum* Gaertn.) Buckwheat production and productivity for food security and income" was signed on 14th January, 2013 (2069 Magh, 01 BS) effective from February 2013 till January 2016. Buckwheat has many medical advantages above other crops; it is highly recommended for the diabetes patient. The recipes made from BW are: staple food (Roti thick bread, Pancakes- thin small bread, Dhido- thick porridge) from grains and green leaves are cooked as green vegetable, curry, soup or salad and dry plants. However, the traditional methods of decortications of buckwheat seed is a tedious process, which needs to refined. The recipes of buckwheat are well preferred by the tourist/trackers and a significant quantity of buckwheat is also exported to overseas. The plant residues are used as animal feed and also it is a good honey crop for bees. Foreign tourists also like the recipe of buckwheat as niche food. Farmers are used to eat BW as staple food. Therefore, such a demand driven project has real significance for food security and income generation of the subsistent farmers by producing environmentally safer produce of Buckwheat.

## 1.1 Project Purpose/Objectives

The main purpose of the project is to develop, fine tune and promote appropriate technology of BW for high-hills, mid-hills and inner Terai areas of Nepal:

**The Project aims to focus on:**

- Testing of selected potential local land races and/or recommended cultivars of BW and improved production packages comparing with farmers' practices for different agro-eco zones.
- Capacity building of the clientele farmers, traders, bakeries through required training with participatory involvement in their follow-up field activities involving subsistent farmers especially women of ethnic communities with vulnerable to food security situations.
- Improving crop production technologies and promoting them in the respective localities of the project area with the participatory approach of adaptive research methods and block production.
- Development and promotion of BW recipes in collaboration with bakeries and Department of Food Technology and Quality Control to promote eco-tourism in corresponding site districts and localities along with support of diversified food product recipes from BW combined with other cereals (maize, millet, wheat, barley, etc.)
- Developing mechanism to work with cooperatives for processing, marketing of grains, and processed products.

## 1.2 Beneficiaries

A wide group and large number of people such as small and medium holder poor farmers will be the main beneficiaries in terms of their food security and income generation to sustain their livelihoods. The participation of women, local ethnic and Dalit communities' will be about 50% in the programme. In year one, a total of 40 households (15 in Mustang, 15 in Palpa and 10 in Rupandehi) will be involved in the varietal demonstration and will be benefited directly. In second year, seed multiplication programme will be conducted and a total of 40 households (15 in Mustang, 15 in Palpa and 10 in Rupandehi) will be benefited directly. The members of the participatory agricultural cooperative will also be the direct beneficiaries through strengthening of the buckwheat programmes (3 cooperatives). Similarly, baker's hotelier, restaurant owners specially involved in trekking business will be provided with skill enhancement training on recipe preparation. A total of 30 hh will be benefited from this activity.

## 1.3 Objectively Verifiable Indicators (OVIs)

| Outputs: | Objectively Verifiable Indicator (OVI) |
|---|---|
| 1. Farmers' preferred improved varieties of buckwheat identified for increased production, productivity. | Buckwheat farmers group formed in each project districts (eight groups in three project districts). Demonstration of buckwheat varieties (total farmers 40, Mustang 15, Palpa-15 and Rupandehi-10). Capacity building training on improved techniques (40 farmers), recipe preparation (30 hh). Most potential high yielding varieties identified and promoted (3 varieties each/eco-zone) and sustainable production technology identified and promoted (each for three ecological zones & 40% yield incensement). |

| | |
|---|---|
| 2. Enhanced food value and palatability of buckwheat products | The traditional recipes refined and consumers preferred recipes of buckwheat product developed & disseminated through bakeries & food processing enterprises (4 recipes). |
| 3. Up scaling and marketing of buckwheat improved | Strengthened for buckwheat marketing (one cooperative for each site of ecological zones), hording board (one/district), video film (one), booklets (1000 copies) on buckwheat published/displayed. Results and findings of the project documented and presented in national workshop (district-3, national-1 workshops), public auditing and recommendations for adoption of varieties and technologies submitted to concerned organization (Final report). |

### 1.4 Up-scaling Pathways

During the second year of the project, seed multiplication programme will be initiated in the larger area. Increased production of seeds from identified improved variety will be marketed in the buckwheat production areas of the country. Mass promotion of technology for increasing production supported by seed production technology along with publication and distribution of brochures/posters carried out. Monitoring, Supervision Preview of all proposed activities during implementation phases will be done. Workshop in third year for sharing project outcomes and feedback inputs will be conducted. The final report will be the main reference document of the technologies generated their application. Mass promotion of the potential results through print, videos and electronic media to upscale the findings of the project in similar agro-ecological zones of the country will also be carried out.

## 2. Synopsis of Project Status

**Targeted Outputs:**

i. Traditional recipes refined and consumers preferred recipes developed and disseminated through bakeries and food processing enterprises.

ii. Enhanced food value and palatability of buckwheat products

iii. Up scaling and marketing of buckwheat improved: strengthened buckwheat marketing, results & findings of the project documented, recommendation of adapted of varieties of technologies submitted to the concerned organizations

**Project Status Reports:**

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Identification and selection of improved varieties of buckwheat | Ongoing | The varietal research trials completed successfully |
| 1.1.1 Review of literature of buckwheat, | Completed in February 2013. | Completed successfully |
| 1.1.2 Baseline survey of buckwheat farmer, cost of production of buckwheat with competitive crop | Completed in May 2013. | Completed successfully |

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1.3 Formation of buckwheat farmer's groups, | Completed in September 2013. | Completed successfully |
| 1.1.4 Capacity building training on improved technologies, marketing & recipe preparation | Completed in January 2014 | Completed successfully |
| 1.1.5 Monitoring and evaluation of the programme<br>a) Regular monitoring & evaluation,<br>b) Joint monitoring & evaluation,<br>c) Public auditing | Ongoing | |
| 1.1.6 Identification of improved varieties and technology packages | Ongoing | 3 varieties identified for each project District |
| 1.1.7 Block production of buckwheat for seed multiplication, | Ongoing | |
| 2.1 Development and popularization of palatable recipes as a special niche product of Nepal | Ongoing | |
| 2.1.1 Analysis of nutritional composition of buckwheat and its products. | Completed in May 2015 | Completed successfully |
| 2.1.2 Identification of by- products of buckwheat for potential uses, | Completed in May 2015 | Completed successfully |
| 2.1.3 Collection, documentary of traditional recipes and refining and popularisation of palatable recipes. | Completed in May 2015 | Completed successfully |
| 3.1 Enhancing marketing services | Ongoing | |
| 3.1.1 Awareness creation on buckwheat technology)<br>a) Video-documentary Preparation | Ongoing | |
| 3.1.2 Institutionalized marketing of buckwheat through agricultural cooperatives | Completed in May 2015 | Completed successfully |
| 3.1.3 Organization of workshop to share the findings and experiences<br>a) district workshop | Yet to begin | |
| 3.1.4 Report preparation and submission | Yet to begin | Periodical being prepared to develop final project report |

## 3. Achievements / Findings (in case of research projects)

The activities for two years' have been completed out of the total three project years. During this period, activities like review of literatures on buckwheat, baseline survey with buckwheat farmers in the study districts and identification of improved varieties, institutionalize marketing, recipe preparation and the respective capacity enhancement programs have been successfully completed. Such activities were quite fruitful to understand the initial condition of the buckwheat farming situation in three different representative ecological regions of Nepal and to adopt the suitable research and development packages for promotion of buckwheat enterprise in the study districts.

Mother and baby trials conducted in three different geographical areas have shown different results and wide variation at yield levels have been observed among varieties. Local varieties (V4 and V5 - in trial, coded for: Jharkot Tite, and Mustang local Mithe respectively) are found to be appropriate for promotion in addition to recommended improved varieties: IR 13 (V1) and Ace#2227-1 (V3). In Palpa, with the combined outcomes from mother and baby trial, it can be recommended that all the three improved varieties V1 (IR 13), V2 (Ace#2223-1) and V3 (Ace#2227-1) are suitable for large scale production. Planting time for bitter type (V1 and V2) should be 10-20 days earlier than the sweet type (V1). It has been observed that V1 has shorter maturity days than that of the sweet type variety (Palpa local: V5 at mother trials in Palpa) by 10-15 days. In Rupandehi District, V1 V2 and V3 are recommended for next season planting while the selection of field sites would be important for increased production.

# Project Title: Management of Degraded Agricultural Land in 4 VDCs of Mahottari District

**Project No: 913**

| | | | |
|---|---|---|---|
| ***Project Coordinator:*** | Krishna Raj Aryal | | |
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| ***Collaborating organizations:*** | 1.Mithila Saving and Credit Cooperative<br>2. District Agriculture Development Office<br>3. Radio Appan Mithila Mahottari | | |
| ***Start Date:*** | 02/2013 | ***End Date:*** | 07/2015 |
| ***Project Cost:*** | NRs 3,356,121 (NARDF contribution: NRs 2999,246) | | |
| ***Location of Project:*** | Parsa Pateli, Matehani, Dhirapur and Simardahi VDCs of Mahottari district | | |

## Project Summary

Project entitled **"Management of Degraded Agricultural Land in 4 VDCs of Mahottari District"** is envisioned to benefit 400 targeted households of 4 most affected settlements from the proposed 4 VDCs of the district. The project has envisioned developing 20 demonstration plots for sampling purpose and then rigorous agricultural organic products will be developed. The farmers of the catchments will be trained on the use of organic manure, importance of organic food on health and cropping rotation. The project is planned to be implemented to meet 4 basic objectives as: improving soil fertility for sustainable agricultural practices which ultimately contribute to increase the production, ecological and environmental balance for better livelihood; improving soil status ( Acidic soil will be improved to neutral soil and the availability of macronutrients NPK will be enhanced); Poor/marginalized farmers will realize the importance of yam and sweet potatoes as alternative of rice and wheat and then initiate in the promotion and utilization of the product; and Farmers' achievements and success will be extended through media and other sources for replication in the vicinities of the VDC and district level. The project is being implemented by the formation of 20 demonstration plots where all activities are integrated for the improvement of existing soil condition. A total of 400 farmers are trained on different aspect of soil correction endeavors through formulation of 20 farmers' groups and strengthening them with trainings, workshops, exposure visits, and dissemination of information through local media and publications, and joint monitoring initiatives. Accountability and visibility will be made through hoarding boards and documentary preparation. In addition, farmers' capacity will be enhanced for corrective soil improvements and these initiatives will be replicated in other parts of the districts.

## Background

Mahottari district is one of the least developed districts of the region in terms of agricultural production and productivity. Most of the land in the district has been left uncultivated owing to a number of reasons in which devoid of irrigation facilities and community's poor awareness level regarding the utilization of land are the primary ones. Of the total cultivated land coverage of 62,944 hectare, only 14.83 per cent of the land has the availability of irrigation facility, and the per capita food production is limited. The production of the district merely serves to address the food requirement of total population 646405 of the district (Census, 2011). More than 71,983 households of the entire district rely on subsistence farming. Farmers' economic condition is assessed on the basis of the quality and quantity of the land they possess. Generally, good and fertile land is occupied by richer households of the community and the marginalized farmers own relatively unfertile degraded land.

The soil is found to be degraded day by day and therefore is very necessary to restore soil fertility. The degraded land has been observed to be intensified in Pataili cluster of Parsa Pataili VDC, Bhagawati Tole of Matihani VDC, Bardaha community of Dhirapur VDC and Simardahi Tole of Simardahi VDC. Flooding has become a major cause of land degradation leading to the poor socio-economic condition and the deterioration of the natural ecosystems. The flood sweeps away manure and loamy soil turning the land unproductive with low humus. Apart from the loss of productive top soil, flooding has further damaged the land and water resources due to siltation of dams and deposition of thick and sandy plains of the Terai river. The bed level of Tarai Rivers is rising by 35-45 cm annually (Dent 1984). Similarly, degradation of soil owes to the unbalanced use of chemical fertilizers and very low use of organic manure at the farmlands. As a consequence of which soil micro-organisms gets totally destroyed hence diminishing soil forming process.

Hence, interventions of soil improvement activities are proposed for the implementation in 4 target VDCs. The total households of the 4 VDCs are 3,975 and the total population of the VDCs is 22,419. Among the total households, the specific targeted households of the program are 400 who possess much degraded land in the entire VDC that has been leading to household food insecurity. The cluster taken for piloting of the activities holds the total population of 5,364 with women accounting to 50.44%. Farmers will be highly benefited and the soil fertility will be restored. This way it will help them to increase production and enhance their livelihood.

## Project Purpose/Objectives

Most of the land of Mahottari district has been left uncultivated, is devoid of irrigation facilities and has poor awareness level of community regarding the sustainable utilization of land. Thus, the overall purpose of this perspective project is to improve soil fertility for sustainable agricultural practices which ultimately contribute to increase the production, ecological and environmental balance for better livelihood.

Poor and marginalized farmers will be aware about the negative impacts of the synthetic fertilizers and start adoption of improved soil management technology. Promotion of yam and sweet potato cultivation will have replaced farmers in better utilization of land for better outputs leading ultimately to higher income.

The other purpose is the inclusive facilitation of the farmers for the adoption of locally available resources for improving the physical, biological and chemical properties of soil in sustainable manner for higher production and thus to reduce poverty by uplifting the livelihood of the farmers.

Other objectives of the project are relevant to contribute towards the fulfillment of the objectives of NARDF in national and regional level. The project will find out the condition of the existing soil and will present the ways of appropriate techniques and ideas to improve for sustainable agro production.

## Beneficiaries

The direct beneficiaries the project are 400 farmers selected from the 20 existing farmer groups of the 4 targeted VDCs including 50% female 50% from other groups. The farmers of all the families both men and women take part in the activities of the project during the project period. The participation of women in project activities will be no less than 50%.

## Objectively Verifiable Indicators (OVIs)

### Output 1.

100 farmers' attended in workshop/ campaign and started to adopt different soil management activities where 1 Katha land will be properly managed by each household within the project location.

400 farmers have utilized more organic manures prepared by them which help them to save their money for better purpose and help to improve livelihood.

60 farmers actively participated in model plot establishment and the income will raise by 20% from now which help them to reduce their household poverty and hunger.

400 farmers have incorporated legumes based cropping pattern once a year.

### Output 2.

Total Nitrogen, available phosphorous and exchangeable potash from 80 individual farmer's field including 20 demonstration plots have been increased from low to medium.

### Output 3.

100 farmers will be trained and have promoted yam and sweet potato production instead of rice and wheat at least in 1 Katha land.

### Output 4.

Production and distribution of pamphlets, posters, workshop papers, linkage with outside farmers and farmers groups etc. has contributed extending the findings of the project. The effect of the project will be followed in the periphery of other farmers.

## Up-Scaling Pathways

The project keep farmers in action for the output oriented activities and the utilization of eco-friendly techniques to sustain soil fertility by the operation of intended beneficiaries. The project has envisaged developing 20 demonstration plots with the integration of improved soil management techniques, legumes and cultivation of yam and sweet potato, where 60 farmers are actively involved. Secondly, it contribute to raise the production and income by 20% from now which help them to reduce household poverty. Thirdly, the existing low fertility status will be raised to medium within the project period. Finally, the documentary and publication will be available to know the success story of the project. The effect of the project will be followed in the periphery of other farmers.

## Synopsis of Project Status

### Targeted Outputs

1. Marginalized farmers will be able to understand the reasons of declining production and actively involved in improved soil management practices by adopting different corrective measures.
2. Soil status will be improved (Acidic soil will be improved to neutral soil and the availability of macronutrients NPK will be enhanced).
3. Poor/marginalized farmers will realize the importance of yam and sweet potatoes as alternative of rice and wheat and then initiate in the promotion and utilization of the product.
4. Farmers' achievements and success will be extended through media and other sources.

### Project Status Report

| S.N. | Activity | Activity status | Remarks |
|---|---|---|---|
| 1.1 | Group formation and mobilization | Completed | |
| 1.2 | Project orientation | Completed | |
| 1.3 | Soil sampling and analysis | Completed | |
| 1.4 | Baseline survey | Completed | |
| 1.5 | Training on sustainable soil management | Completed | |
| 1.6 | Farmers' learning center | Ongoing | |
| 1.7 | Training on compost pit construction | Completed | |
| 1.8 | Nutrient support for rehabilitation of soil | Completed | |
| 1.9 | Site selection, soil sampling and soil analysis | Completed | Soil nutrients have been increased than earlier |
| 1.10 | Orientation and execution of demo plot establishment | Completed | |
| 1.11 | Orientation of Vermi composing | Completed | |
| 1.12 | Farmers visit and experience sharing | Completed | |
| 1.13 | Farmers' exhibition of yam and sweet potato produced | Completed | |
| 1.14 | Marketing of yam and sweet potato | Completed | |
| 2.1 | Workshop on the importance of leguminous crops in the cropping pattern | Completed | |
| 2.2 | Training on improved farmyard manure management and cultivation and utilization of green manure crops | Completed | |
| 2.3 | Support for cattle shed improvement and urine collection | Completed | |
| 2.4 | Campaign for utilizing animal urine | Completed | |
| 3.1 | Training on awareness, importance, cultivation and management of yam and sweet potato | Completed | |

| | | | |
|---|---|---|---|
| 3.2 | Distribution of tubers/seedlings | Completed | |
| 4.1 | District level meeting | Ongoing | |
| 4.2 | Dissemination of information through media | Ongoing | |
| 4.3 | Flyers and pamphlets developed | Completed | |
| 4.4 | Hoarding board and documentary preparation and supply | Ongoing | |
| 4.5 | Public hearing | Ongoing | |
| 4.6 | Monitoring | Ongoing | |
| 4.7 | Joint Monitoring | Ongoing | |
| 4.8 | Report Preparation and Auditing | Ongoing | |

## Achievements/ Findings

- Twenty farmers' groups formed to implement the project activities effectively and efficiently.
- Valuable information obtained from the baseline survey which would be very useful in implementation of the project activities.
- Farmers oriented about the project and its activities during the district and VDC level awareness workshops which created favorable and friendly environment in implementation of the project activities.
- Raise the income level of the participating households
- Enhance food security and improve nutrition, health and sanitation status of the participating households particularly that of women.
- Various training programs and exposure visits strengthen the capacity of the local people specially women and indigenous communities.
- Increment of women participants in different development activities.
- Decision making power of groups as well as female members has been increased.

| | |
|---|---|
|  |  |
| Farmers' participation in importance, cultivation and management practices of yam and sweet potato | Farmers' participation in improved farmyard manure management and cultivation and utilization of green manure crops |

# Project Title: Conservation and Promotion of Gaddi Buffalo for Livelihood Improvement of Farmers of Far Western Hills of Nepal.

**Project No :** 1001/2014

| | |
|---|---|
| ***Project Coordinator*** | Dr. Jagat Bandhu Nepali |
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| ***Collaboration/Partners*** | Grameen Sudhar Manch (GSM), Dadeldhura<br>Bovine Research Programme, Animal Breeding Division |
| ***Total Cost of Project:*** | NRs. 19,98,700.00 |
| ***Duration of Project:*** | Three years (Jan, 2014 to Dec, 2016) |
| ***Location of Project:*** | Aasigram and Belapur VDCs of Dadheldhura district |

## Background

Gaddi buffalo is one of the three identified indigenous buffalo breeds of country, particularly found in the far western hill districts. The buffaloes play significant role in household nutrition and food security. Among the three indigenous breeds, it is the heaviest one in terms of physical appearance and produces more milk per lactation compared to the other breeds. The white mark in the forehead and massive body are the typical characteristics of the breed. It has been experienced that the population of Gaddi buffalo is declining, however, the population status and herd structure is not completely known.

Buffaloes play an important role in the livelihood support and nutrition security for farming households in the country. Buffalo alone contributes around 70% and 65% of annual national milk and meat production respectively. Gaddi buffalo, native buffalo breed of far western hill, particularly in Dadeldhura district is well known for high milk production, high fat percent and consistency in milk production. The average daily milk production has been found to be 7lit for a lactation period of 10-11 months which is significantly higher than the performance of other indigenous buffaloes. The average age at first conception has been found to be 3.5 years, shorter than the other native buffalo breeds. The Gulger tribes might have given the name Gaddi for their buffaloes due to its larger size. In the recent days, the population of Gaddi buffaloes is in rapid decline mainly due to export of buffaloes to India, indiscriminant breeding with other buffalo breeds and inability to properly address the endemic Khari disease prevalent in the region. Recent rapid survey has revealed that there are only around 500-600 pure Gaddi buffaloes in Aasipur and Belapur VDC of Dadeldhura district. In these contexts of rapid population decline and comparatively better production performance, it is extremely essential that the Gaddi buffalo breed needs to be conserved, promoted and properly utilized for the betterment of farming families at large.

## Purpose of the Project

The overall goal of the project is to improve the livelihood of the farmers raising Gaddi buffaloes whereas the main purpose is to ensure conservation and promotion of Gaddi buffaloes

which are mostly found in Dadeldhura district in far western hill, the population of which is declining at fast pace making it at endangered status.

**The specific objective of the projects are to:**

Document current status of Gaddi buffalo population, trend, their production system and associated constraints in the perspective of breed conservation.

- Improve production and productivity of Gaddi buffaloes in order to enable or motivate farmers for taking conservation initiative in one hand and to increase household income on the other.
- Ensure in situ (intact on its home tract) and ex situ conservation (semen and DNA extract)
- Aware people about conservation importance of endangered livestock breeds Supporting for increased
- supply of milk and meat in the current deficit situation in the country
- Reduce cost of milk and meat production through productivity improvement in buffaloes

### Expected beneficiaries

The primary envisaged beneficiaries of the current project are the Gaddi buffalo farmers (about 200 households) of two VDCs of Dadeldhura district through direct project activities implementation and empowerment of the farmers. Of the total direct beneficiaries, at least 30% will the female farmers and 30% (inclusive of both male and female) will be from the socially disadvantaged communities.

## Objectively Verifiable Indicator (OVI)

By the end of project period, milk productivity of buffalo increased at least by 15% and in situ and ex situ conservation ensured.

- The population status of Gaddi buffalo will be fully known
- The production system and associated constraints will have been documented
- At least 100 farmers will have been trained on buffalo management and conservation importance
- At least one Conservation fund with initial project support of NRs 50,000. will be established
- At least 2 conservation awareness campaigns and Local FM broadcast on its importance ensured.
- Conservation booklets distributed to all participating farmers
- The population of Gaddi buffalo increased at least by 10%
- At least 5000 doses of semen from Gaddi bulls and DNA segments stored for the future
- The productivity of Gaddi buffalo increased at least by 15
- One workshop proceeding (document) published
- One booklet (300 copies) incorporating approaches/ model and importance of conservation of Gaddi buffalo made available and100 copies of final technical report published

The proposed project aimed at improving productivity of Gaddi buffaloes, also ensuring their conservation to improve income and livelihood of smallholder buffalo farmers and rural

communities in far western hills. This will strengthen the entrepreneurial abilities of both youth and women through development of self-employment opportunities and also contribute in the formal milk market. This helps the producers, marketers, local unskilled labor as well as youth and women to increase their income, thus the outputs of the project contribute to reduce unemployment, increase income, and help alleviate the existing poverty to lead the sustainable livelihood of the targeted groups. Further it has been envisaged that the recently establish dairy plant by DDC in Attaria, Kailali will also provoke the buffalo farmers Dadeldhura to increase their animal productivity for increased and sustain income of the farm family.

## Project's targetted outputs

The following outputs have been envisioned from the project that would help achieving project purpose:

Output 1 : Current Status of Gaddi buffalo fully document
Output 2 : Farmers capacity on breed conservation enhanced
Output 3 : Conservation of Gaddi buffalo ensured
Output 4 : Production and productivity of Gaddi buffalo improved
Output 5 : Information widely distributed
Output 6 : Policy developed for non introduction of other buffalo breeds in the Gaddi pocket, export and slaughter ban productive she-buffaloes

**Activities proposed and its status:**

| | | | |
|---|---|---|---|
| **Activity No:** | **1.1** | **Activity**: | Population census of Gaddi buffalo |
| **Activity Status:** | | The population census has been completed in the proposed project VDCs | |
| **Activity No:** | **1.2** | **Activity**: | Household Survey |
| **Activity Status:** | | Household survey to document current status of Gaddi buffalo production in the project sites has been completed. A total of 50 HHs were randomly selected for this purpose. | |
| **Activity No:** | **1.3** | **Activity**: | Tagging of pure Gaddi buffaloes |
| **Activity Status:** | | The buffaloes selected for further studies have been try to tagged But face with technical problem. | |
| **Activity No:** | **1.4** | **Activity**: | Documentation of survey and census |
| **Activity Status:** | | The information collected being entered in the computer and report preparation under process and comes to final. | |
| **Activity No:** | **2.1** | **Activity**: | Farmers' group formation |
| **Activity Status:** | | Two farmers groups comprising of 50 members have been formed | |
| **Activity No:** | **2.2** | **Activity**: | Awareness campaign |
| **Activity Status:** | | Hording boards have been prepared and displayed in different locations and interaction with stakeholders | |
| **Activity No:** | **2.3** | **Activity**: | Farmers' Training on Conservation |

| | | | |
|---|---|---|---|
| **Activity Status:** | | Two trainings were organized in respective sites and a total of 50 group members and 10 other farmers participated in the conservation focused training | |
| **Activity No:** | **2.4** | Conservation group fund formation and mobilization | |
| **Activity status** | | Conservation fund deposited on farmers account and used on different activities. | |
| **Activity No:** | **3.1** | **Activity**: | In situ conservation model development |
| **Activity Status:** | | Site selection, model conservation farms constructed and start to rearing Buffalos | |
| **Activity No:** | **3.2** | **Activity** | Breed society registration |
| **Activity status** | | Breed society registration on DLSO is ongoing | |
| **Activity No:** | **3.3** | **Activity** | Ex situ conservation |
| **Activity status** | | | Initiated |
| **Activity No:** | **4.1** | **Activity**: | Initiation of Recording |
| **Activity Status:** | | The milk yield recording has been initiated | |
| **Activity No:** | **4.2** | **Activity**: | Demonstration of improved nutrition on milk production |
| **Activity Status:** | | UMMB block demonstration has been initiated And increase in milk production. | |
| **Activity No:** | **4.3** | **Activity** | Feeding management for improving growth rate in male calves |
| **Activity Status** | | Feeding male calves with minerals and fortnightly weight recorded. | |
| **Activity No:** | **4.5** | **Activity**: | Milk Product Diversification |
| **Activity Status:** | | Training to 56 dairy farmers/ entrepreneurs on milk product diversification | |
| **Activity No:** | **4.6** | **Activity**: | Vaccination against diseases |
| **Activity Status:** | | All buffaloes in the sites have been vaccination against HS and BQ | |
| **Activity No:** | **4.7** | **Activity**: | Control of internal parasites |
| **Activity Status:** | | Drenching of buffaloes Is ongoing | |
| **Activity No:** | **4.8** | **Activity** | Training on disease management |
| **Activity status** | | Farmers were trained on main bovine diseases | |
| **Activity No:** | **5.1** | **Activity** | Video documentary |
| **Activity status** | | Video documentary preparation is on going | |
| **Activity No :** | **5.2** | **Activity** | Organization of public audit |
| **Activity status** | | Public auditing is completed | |
| **Activity No:** | **5.3** | **Activity**: | Project monitoring |
| **Activity Status:** | | Monitoring of project implementation sites by Regional Director, District level and NARDEF Officer . | |

# Project title: Livelihood improvement Project by Off-season Production program for deprived people

**Project No.:** PPN. 1003/2013/14

| | |
|---|---|
| ***Project Co-ordinator:*** | Mr. Anil Kumar Mahato |
| ***Mailing Address:*** | VDC-Thadhi-Jhijha-4,District-Dhanusha,Municiaplity : Janakpurdham-1 |
| ***Mobile No.:*** | 9815719795 / 9857822583 |
| ***E-mail:*** | anilkmt83@gmail.com |
| ***Collaboration/Partners:*** | DADO, Siraha |
| ***Duration of Project:*** | March 2014 To Feb. 2016 |
| ***Project Cost:*** | NARDF Rs.1992134 & Co-operative Rs. 457424<br>Total:- Rs. 2449558 |
| ***Location of Project:*** | Lalpur and Jamdah VDC of Siraha |

## Project Summary

## Project's Background

The agricultural sector is the main backbone of livelihood for the vast majority of population in Nepal. The paramount of this sector is reflected by its 38% share to national GDP with an annual growth rate of 2.8% and absorption of 66% labor force. With the existence of favorable climatic condition together with easy farming as compared to other crops, the smallholder farmers are being positively attracted toward off-season vegetable farming in Nepal. An off-season vegetable provides 5 times more yield than that of cereals and millets and gives more return per unit area of land. As a result, the area of vegetables in Nepal has been increasing moderately.

This project has been developed for Golbazar, Ashanpur and JamdahVDCs of Siraha district which is linked with MahendraRajmarg. A total of 100 farmer households, 10 lead farmers, 3 agro-business centers, one cooperative and one MPC will be directly benefited from the project. Indirect beneficiaries will be at least 850 farmers who will observe the good adaptation practices. Most of the people are engaged in seasonal vegetable production only few in off-season vegetable production. Lack of market orientated production on commercialization of Agriculture. Farmers are very poor, small land holding and lack of income generating opportunities. Off-season vegetable production is the only way to increase their level of income to improve their livelihood. The proposed project is designed accordingly as demand of the project area and the program is associated with the strong desire of local community.

The Applicant is a Siraha based Cooperatives. It has over 5 years long experience of program implementation within the district. The programs are supported by various donors and government.

In the developing countries like Nepal, the economy is directly linked agriculture. And hence until and unless the value added products in terms of money and qualitative aspect between agriculture will not be developed we can't imagine the strong backbone of our economy.

Applicant has been implementing various agriculture projects in Siraha district since past 5 years under various projects. In this process significant collaboration has been done with district line agencies (DDC, DADO), NGO, INGO and private sector providers. During the coordination meetings WMCL, Golbazar has also learned the need and demand for various agriculture projects in different parts of the district including the proposed project area. Demands for such programs are clearly spelled out from the VDCs. The DADO, VDCs and local farmers groups have given letters of collaboration for this project as per the recognition of the local farmers, leaders in this aspect.

## Main purpose/objectives:

The project purpose is to increase income of target beneficiaries through income generating off-season vegetable production and marketing network and linkages development in the district for technology (DADO, NGOs, donor agencies, vegetable growing groups and co-operative farmers group). Small land holding of poor farmers who have less than 5 katha land and lack of on as well as off-farm income has created a disguised unemployment and low income. Marketers and unemployed both educated and uneducated rural youth are major clients or beneficiaries groups of the off-season vegetable commodity.

The Project intends to reduce poverty of ultra-poor, vulnerable, deprived groups, social excluded groups, and marginalized groups through involvement in different production Activities of the project.

The purpose of the project can be summarized as:

1. To increase income level of farmers through off-season vegetable production.
2. To enhance competitive capacity of farmers regarding off-season vegetable production and marketing.
3. To increase farmers access to market.

## Expected beneficiaries:

The project will be focused in targeting the following way:

The concern co-operative farmers group, all the commercial and semi-commercial vegetable growers of Mahendra Rajmarg corridors of Siraha district near Golbazar will be benefited. 100 farmers, 10 lead farmers, 3 agro-business centers, one cooperative and one MPC will be directly

benefited from the project. Indirect beneficiaries will be at least 850 farmers who will observe the good adaptation practices.

Direct beneficiaries will be small and marginal farmers mostly from socially excluded groups, women and poor. Some farmers will be benefitted from intensive leader farmers training who will serve as local resource person in the community. Besides the farmers, local agro-vets, cooperatives and traders will also be benefited through increased sales of input and outputs. Finally, observer people from the neighborhood and other location will also be benefitted from the knowledge gain from the good agricultural practices. The project will not have any negative impact to the community both in the short and long terms. It will rather have positive impacts in the rural livelihoods because of increased income, food security and livelihood promotion.

The communities involved as a whole in the project that are to make economic benefit by selling the vegetable produced by them and have the first degree of benefit. Other sectors such as transportation sector and wholesalers of off season vegetable growers can also be considered beneficiaries who gain economically during marketing of vegetables. The development and extension agencies such as ADOs, NGOs, INGOs, CBOs etc. which are working on vegetable production, in the project sites will also get the first hand information improved techniques and be able to transfer it to other areas. The secondary beneficiaries will be the entrepreneur and farmers from outside of the project sites who are involved with vegetable production. The applications of the findings of this project work may increase supply of different vegetable crops to consumption areas such as Lahan, Siraha, Golbazzar, Biratnagar, Janakpur, Narayanghat, Kathmandu. Researcher students, academic institutions are the up-streaming beneficiaries of this project outputs. There will be no disadvantaged group that will be adversely affected by the proposed project and its outcomes.

| VDC/Ward/Tole | No. of Farmer Groups | No. of Farmers | Total Female | Total Male | Total Janjati | Total dalit | Total Others |
|---|---|---|---|---|---|---|---|
| Lalpur-1 | 1 | 25 | 16 | 9 | - | 10 | 15 |
| Lalpur-5 | 1 | 25 | 20 | 5 | 12 | 4 | 9 |
| Lalpur-8 | 1 | 25 | 10 | 15 | - | 7 | 18 |
| Jamdah-5 | 1 | 25 | 12 | 13 | 9 | 7 | 9 |
| Total | 4 | 100 | 58 | 42 | 21 | 28 | 51 |

## Objectively Verifiable Indicators (OVIs)

100 farmers capacity will be enhance by training on off-season vegetable production and marketing by the end of project period. 90 MT. off-season vegetable will be produced from 6 Ha. Of land and marked by the end of project.1 market chain establish between farmers, trader, processor by the end of project period. Market information system will be established equipped with modern

facility in cooperative by the end of project. Off-season vegetable cultivation will be started by neighboring farmers in more 10 Ha. Land by demonstration effects and extension work by end of project. Project will generate employment for 50 farmers, 20 traders and 600 labors by the end of project.

## Up scaling Pathways

The project sites of this project are the potential of the Sirha districts. Farmers involved in off-season vegetable production are also innovative and always search for the new opportunity to increase their productivity level as well as looking forward for creating genetic diversity in the vegetable production .Most of the varieties using by farmers are not so superior due to this they are losing their productivity. Only government organizations like DADO's and research centres are able to meet the farmers demand with participation of NGO's and Cooperative a number of varieties can be introduced in this area.

### Methodology

During the implementation of the scaling up of the activities through group approach of farmers and their cooperatives the following steps and process will be followed.

- Meeting and discussion with stakeholders
- Situation analysis and need assessment for new vegetable grower technology
- Search process to identify suitable varieties matching farmers need
- Farmers field experiment
- Scaling up (wider dissemination of preferred varieties and technology)

### Meeting and discussion of stakeholders:

- Meeting of the stakeholders and farmers will be organize for implementation of the project. The stakeholders will be DADO's, CBO's,VDC's,NARC and cooperative farmers group.

  The main activities as plan for technology scaling up for 2 years will be as mention:

  - Result demonstration
  - Minikit distribution
  - Different duration farmers training
  - Farmers field day for technology display
  - Staff orientation workshop
  - Field program monitoring and evaluation for prize distribution for good crop
  - Inter districts farmers visit and different governments' farms exposure visit.

The number of activities and coverage by the program may differ depending upon the needs and priorities of the farmers

## Role and Responsibilities

| NARDF | Cooperatives |
|---|---|
| Budget support | Scaling up of technology |
| Program monitoring and evaluation | Coordination for planning, implementation and monitoring |
| Technical backstopping | Methodology development |

### Expected Output of the project

The whole project has mainly divided into three parts-i.e. farmer groups development and management, commercial off-season vegetable production technology adoption and marketing management. The projects have five targeted outputs and activities are mainly focuses on awareness creation, group formation, social mobilization and their development and management in first year. Technology transfer on commercial off-season vegetable production which includes practicing of hybrid seeds, pre and post harvest handling, market promotion and management in 2nd year.

The intended outputs of projects are mainly; competitive capacity of farmers on off-season vegetable production increasement, increase in volume of off-season vegetable production, market linkage development, market information systems establishment, area expansion in off-season vegetable production and increase in employment opportunity.

Through the training capacity of farmers for vegetable growing will be developed during project period and there will be develop competition of more vegetable production after reception of technological knowledge. Mass production of vegetable enforces the growers to arrive at market for linkage with traders up to long distance market for supply and thereafter farmers sensitized with market information system which provides knowledge on determination of price of vegetable at farm gate and at market places and hatbazars.Farmers will capable to deal with trader for price determination as a result they get suitable and high price of their product. Profits from off-season vegetable production enforce the growers to expand their land area which results in generation of employment for their family and others unemployed skilled and non-skilled labor available at local level. Creation of employment helps in improvement of their social and economic life and indirectly boost up in the poverty reduction.

## Activities Proposed

| S.N | Activities | Activity Status | Remarks |
|---|---|---|---|
| 1.1 | Baseline survey | Ongoing and completed with June | Pre baseline |
| 1.2 | Farmer group formation | 3 FG completed in march 2014 | activities completed |
| 1.3 | Field level training | In 2 FG completed | 51beneficiaries enhanced the capacity building training on Off season vegetable. |

| S.N | Activities | Activity Status | Remarks |
|---|---|---|---|
| 1.4 | Interaction meeting | Will be held on June 2014 | ---------- |
| 1.5 | IPM farmer's | Will be to next quarter | ---------- |
| 2.1 | Input distribution | Hybrid seed distributed to 3 formed farmers group | About 75 beneficiaries got hybrid vegetable seeds. |
| 2.3 | Plastic house | Yet to begin | ---------- |
| 2.4 | Field preparation | Completed in 3 hector area of land | |
| 2.5 | Planting of seeds | Sown on nursery bed ready to transplant in main field | ---------- |
| 2.6 | Intercultural operation | Yet to begin | ---------- |

## Achievements:

- Farmers groups has been formed in the project VDCs and these groups were mobilized to work together for vegetable cultivation
- A baseline survey has been completed to access the farmer's status of agriculture production, market access, education, health status, general demography etc.
- Vegetable kits distributed to the farmers equally and in the first trimester of the project duration.

## आयोजनाको शीर्षक: 'अर्घाखाँची जिल्लामा प्राङ्गारिक तरकारीको बजारमुखी उत्पादन तथा बजार प्रवर्द्धन आयोजना' अर्घाखाँची

**आयोजना नं. :** PP No. 1004 /2013/014

| | | | |
|---|---|---|---|
| *आयोजना संयोजक* | विश्व चन्द्र पोखरेल | | |
| *ठेगाना* | **ग्रामिण कृषि तथा पशु विकास संस्था-नेपाल (राडो नेपाल)**<br>**कपिलवस्तु नगरपालिका-५, कपिलवस्तु** | | |
| *टेलिफोन* | ०७६ ५६०६२५, ९८४७०६२५३१ | | |
| *इमेल* | pokhrelb_2040@yahoo.com ,<br>raadonepal_2063@yahoo.com | | |
| *सहयोगी संस्था* | १) ग्रामिण विकास मंञ्च नेपाल, नरपानी, अर्घाखाँची<br>२) ग्रामिण विकास कृषि सहकारी संस्था.लि., नरपानी, अर्घाखाँची<br>३) जिल्ला कृषि विकास कार्यालय, अर्घाखाँची | | |
| *आयोजना शुरु मिति* | २०७० पौष | आयोजना पूरा हुने अपेक्षित मिति | २०७३ मंसिर |
| *आयोजनाको लागत* | **आयोजनाको जम्मा लागत :- रु ३०,९६,५३८** | | |
| | रा.कृ.अ.तथा वि.कोषको योगदान :- रु १९,९९,९६२<br>राडो नेपालको योगदान :- रु १,८०,०००<br>ग्रामिण विकास कृषि सहकारी संस्था.लि.: रु. १,०८,०००<br>ग्रामिण विकास मंञ्च योगदान : रु १,०८,०००<br>लक्षित समुदायको योगदान :- रु ८,०८,५७५ | | |
| *आयोजना स्थल* | अर्घाखांची जिल्लाको नरपानी गा.वि.स. (वार्ड नं. २, ४, ५, ६ र ७) | | |

### Project Summarys

खेती प्रणालीको त्यो विधि जसमा रसायनको प्रयोग गरिदैन र बोट बिरुवालाई आवश्यक पोषकतत्व तथा रोग किराको व्यवस्थापनको लागि स्थानियस्तरमा निहित वस्तुहरु जस्तै- बिभिन्न प्रकारका मलहरु (गोबरमल, कम्पोष्ट मल, गडयौला मल, पतिङ्गर मल तथा पिनाहरु इत्यादि) तथा बिभिन्न प्रकार बिरुवाहरु (तितेपाती, सिस्नु, असुरो इत्यादि) सकहित गरेको खेतीलाई र बाली चक्र इत्यादिको अनुसरण गरी उत्पादन गरिने प्रक्रियालाई प्राङ्गारिक खेती भनिन्छ। वर्तमान तरकारी खेती प्रणालीबाट उत्पादनस्तरमा उत्पन्न समस्याहरु (माटोको उर्बराशक्ति ह्रास आउदै जानु, नया नया प्रजातिका रोग कीराको व्यवस्थापनमा कठिनाइ हुनु, उत्पादन लागत अधिक हुनु इत्यादि) र उपभोगस्तरमा उत्पन्न समस्याहरुको (उपभोगकर्ताले रसायनको प्रयोगबाट खेपनु परेको टाउको दुखाइ, अल्सर, पत्थरी, अपाङ्ग बच्चा जन्मिनु जस्ता रोगहरु, Ref. www.newdream.org) न्यूनिकरणको लागि आजको आवश्यक्ता भनेकै कृषकहरुलाई प्राङ्गारिक तरकारी खेती तर्फ उन्मुख गराउनु भएको छ।

प्रस्तावित क्षेत्र नरपानी गा.वि.स.को २, ४, ५, ६ र ७ मा प्राङ्गारिक तरकारी खेतीको लागि प्रशस्त सम्भावना (स्थानिय स्रोत साधनको उपलब्धता, माटोको उपयुक्तता, वातावरणको अनुकूलता, बिक्रिको लागि समस्या नभएको) भएको अवस्था र जैविक बिबिधताको सदुपयोग गर्दे गरीब तथा पिछडिएका कृषकको संलग्नतामा स्थानिय स्रोत साधनको प्रयोगबाट उत्पादन लागत घटाई परिवारिक आम्दानीमा वृद्धि गर्ने उद्देश्यले **अर्घाखांची जिल्लामा**

**प्राङ्गारिक तरकारीको बजारमुखी उत्पादन तथा बजार प्रवर्द्धन आयोजना** को परिकल्पना गरिएको हो । वि.सं. २०७३ सम्म अर्घाखांची जिल्लामा प्राङ्गारिक तरकारीको बजारमुखी उत्पादन तथा बजार प्रवर्द्धन आयोजना द्वारा लक्षित नरपानी गा.वि.स.का कृषकहरुको आयस्तरमा ३५ प्रतिशतले बृद्धि गरी उनीहरुको जिविकोपार्जनमा सुधार आइ खाद्य सुरक्षा सुनिश्चितता तथा गरिबी निवारणमा थप टेवा पुगेको हुनेछ । यस आयोजनाको दिगो बिकास गर्नको लागि बिभिन्न लाईन एजेन्सिहरु जिल्ला कृषि विकास कार्यालय, स्थानिय स्तरमा रहेको कृषि सेवा केन्द्र/सर्म्पक कार्यालय, ग्रामिण बिकास कृषि सहकारी संस्था, ग्रामिण विकास मंच र कृषक समुहहरुको साझेदारमा आयोजनाको सहभागितात्मक व्यवसायिक योजना तर्जुमा, कार्यन्वयन, अनुगमन तथा मुल्यांकन रणनिति लिएको छ । आधारभुत सर्भेक्षण, अभिमुखिकरण गोष्ठि, समुहहरुको गठन/पुर्नगठन, कृषक तालिमहरु (प्राङ्गारिक तरकारी उत्पादन प्रविधि सम्वन्धि तालिम, प्राङ्गारिक मल तथा जैविक विषादि बनाउने सम्वन्धि तालिम, प्राङ्गरिक उत्पादनको मापदण्ड र प्रमाणिकरण सम्वन्धि तालिम, पोष्ट हार्भेष्ट सम्वन्धि तालिम, सामूहिक बजारीकरण तथा बजार व्यावस्थापन सम्वन्धि तालिम), उत्पादन प्रर्दशनहरु (प्राङ्गरिक/भर्मि कम्पोष्ट सम्वन्धि, जैविक विषादी सम्वन्धि), प्राङ्गरिक तरकारी उत्पादन, बिभिन्न सामाग्री तथा उपकरण वितरण, सहकारी संस्थाको क्षमता अभिबृद्धि तथा सुदृढीकरण, प्राङ्गारिक स्टल निर्माणको लागि सहयोग, कृषक व्यापारी अर्न्तरक्रिया गोष्ठि, प्राङ्गारिक उत्पादनको समुदाय द्वारा प्रमाणिकरण, कृषक दिवस, अनुगमन, बुकलेट तथा पम्पलेट प्रकासन, आयोजना मूल्यांकन मार्फत जम्मा **रु. ३०९६५३८** बजेटको परिधि भित्र कार्य सम्पादन गर्ने लक्ष्य यस आयोजनाले लिएको छ ।

यस आयोजनाको मुख्य उद्देश्य भनेको लक्षित गा.वि.स.का गरीब तथा पिछडिएका कृषकहरुको संलग्नतामा स्थानिय श्रोत साधनहरुको प्रयोगबाट उत्पादन लागत घटाई पारिवारिक आम्दानीमा वृद्धि गर्ने रहेको छ । जसवाट उत्पादित तरकारीहरुको सहकारी संस्था मार्फत बजार व्यवस्थापन भई लक्षित घरधुरीको बार्षिक रुपमा कम से कम रु.१६ हजार ५०० का दरले पारिवारिक आायमा वृद्धि भएको हुनेछ ।

यस आयोजनाको प्रतिफल अन्य समुदायमा विस्तार तथा अनुसरण गराउनको लागि विभिन्न गोष्ठिहरु, उत्पादन प्रर्दशन, कृषक दिवस, एफ.एम. तथा भिडियो छायांकन, बुकलेट तथा पम्पलेट प्रकासन, सार्वजनिक सुनुवाई जस्ता क्रियाकलापहरु गर्ने रणनिति यस आयोजनाको रहेको छ ।

## Project Goal

अर्घाखांची जिल्लाको नरपानी गा.वि.स.मा प्राङ्गारिक तरकारीको बजारमुखी उत्पादन तथा बजार प्रवर्द्धन आयोजनाद्धारा लक्षित समुदायको जिविकोपार्जन तथा आयमा सुधार ल्याइ खाद्य सुरक्षा सुनिश्चित गराउने साथै स्वच्छ ताजा तथा विषादी रहित तरकारीको प्रयोगबाट उपभोक्ताको स्वास्थ्य स्वस्थ गराउने ।

## Project Purpose/Objectives

लक्षित अर्घाखांची जिल्लाको नरपानी गा.वि.स.मा गरीब तथा पिछडिएका कृषकको संलग्नतामा स्थानिय स्रोत साधनको प्रयोगबाट उत्पादन लागत घटाई परिवारिक आम्दानीमा वृद्धि गर्ने ।

## Beneficiaries

यस आयोजनाले अर्घाखांची जिल्लाको नरपानी गा.वि.स. श्रोत साधन नभएको, अन्य सरकारी तथा गैर सरकारी संस्थाहरुबाट सुविधा नपाएको र कृषि पेशामा (मुख्यत: तरकारी पेशामा) निर्भर रहेका कृषकहरुलाई लाभान्वित समुदायका रुपमा लिएको छ । यस आयोजनाका क्रियाकलापहरुको कार्यान्वयन आर्थिक तथा सामाजिक रुपमा पिछडिएका कृषक (बिशेषत: दलित, जनजाति तथा अन्य) समूहद्धारा सम्पन्न गरिने भएको जसमा विपन्न महिलाहरु (आर्थिक तथा सामाजिक रुपमा) यस आयोजनाबाट लाभान्वित भएका छन् । यस आयोजनामा नरपानी

गा.वि.स. अन्तर्गत सरकारी, गैर सरकारीस्तर र स्वयं आफ्नै पहलबाट गठन भएका तर सेवा र सुविधा नपाई निष्क्रिय रहेका समूहहरुलाई पनि सहभागी गराइएको छ। महिलाहरुको हरेक क्षेत्रमा निर्णय तहमा पुऱ्याउनको लागि यस आयोजनाको तर्जुमा, कार्यान्वयन, अनुगमन, मुल्यांकन, अन्य तालिम तथा गोष्ठिहरुमा पनि महिलाको सहभागितालाई उच्च प्राथमिकता दिइएको छ। यसरी यो आयोजनावाट प्रत्यक्ष रुपमा नरपानी गा.वि.स.का ३०० घरधुरी लाभान्वित भएका छन्, साथै ताजा तथा बिषादी रहित तरकारी तथा बिउ, कृषि उपकरणहरुको बिक्रि वितरणमा संलग्न व्यापारीहरु समेत लाभान्वित भएका छन्। यसका अतिरिक्त प्राङ्गारिक ताजा तरकारीको सुलभ र सस्तो रुपमा उपभोग गर्ने कम से कम अप्रत्यक्ष रुपमा १७००० (५०० जना स्थानिय, ६५०० जना अर्घाखांची जिल्लामा र १०००० जना छिमेकी जिल्लाहरुमा) घरधुरी लाभान्वित हुने अपेक्षा गरिएको छ।

## Objectively Verifiable Indicators (OVIs)

१.१. वि.स. २०७३ सम्ममा लक्षित गा.वि.स. का ३०० गरिब तथा पिछडिएका कृषकहरुले प्राङ्गारिक तरकारी खेती व्यावसायीक रुपमा शुरु गरी बार्षिक १५ हे. क्षेत्रफलबाट २७० मे.टन प्राङ्गरिक तरकारी उत्पादन गरेका हुनेछन्।

१.२. वि.स. २०७३ सम्ममा लक्षित गा.वि.स.का ३०० गरिब तथा पिछडिएका कृषकहरुले स्थानिय स्रोत साधनको प्रयोगबाट (प्राङ्गारिक मल तथा जडिबुटी) माटोलाई आवश्यक पोषकतत्वको व्यवस्थापन तथा रोग किराको नियन्त्रण गर्ने प्रविधिको अबलम्वन गरेका हुनेछन्।

२. वि.स. २०७३ सम्ममा लक्षित गा.वि.स. मा रहेको सहकारी संस्थाद्वारा बार्षिक २५० मे.टन बिषादी रहित तरकारीको बजार व्यावस्थापन भएको हुनेछ।

३. वि.सं. २०७३ सम्ममा कम से कम १००० कृषकहरुले विभिन्न प्रकासन तथा प्रसारण, गोष्ठि, कृषक दिवस कृषक देखि कृषक सम्म बाट प्राङ्गारिक तरकारी उत्पादन तथा बजारीकरण प्रविधि सम्वन्धि जानकारी प्राप्त गरेका हुने छन्।

## Up-scaling Pathways

यस आयोजनाका प्रतिफल अन्य समुदायमा अनुसरण, विस्तार र प्रसार गर्नको लागि आयोजनाको शुरुमा नै अभिमुखिकरण गोष्ठि गरी सम्पुर्ण सरोकारवालाहरुलाई आयोजनाको बारेमा जानकारी दिईएको छ। प्रारम्भिक प्रतिवेदन, चौमासिक प्राविधिक प्रतिवेदन तथा बार्षिक प्रतिवेदन साझेदार संस्थाहरुलाई उपलब्ध गराईएको छ। अन्य समुदायमा आयोजनाका प्रतिफल तथा उपलब्धिहरुको प्रचार प्रसार र विस्तार गर्नको लागि एफ.एम. बाट कार्यक्रम प्रसारण, भिडियो छायांकन, प्राङ्गारिक तरकारी उत्पादन प्रविधि सम्वन्धि पम्पलेट तथा बुकलेट प्रकासन गरिएको छ। साझेदार संस्था मार्फत पनि प्रतिफलहरुको व्यापक प्रचार प्रसार भएको छ।

## Synopsis of Project Status

## Targeted Outputs:

- प्राङ्गारिक तरकारी उत्पादन प्रविधिको प्रवर्द्धन भएको हुने छ
- उत्पाादित बिषादी रहित तरकारीको बजार व्यवस्थापन संस्थागत रुपले सुदृढ भएको हुनेछ।
- आयोजनाका प्रतिफलहरुको प्रचार प्रसार तथा अनुसरण भएको हुने छ।

**Project Status Reports:**

| Activities | Progress status | Remarks |
|---|---|---|
| १.१) आधारभुत सर्भेक्षण | २०७० पौषमा सम्पन्न | |
| १.२) अभिमुखिकरण गोष्ठि | २०७० पौषमा सम्पन्न | |
| १.३) समुह गठन/ पुर्नगठन | २०७० पौषमा सम्पन्न | |
| १.४) कृषक तालिम | २०७० फाल्गुन/चैत्रमा सम्पन्न | |
| १.४.१)प्राङ्गरिक तरकारी उत्पादन प्रविधि सम्वन्धि : | २०७० फाल्गुन/चैत्रमा सम्पन्न | |
| १.४.२)प्राङ्गरिक मल तथा जैविक विषादि बनाउने सम्वन्धि | २०७० फाल्गुन/चैत्रमा सम्पन्न | |
| १.४.३)प्राङ्गरिक उत्पादको मापदण्ड र प्रमाणिकरण सम्वन्धि | २०७० फाल्गुन/चैत्रमा सम्पन्न | |
| **१.५) उत्पादन प्रर्द्धशन :** | २०७० फाल्गुन देखी संञ्चालन भई रहेको । | |
| १.५.१)प्राङ्गरिक / भर्मि कम्पोष्ट सम्वन्धि उत्पादन प्रर्द्धशन | २०७० फाल्गुन देखी संञ्चालन भई रहेको | हाल सम्म ५ वटा प्रर्द्धशन कार्यक्रम सम्पन भएको १ वटा २०७२, फाल्गुनमा संञ्चालन गरिने । |
| १.५.२)जैविक विषादी सम्वन्धि उत्पादन प्रर्द्धशन | २०७० फाल्गुन देखी संञ्चालन भई रहेको | हाल सम्म ३ वटा प्रर्द्धशन कार्यक्रम सम्पन भएको १ वटा २०७२, फाल्गुनमा संञ्चालन गरिने । |
| १.६) प्राङ्गरिक तरकारी उत्पादन | प्राङ्गरिक तरकारी उत्पादन कार्य २०७० माघ/फाल्गुन देखी निरन्तर रुपमा भईरहेको छ । | हाल लक्षित गा.वि.स.मा १५ वटा कृषक समूहमा आवद्ध भएका ३०० कृषकहरुले काउली ५ हे., गोलभेडा ३ हे., खुर्सानी २ हे., लौका १ हे., प्याज ४ हे. र काका ४ हे. गरी कुल १९ हे. क्षेत्रफलमा प्राङ्गरिक तरकारी उत्पादन गरेका छन् । |
| **१.७) विभिन्न सामाग्री तथा उपकरण वितरण :** | | |

| Activities | Progress status | Remarks |
|---|---|---|
| **१.७.१) जैविक विषादी :** | निरन्तर रुपमा संञ्चालन भईरहेको । | २ पटक वितरण गरिसकिएको १ पटक वितरण गर्ने कार्य २०७२, फाल्गुनमा गरिने । |
| **१.७.२) स्प्रेयर वितरण** | २०७० फाल्गुनमा सम्पन्न | |
| **१.७.३) हजारी** | २०७० फाल्गुनमा सम्पन्न | |
| १.७.४) केट वितरण | २०७० चैत्रमा सम्पन्न | |
| १.७.५) तराजु वितरण : | २०७० चैत्रमा सम्पन्न | |
| २.१) सहकारी संस्थाको क्षमत्ता अभिवृद्धि तथा सुदृढीकरण | २०७० चैत्रमा सम्पन्न | |
| २.२) प्राङ्गरीक स्टल निर्माणको लागी सहयोग | २०७१ चैत्रमा सम्पन्न । | |
| २.३) पोष्ट हार्भेष्ट सम्बन्धि तालिम | २०७१ साउनमा सम्पन्न । | |
| २.४) सामुहिक बजारिकरण तथा बजार व्यावस्थापन सम्वन्धि तालिम | २०७१ साउनमा सम्पन्न । | |
| २.५) कृषक व्यापारी अर्न्तरक्रिया गोष्ठि | | २०७२ आषाढ/श्रावणमा कार्यान्वयन गरिने । |
| २.६) प्राङ्गारिक उत्पादनको समुदाय द्वारा प्रमाणिकरण | समुदाय द्वारा निरन्तररुपमा खेत बाली निरिक्षण भइरहेको । | |
| ३.१) भिडियो छायांकन | निरन्तर रुपमा भइरहेको । | |
| ३.२) एफ.एम द्वारा प्रसारण | ४ पटक एफ.एम.बाट प्रसारण भइसकेको र आगामी कार्यक्रम २०७२ आषाढ/श्रावण हुने छ । | |
| ३.३) कृषक दिवस | | २०७२ आषाढ/श्रावणमा कार्यान्वयन गरिने । |
| ३.४) सहभागितात्मक अनुगमन | निरन्तर रुपमा भइरहेको छ । | नार्डेफका प्रतिनिधिवाट २०७२ जेष्ठमा अनुगमन भएको । |

| Activities | Progress status | Remarks |
|---|---|---|
| ३.५) बुकलेट तथा पम्पलेट प्रकासन | १००० थान बुकलेट र ५००० प्रति पम्पलेट प्रकासन गरि सकिएको छ । | |
| **३.६) प्रतिवेदन प्रकासन :** | | |
| ३.६.१) प्रारम्भिक | २०७० माघमा पहिलो साता सम्पन्न | |
| ३.६.२) चौमासिक | निरन्तर रुपमा भईरहेको । | ४ पटक सम्पन्न |
| ३.६.३) वार्षिक | निरन्तर रुपमा भईरहेको । | १ पटक सम्पन्न |
| ३.६.४)फाईनल | | |
| ३.७) आयोजना मुल्यांकन | | |
| ३.८) सार्वजनिक सुनुवाई | | |
| ३.९) समन्वयन : | निरन्तर | |
| ३.१०) हस्तान्तरण : | | |

## Achievements

- स्थानिय स्तरमा रहेको ग्रामिण विकास कृषि सहकारी संस्था.लि ले प्राङ्गारिक कृषि उत्पादनको सामुहिक प्रमाणीकरणका लागि आन्तरिक नियन्त्रण प्रणाली निर्देशिका, २०७० जारी गरि सोही अनुसार आफ्नो कार्य प्रारम्भ गरि रहेको छ ।
- विभिन्न कृषक तालिमको कारणले कृषकहरुको प्राङ्गारिक तरकारी उत्पादन तथा बजारिकरणमा ज्ञान, व्यावहारिक सिप तथा मनोवृतिमा समेत सकारात्मक परिवर्तन आएको छ ।
- यस आयोजनामा संलग्न विभिन्न कृषक समुहहरुका कृषकहरुले समुहमा निक्षेप संकलन गर्ने र सो को प्राङ्गारिक तरकारी उत्पादन तथा बजारिकरणमा लागी ऋण परिचालन शुरु गरिसकेका छन् ।
- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स.का ३०० गरिब तथा पिछडिएका कृषकहरुले स्थानिय स्रोत साधनको प्रयोगबाट (प्राङ्गारिक मल तथा जडिबुटी) माटोलाई आवश्यक पोषकतत्वको व्यवस्थापन तथा रोग किराको नियन्त्रण गर्ने प्रविधिको प्रयोग गर्न शुरु गरेका छन्।
- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स. का ३०० गरिब तथा पिछडिएका कृषकहरुले काउली ५ हे., गोलभेडा ३ हे., खुर्सानी २ हे., लौका १ हे., प्याज ४ हे. र काका ४ हे. गरी कुल १९ हे. क्षेत्रफलमा प्राङ्गरिक तरकारी उत्पादन गरेका छन् । प्राङ्गारिक तरकारी खेती व्यावसायीक रुपमा १९ हे. क्षेत्रफलमा लगाएका छन् ।
- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स.मा १५ वटा कृषक समूहमा आवद्ध भएका ३०० कृषकहरुले काउली ८१ मे.टन., गोलभेडा ४९ मे.टन., खुर्सानी ३२ मे.टन., लौका १७ मे.टन. हे., प्याज १२६.५ मे.टन र काका ७२.५ मे.टन. गरी कुल ३७८ मे.टन.प्राङ्गरिक तरकारी उत्पादन गरेका छन् ।
- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स.मा १५ वटा कृषक समूहमा आवद्ध भएका ३०० कृषकहरुले काउली ७६.२५ मे.टन., गोलभेडा ४६.०६ मे.टन., खुर्सानी ३१.०५ मे.टन., लौका १५.९४ मे.टन. हे., प्याज १२३.७५ मे.टन र काका ६६.२५ मे.टन. गरी कुल ३५९.३ मे.टन.प्राङ्गरिक तरकारी बिक्रि गरी सकेका छन् ।

- १८ मे.टन प्रति हेक्टर उत्पादकत्व अनुमानित गरिएकोमा वि.स. २०७२ जेष्ठ सम्ममा उत्पादकत्व १९.८९ मे.टन.प्रति हेक्टर रहेको छ। यसरी हाल सम्म लक्षित उत्पादकत्व भन्दा १०.५३ प्रतिशत उत्पादकत्वमा वृद्धि भएको छ।
- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स.मा १५ वटा कृषक समूहमा आवद्ध भएका ३०० कृषकहरुले ३५९.३ मे.टन. तरकारी बिक्रि द्धारा प्रति कृषक रु. २५ हजार १५० आम्दानी गरेका छन्। भने वार्षिक रुमपा २० हजार ९२ भएको छ।
- हाल सम्म १२०० कृषकहरुले विभिन्न बुकलेट तथा पम्पलेट प्रकासन तथा एफ.एम.बाट कार्यक्रम प्रसारण, अभिमुखिकरण गोष्ठि, कृषक देखि कृषक सम्म बाट प्राङ्गारिक तरकारी उत्पादन प्रविधि प्रविधि सम्वन्धि जानकारी प्राप्त गरेका छन्।
- विभिन्न अभिमुखिकरण गोष्ठि तथा कृषक तालिम सम्पन्न गर्ने क्रममा जि.कृ.वि.का. लगायत अन्य लाईन एजेन्सीहरु संग कृषकहरुको सम्बन्ध विस्तार भएको छ। यसका साथै उनिहरुको प्राविधिक, व्यावस्थापकिय क्षमत्ता समेत वृद्धि हुनुका साथै कृषक समुहहरुको संस्थागत सुदृढिकरण समेत भएको छ।


चित्र: सामाग्रीहरु वितरण कार्यक्रम

चित्र: अभिमूखिकरण गोष्ठी

चित्र: आयोजना अनुगमन

# आयोजनाको शीर्षक: टीमूर, कुरिलो र चिराईतोको दीगो उत्पादन, प्रशोधन तथा वजार व्यवस्थापनद्वारा पर्वत होश्राङ्गदी र उराम गाविसका विपन्न किसानहरूको जिविकोपार्जनमा सुधार

**Project No:** 1006/2014/15

| | | | |
|---|---|---|---|
| ***Project Coordinator:*** | हरिषचन्द्र सापकोटा | | |
| ***Address:*** | कुश्मा नगरपालिका वार्ड नं. १० प्रगतिचोक, कुश्मा पर्वत | | |
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| ***Collaborating organizations:*** | जिल्ला वन कार्यालय पर्वत | | |
| ***Start Date:*** | फाल्गुन २०७० | ***End Date*:** | माघ २०७३ |
| ***Project Cost:*** | १९,९९,९३१/- | | |
| ***Location of Project:*** | पर्वत जिल्लाको होश्राङ्गदी र उराम गाउँ विकास समिति | | |

## Background

दक्षिण एसियामा उत्पादन हुने चिराईतो मध्ये नेपालको पूर्वि पहाडवाटमात्रै ५०% भन्दा वढि उत्पादन हुने भए पनि त्यसको परिमाण प्रतिवर्ष गिर्दो देखिन्छ। १९९७ मा नयां दिल्लीमा सम्पन्न दक्षिण एसियाली देशहरुका "विशेषज्ञ परामर्श" (Expert Consultation) ले प्राथमिकतामा सूचीकृत गरेका ३० प्रजातीमा कुरीलो र चिराईतो पनि समावेश छन्।

NARDF को प्राथमिकतामा "औषधी र सुगन्धित विरुवाहरुको खेती, र मूल्य अभिवृद्धि" समावेश छ। तिन वर्षिय अन्तरीम योजनामा "वन तथा जलाधार क्षेत्रको दीगो विकासका लागि जन अधिकार तथा जनसहभागितामूलक पद्धति अपनाई वन, वनस्पति, जडिवुटी, भू तथा जलाधार, वातावरण, जैविक विविधताको व्यवस्थपानका साथै वन उद्यमहरुको विकासद्वारा आय आर्जनका अवसरहरुमा वृद्धि गरी गरिवी न्यूनीकरण गर्ने" उल्लेख छ।

पर्वत जिल्लाका गैर काष्ठ वन पैदावर वढि पाईने ४ क्षेत्रमध्ये ६८ प्रकारका NTFP पाईने गोर्ल्याङ्ग लेक क्षेत्र एउटा हो। गोर्ल्याङ्ग लेकमा पाईने NTFP मध्ये उपलव्धता, वृद्धि र वजार व्यवस्थापनको दृष्टिले सवै भन्दा उपयुक्त ३ प्रजातीहरुमा टीमूर, चिराईतो र कुरीलो रहेका छन। गोर्ल्याङ्ग लेक क्षेत्रमा रहेका ७ वटा सामुदायिक वन मध्येका ३ वटा सामुदायिक वन उपभोक्ता समिति (सा.व.उ.स) ले जडिवुटी खेतीमा सहकार्य गर्न आवेदक संस्थासंग अनुरोध गरेकाछन्।

## Project Summary

पर्वत जिल्लाको सुदूर दक्षिणमा रहेको गोर्ल्याङ्ग क्षेत्रमा व्यवशायिक रुपमा दीगो उत्पादन गर्न सकिने १२ प्रजातीका जडिवुटी तथा गैर काष्ठ बनपैदावर मध्ये टीमूर, कुरीलो र चिराईतो प्रमुख हुन भनेर पहिचान भएको छ। भिरालो पाखा पखेरा भएको गोर्ल्याङ्ग क्षेत्रका ५ गाउँ विकास समिति भित्र ७ वटा सामुदायिक वन (सा.व.) मध्ये ३ वटा (गोर्ल्याङ्ग, सातपत्रे तथा सिरवाने लिसे गैरा)सा.व.हरुले आफ्नो

आफ्नो जलवायू अनुकुलन योजनामा जलवायू परिवर्तनको असरवाट जोखिममा परेका विपन्न समुदायको जिविकोपार्जनमा सुधारकालागि सा.व. क्षेत्रमा व्यवशायिक जडिवुटी खेतीलाई प्राथमिकता दिएकाछन् । सोही अनुकुलन योजनामा उल्लेख भए अनुसार जडिवुटी खेतीमा आवश्यक सहयोग गर्नकोलागि यस संस्थालाई पटक पटक लिखित अनुरोध भई आएको छ । सा.व.हरुको त्यही माग परिपूर्ति गर्ने गरि यो आयोजना प्रस्ताव तयार गरिएको हो ।

यस आयोजनाको मुख्य उद्देश्य पर्वत जिल्लाको सुदूर ग्रामिण क्षेत्रमा रहेका विपन्न र पिछडिएको समुदायलाई हाल उपयोगमा कम जमिनमा व्यवशायिक रुपले जडिवुटी खेती गरि प्रतिवर्ष प्रति परिवार थप रु १५००० आम्दानी गर्न सक्ने बनाउने रहेको छ । सो उद्देश्य पुरा गर्न आयोजनाले आयोजना क्षेत्र भित्रका जडिवुटी खेतीकोलागि आफ्नो जमिन भएकालाई आफ्नै जमिनमा र आफ्नो जमिन नभएकालाई सा.व.को निश्चित क्षेत्र कवुलियति वनको रुपमा निश्चित समय उपयोग गरी व्यवशायिक जडिवुटी खेतीद्वारा आय वृद्धि गर्ने अवसर सृजना गर्ने छ । आयेाजनाले व्यवशायिक जडिवुटी खेती गरि जिविकोपार्जनमा सुधार गर्न चाहने किसानलाई जडिवुटी खेती र सो को प्रारम्भिक तहको प्रशोधन सम्वन्धि आवश्यक ज्ञान, सिप धारणा विकास तथा बीउ र विरुवाको उपलव्धतालाई सहज वनाउने छ । त्यसै गरि व्यवशायिक रुपले गरिएको जडिवुटी खेतीवाट उत्पादित तथा सा.व. क्षेत्रमा व्यवस्थित रुपमा संकलन गरिएको जडिवुटीलाई प्रारम्भिक प्रशोधन गरि नियमित रुपमा विक्रि गर्न वजारमा पहुंच वृद्धि गर्नपनि आयोजनाले सहयोग गर्ने छ ।

## Project Purpose/Objectives

यस आयोजनाको उद्देश्य "जडिवुटीको खेती प्रारम्भिक प्रशोधन र वजार व्यवस्थापनद्वारा विपन्न किसानहरुको जिविको पार्जनमा सुधार" रहेको छ । विपन्न किसानहरुको जिविकोपार्जनमा सुधार आउन प्राकृतिक श्रोत साधनमा थप उपयोगको अवसर उपलव्ध गराई उनीहरुको थप आम्दानी हुनै पर्छ । विपन्न किसानहरुले उपयोग गर्न पाउने स्थानिय रुपमा उपलव्ध हुने प्राकृतिक श्रोत भनेको सामुदायिक वनको उपयोगमा नआएका जमिनहरु नै हुन । यस आयोजनाले आयोजना क्षेत्रका २०० जना किसानहरुलाई हाल उपयोगमा नरहेका व्यक्तिका खेती योग्य जमिन वा वन क्षेत्रको खाली जमिनलाई लिजमा उपलव्ध गराई जडिवुटी खेती गर्ने परिपाटी मिलाउने छ । वन क्षेत्रवाट १ रुपैञा पनि आम्दानी गर्न नपाएको विपन्न परिवारले जडिवुटी खेतीवाट औषतमा प्रति परिवार प्रतिवर्ष कम्तिमा १५०००/- रुपैञा थप आम्दानी गर्न सक्ने वनाउने छ । यसवाट ती विपन्न किसानहरुको जिविकोपार्जनमा सुधार गर्ने छ ।

यस आयोजना पर्वतको सूदूर दक्षिणमा रहेको गोर्ल्याङ्ग लेकको उराम र होश्राङ्गदी गा.वि.स. मा पर्ने क्षेत्रमा चिराईतो, कुरीलो, टीमूर लगायत थुप्रै जडिवुटीहरु प्राकृतिक रुपमा पनि पाईन्छन् । प्राकृतिक रुपमा उपलव्ध यी जडिवुटीहरु व्यवस्थित नगर्ने हो भने अनियन्त्रित र अवैज्ञानिक संकलनवाट मासिन सक्ने प्रवल संभावना छ । सतुवा जस्ता जडिवुटीहरु अहिले त्यस क्षेत्रवाट लोप हुने अवस्था छ । प्रस्ताविक आयोजनाले जडिवुटी खेती गर्न तथा प्राकृतिक रुपमा पाईने जडिवुटीहरुको कसरी संरक्षण गरे दीगो आम्दानी गर्न सक्छि भन्ने २०० जना उपभोक्तालाई सिकाउने वुझाउने छ । यसवाट सो क्षेत्रमा उपलव्ध जडिवुटीहरुको संरक्षण भई ति जडिवुटीहरुको सघनता वृद्धि हुने छ । प्राकृतिक रुपमा पाईने जडिवुटीको वैज्ञानिक रुपमा संकलन, प्रारम्भिक तहको प्रशोधन तथा प्याकेजिङ्ग गरि वजारमा विक्रिकोलागि पठाउने परिपाटीवाट पनि विपन्न परिवारले थप आम्दानी गर्न सक्ने छन् । यसवाट जिविकोपार्जनको अन्य विकल्प नभएका विपन्न किसानहरुको जीविकोपार्जनमा सुधार गर्न पनि सहयोग पुग्ने छ ।

## Beneficiaries

आयोजना क्षेत्रमा २६८ परिवार वसोवास गर्दछन् । ति मध्ये १६१ परिवार आफ्नो उव्जनी तथा नियमित आम्दानीले ६ महिना सम्म पनि खान नपुग्ने विपन्न रहेका छन् । बांकी १०७ परिवार आफ्नो नियमित आम्दानी र उव्जनीले ६ महिना भन्दा वढि समय खान पुग्ने मध्यम तथा धनि समूदायका रहेका छन् । जातिय रुपमा हेर्दा ति मध्ये दलित २९ परिवार, जनजाती १४६ र क्षेत्री वाहुन ठकुरी ९३ परिवार रहेका छन् । आयोजनावाट प्रत्यक्ष लाभान्वित हुनेको संख्या २०० जना मध्ये अति गरिव १६१ र ३९ मध्यम तथा धनि परिवारका हुनेछन् । उपसमूहमा वस्ने सदस्य मध्ये ६०% भन्दा वढि महिला रहनेछन् । उनीहरुले जडिवुटी खेती गर्ने ज्ञान, सिप, धारणा विकास गरी आफ्नो जमिन वा सा.व.वाट प्राप्त जमिनमा सो को खेती एवं विक्रि गरी लाभान्वित हुनेछन् । खेती गर्न नचाहने उपभोक्ताले पनि सा.व. क्षेत्रका जडि वुटीहरु उपभोक्ता समूहको कार्ययोजनाको परिधि भित्र रही दीगो रुपमा संकलन तथा विक्रिवाट लाभान्वित हुनेछन् ।

आयोजना अवधिमा गोल्र्याङ्धाम नि.मा.वि.ले आफ्नो जग्गामा जडिवुटी उत्पादन स्थल निर्माण गरि जडिवुटी उत्पादन तथा विक्रि गरी आफ्नो रणनैतिक योजनामा उल्लेख भए अनुसारको विकास गर्न आवश्यक श्रोत नियमित रुपमा जुटाउन सक्नेछन् । विद्यालयको जडिवुटी उत्पादन स्थलमा विद्यार्थीहरु जडिवुटी खेती सम्वन्धि शैद्धान्तिक तथा व्यवहारीक ज्ञान, सिप सिक्न पाउने छन् । यसवाट उनीहरु विद्यालयको अध्ययन पश्चात आँफैले जडिवुटी खेती गरी जिविकोपार्जन गर्न सक्नेछन् । आयोजना क्षेत्र वाहिरका जडिवुटी खेती गर्न इच्छुक व्यक्तिले पनि सिकेर आफ्नो जमिनमा पनि जडिवुटी खेती गर्ने अवसर पाउने छन् । संचार माध्यमवाट प्रसारीत सामाग्री तथा आयोजना क्षेत्रका किसानहरुसंग सरसल्लाह लिई जडिवुटी खेती गरि लाभान्वित हुन सक्नेछन् ।

जडिवुटीलाई औषधिको रुपमा उपयोग गर्ने उपभोग कर्ता, प्रशोधन गर्ने उद्यमी, प्रशोधन गर्ने श्रमिक तथा जडिवुटी व्यापारीहरु पनि आयोजना क्षेत्रमा उत्पादित जडिवुटीवाट आफ्नो व्यवशाय विकास गरि लाभान्वित हुन सक्नेछन् ।

## Targeted Out puts and Objectively Verifiable Indicators (OVIs)

1. **Output 1 : किसानहरुको जडिवुटी खेती, संरक्षण तथा सुरक्षित संकलन तथा प्रशोधन सम्वन्धि ज्ञान सिप धारणा विकास भई व्यवहारमा लागु गरि रहेका हुनेछन् ।**
   - आयोजनासंग प्रत्यक्ष रुपमा संलग्न कम्तिमा २०० किसान परिवारले कम्तिमा २ रोपनी जमिनमा चिराईतो, कुरीलो र टीमूरको खेती गरि औषतमा प्रति परिवार १०० केजी जडिवुटी उत्पादन गरि रहेका हुनेछन् ।
   - आयोजना क्षेत्रका ३ वटै सामुदायिक वन समूहले आफ्नो सामुदायिक वन क्षेत्रमा विपन्न गरीव उपभोक्ताहरुकोलागि जडिवुटी खेती गर्न कवुलियती वनको रुपमा जग्गा उपलव्ध गराई जडिवुटी खेती गर्न लगाई रहेका हुनेछन् ।
2. **Output 2 : आयोजनाक्षेत्रमा उत्पादित/ संकलित जडि वुटीहरुको वजार सुनिश्चित भएको हुने छ ।**
   - आयोजना क्षेत्रवाट प्रतिवर्ष चिराईतो ५ मे.टन, कुरीलो १२ मे.टन र टीमूर ३ मे.टन औषधि कम्पनि वा जडिवुटी विक्रेतालाई निर्धारीत मूल्यमा विक्रि गर्ने व्यवस्था भएको हुनेछ
   - आयोजना क्षेत्रमा उत्पादित हुने जडिवुटीको घर घरमा गर्न सकिने स्तरको सरसफाई तथा प्रशोधन प्याकेजीङ्ग पश्चात वजारमा पठाउने परिपाटी स्थापित भएको हुनेछ ।

**3. Output 3: सफल र अनुकरणीय उपलब्धिहरुको प्रचार प्रसार भएको हुनेछ ।**

- आयोजना क्षेत्र वाहिरका कम्तिमा १ सामुदायिक वन का ५० उपभोक्ताहरुले आफ्नो सामुदायिक वनमा पनि जडिवुटी खेती गर्न शुरु गरेका हुनेछन् ।
- आयोजना क्षेत्र वाहिरवाट जडिवुटी खेती सम्वन्धि अध्ययन अवलोकन गर्न वर्षमा कम्तिमा ४ समूह आयोजना क्षेत्रमा अवलोकनकोलागि आई रहेका हुनेछन् ।

## Up-scaling Pathways

यस आयोजनाको उद्देश्य नै ग्रामिण क्षेत्रका विपन्न परिवारको जीविकोपार्जनमा सुधार गर्ने रहेको छ । विपन्न गरीवहरुको जीवन स्तर उठाउन उनीहरुलाई नियमित रुपमा आम्दानी भई रहने अवस्था हुनु पर्छ । पर्वत जस्तो पहाडि जिल्लामा आम्दानीकोलागि प्राकृतिक रुपमा उपलव्ध तिन "ज"(जंगल, जमिन, जल) मध्ये एकको सदुपयोगहुनै पर्छ । गरीवहरुसंग खेतीयोग्य जमिन अनुपलव्ध वा भएको पनि रुखो पाखोमात्र हुने हुनाले अर्को विकल्प खोज्नै पर्छ ।

गरीवहरुलाई जिविकोपार्जनमा सुधार गर्न आवश्यक पर्ने प्राकृतिक स्रोतको अभाव नहोस भनेर नै सरकारले सा.व.को निश्चित क्षेत्र निश्चित अवधिकोलागि गरीव उपभोक्तालाई उपलव्ध गराउन सक्ने प्राव्धान राखेको छ । आयोजना क्षेत्रका सा.व. क्षेत्रमा प्रशस्त मात्रामा खाली वा अनावश्यक झाडि भएका ठाउंहरु रहेका छन् । ति खाली ठाउंहरुमा पर्याप्त मात्रामा कुरीलो, चिराईतो तथा टिमूर खेती गर्न सकिने अवस्था रहेको छ । टिमूर कुरीलो एक पटक हुर्काए पछि वर्षौसम्म उत्पादन लिन सकिन्छ । चिराईतो र कुरीलोवाट छिटै आम्दानी लिन सकिन्छ । जडिवुटी खेतीवाट वन क्षेत्रको अवस्थामा कुनै प्रतिकुल असर नपार्ने हुनाले अन्य उपभोक्ताहरुवाट पनि विरोध हुदैन । आयोजनामा प्रत्यक्ष रुपमा संलग्न आफ्नो जमिन प्रयाप्त नभएका, जिविकोपार्जनकालागि अन्य स्रोत पनि नभएका गरीवहरुले पनि सामुदायिक वनमा जग्गा लिई नियमित आम्दानी गर्न सक्नेछन् । आयोजना क्षेत्र वाहिरका गरीव किसानहरुले पनि आयोजना क्षेत्रका किसानहरुवाट सिकेर वा सहयोग लिएर आ-आफ्नो ठाउंमा जडिवुटी खेती गरी आय आर्जनद्वारा आफ्नो जीवन स्तर सुधार गर्न सक्नेछन् । यसरी प्रस्तावित आयोजनाले गरीवि न्युनीकरणमा प्रत्यक्ष रुपमा योगदान गर्नेछ ।

## Synopsis of Project Status

### Activities Proposed

| Activities | Progress status |
|---|---|
| १.१ कार्यक्रमवारे जानकारी | |
| १.१.१ जिल्ला स्तरिय गोष्ठि | २०७० फाल्गुनमा सम्पन्न भई सकेको |
| १.१.२ गा.वि.स.स्तरिय गोष्ठि | २०७० फाल्गुनमा सम्पन्न भई सकेको |
| १.२ सा.व.उ.स.संग छलफल कार्यक्रम | २०७० फाल्गुनमा सम्पन्न भई सकेको |
| १.३ उपसमुह गठन तथा परिचालन | |
| १.३.१ समुह अनुशिक्षण तथा उपसमुह गठन | २०७० चैत्रमा सम्पन्न भई सकेको |
| १.३.२ उपसमुह परिचालन | २०७० चैत्रवाट निरन्तर रुपमा सन्चालन भई रहेको |
| १.४ टीमूर, कुरिलो र चिराईतोको खेती संरक्षण, प्रारम्भिक प्रशोधन तथा प्याकेजिङ्ग तालिम | |
| १.४.१ जडिवुटि उत्पादक अगुवा कृषक तालिम | २०७१ जेष्ठमा सम्पन्न भई सकेको |
| १.४.२ उपसमुह तालिम तालिम | २०७१ जेष्ठ वाट शूरु भईसकेको |

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|---|---|
| १.५ सा.व.मा भएका जडिवुटीको मापन तथा संरक्षण सम्वर्द्धन तालिम | |
| १.५.१ सा.व. क्षेत्रमा जडिवुटीको उपलब्धता र अवस्था मापन | २०७२ कार्तिक/मंशिरमा सन्चालन गर्ने तयारी भएको |
| १.५.२ प्राकृतिक रुपमा रहेका जडिवुटी संरक्षण तथा सम्वर्द्धन तालिम | २०७२ कार्तिक/मंशिरमा सन्चालन गर्ने तयारी भएको |
| १.६ नर्सरी स्थापन र विरुवा उत्पादनमा सहयोग | २०७१ जेष्ठमा ८ स्थान (सुभद्रीखर्क र गेप्ताङ्गमा तयार भई सकेको) |
| २.१ जडिवुटि खेति अभियान | २०७० फाल्गुन वाट निरन्तर रुपमा सन्चालन भएको |
| २.२ अवलोकन भ्रमण, व्यापारीहरुसंग सम्पर्क र संभौता | तेश्रो वर्षको प्रथम चौमासिकमा सन्चालन गर्ने तयारी गरेको |
| ३.१ संचार माध्यमवाट प्रचार प्रसार | २०७१ वैशाखवाट नियमित रुपमा सन्चालन भएको |
| ३.२ श्रव्य दृश्य, सामाग्री उत्पादन तथा वितरण | |
| ३.२.१ ब्रोसर प्रकाशन र होर्डिङ्ग बोर्ड | २०७१ जेष्ठमा सम्पन्न |
| ३.२.२ भिडियो डकुमेन्ट्री निर्माण | २०७१ आषाढवाट परियोजना क्षेत्रमा भएका गतिविधिको रेकर्डिङ्ग कार्य गर्ने तयारी |
| ३.३ अनुगमन तथा मूल्यांकन | |
| ३.३.१ नियमित अनुगमन र चौमासिक प्रगति प्रतिवेदन | २०७० चैत्रवाट माघ वाट परियोजना क्षेत्रमा भएका गतिविधिको नियमित रुपमा अनुगमन गर्ने कार्य भई रहेको |
| ३.३.२ सयुक्त अनुगमन | २०७२ जेष्ठमा सम्पन्न |
| ३.३.३ सार्वजनिक लेखा परिक्षण तथा समापन गोष्ठि | तेश्रो वर्षको अन्तिम चौमासिकमा |
| ३.३.४ अन्तिम मूल्यांकन प्रतिवेदन तयारी र प्रकाशन | तेश्रो वर्षको दोश्रो र तेश्रो चौमासिकमा |

## Achievements (also include Findings in case of Research Projects)

१. आयोजना क्षेत्रमा जडिवुटि खेती गर्नको लागि ८ वटा उपसमुह गठन भई सकेको छ ।

२. आयोजना क्षेत्रका ८५ जना व्यवसायिक रुपमा जडिवुटि खेती गर्न को लागि जमिनको तयारी गरि चिराईतो, कुरिलो र टिमुरको खेती गर्न थालेका छन् ।

३. २५ जना किसान परिवारले गोल्र्याङ सामुदायिक वन भित्र खाली रहेको चौरमा सामुहिक रुपमा जडिवुटि खेति गरि रहेका छन् ।

४. आयेाजना क्षेत्रका ८ स्थान (सुभद्रीखर्क, जम्पुर, होश्राङ्गदी र गेप्ताङ्ग उराम) मा कुरीलो र चिराईतोको विरुवा उत्पादन गर्नको लागि नर्सरी स्थापना भई सकेको छ ।

५. आयोजना क्षेत्र भन्दा वाहिरका समुदायले जडिवुटि खेति सम्वन्धि जानकारी लिन सोध खोज गर्न थालेका छन् ।

६. जिल्ला वन कार्यालय, स्थानिय अन्य संघ संस्था र अन्य सरोकारवालाहरुसंग समन्वय गरी कार्यक्रम संचालन गरि रहेको छ ।

## आयोजनाको शीर्षक: 'प्रांगारिक बाली प्रवर्द्धन' आयोजना स्याङ्जा नेपाल

**Project No. :** 1007/2013/014

| | |
|---|---|
| ***Project Coordinator*** | रुकुमदत्त पौडेल |
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| ***Fax*** | फ्याक्स नं. ०६३-४२०६९२ |
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| ***Collaboration/Partners*** | क्याक्मी बचत तथा ऋण सहकारी संस्था लि. दरदी क्याक्मी, स्याङ्जा । |
| ***Duration of Project*** | वि.सं. २०७० देखि २०७३ सम्म (तीन वर्ष) । |
| ***Project Cost*** | • जम्मा लागत रु.२७१५०९५।-<br>• रा.कृ.अ. तथा वि.कोष रु.१९९९९९५। ७४%<br>• संस्था को रु ७१५१००। २६% |
| ***Location of Project*** | स्याङजा जिल्लाको चित्रेभञ्ज्याङ् र क्याक्मी गाविस । |

### Project Summary

## Project's background

आयोजना क्षेत्रका मानिसहरु कृषि पेशामा आधारीत भएर पनि परम्परगत खेतीप्रणाली र सोंचका कारण उनीहरुको आर्थिक तथा सामाजिक अवस्थामा अपेक्षित सुधार आउन सकेको छैन । जमिनको उत्पादन क्षमता दिनानुदिन घट्दै गएको तर बालीनालीको महत्वपूर्ण खाद्यतत्व त्यतिकै खेर गएको र कतिपय कृषकहरुमा ज्ञानको कमीका कारण दुरुपयोग भैरहेकाले भू-क्षय समेतलाई मद्दत पुगेको अवस्था छ । आयोजनाले यसको समूचित व्यवस्थापन गर्नेछ । गाउँघरबाट बजारतिर कृषि उपजहरु लगेर आयआर्जन गर्नु पर्नेमा बजारबाट तरकारी तथा वीउविजन ल्याउनु पर्ने उल्टो अवस्था विकसित हुँदै गैरहेको छ । एकातिर दिनानुदिन खेतीयोग्य जमिन बाँझिदै छ भने आर्कोतिर बेरोजगारीको कारण भन्दै सारा युवा जनशक्ति बिदेसीने गरिरहेका छन् । हिजोआज प्रांगारिक वाली प्रवर्द्धनको निम्ति कृषि स्रोत तथा जैविक विविधताका परम्परागत हाम्रा स्रोत गाउँघरमा नगन्य मात्रमा कताकति देख्न पाईन्छ । मादले काँक्रो, सागे तथा शरादे सीमी, कार्तीके बोडी आदि जस्ता स्रोत सङ्कटमा परिसके । बजारमा हाईब्रिड जातका वीउ आयत गरिएतापनि अति महङ्गा छन् जसका कारण साना किसानको पहुंच पुग्दैन र उपयुक्त मौसममा खोज्दा एग्रोभेटहरुमा पाईदैन । यो तितो यथार्थलाई हृदयङ्गम् गरी स्थानीय स्रोत, साधन, प्रविधि र सामाग्रीमा आधारित रहेर यो आयोजना सञ्चालन गरिएको छ । यहाँका समस्या र सम्भावनाको विश्लेषण गर्दा यसले उल्लेखित प्रांगारिक वाली प्रवर्द्धनको लागि कृषि स्रोत एवं कृषि जैविक विविधतामा देखिएका जटिलता हरुलाई संबोधन गरी समस्याहरुलाई न्युनिकरण गर्नेछ । यस क्षेत्रमा यस प्रकारका आयोजनाहरु हालसम्म कार्यन्वयन भएको अवस्था छैन । यो आयोजनामा तर्जुमा गरिएका क्रियाकलापहरुले कृषकहरुमा उत्साह ल्याउनुको साथै पहिले गरिएका कार्यक्रमलाई निरन्तरता दिन सकिनेछ । यो आयोजनाले यहाँका लक्षित वर्गहरुको लागि ज्यादै महत्वपूर्ण अवसर सृजना गर्नेछ र तर्जुमा गरिएका क्रियाकलापहरुले कृषकहरुमा उत्साह ल्याउनुको साथै आयआर्जनमा थप टेवा पुग्ने तथा गरिएका कार्यक्रमलाई निरन्तरता दिन सकिनेछ ।

## Main purpose/objectives,

१. कृषकहरुको प्रांगारिक वाली प्रवर्धन क्षमता अभिबृद्धि गर्ने ।

२. कृषकहरुमा कृषि उद्यमशिलता विकाश गरी आय आर्जनमा बृद्धि गर्ने ।

## Expected beneficiaries from the project

| जम्मा समुह | जम्मा कृषक | लैङ्गीक | | समाबेशी | | | | | | जम्मा |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | दलित | | जनजाती | | अन्य | | |
| | | महिला | पूरुष | महिला | पूरुष | महिला | पूरुष | महिला | पूरुष | |
| १८ | ४५० | २३८ | १८२ | ५४ | २१ | १४६ | ९६ | ६८ | ६५ | ४५० |

कार्यक्षेत्रका थप २७०० जना अप्रत्यक्ष लाभान्वीत हुनेछन ।

### Objectively Verifiable Indicators (OVIs)

**उद्धेश्य नं. १. कृषकहरुको प्रांगारिक वाली प्रवर्धन क्षमता अभिबृद्धि गर्ने ।**

- लक्षित समूहका ४५० जना सदस्यहरुको गोठेमल व्यवस्थापन तथा गंहुत सङ्कलन र सदुपयोग क्षमता अभिबृद्धि हुनेछ ।
- ७२ जनाको कम्पोष्ट तथा झोलमल तयारी र वाली संरक्षणमा घरेलु उपायको बारेमा क्षमता अभिबृद्धि भएको हुनेछ ।
- १९८ जनाको करेसाबारी स्थापना र व्यवस्थापन क्षमता अभिबृद्धि भएको हुनेछ ।

**उद्धेश्य नं.२. कृषकहरुमा कृषि उद्यमशिलता विकाश गरी आय आर्जनमा बृद्धि गर्ने ।**

- करेसाबारीको तरकारी उपभोग गरी प्रति समूह सरदर बार्षिक रु.६६०००।- खर्च कटौती भएको हुनेछ ।
- तरकारी बिक्रिबाट प्रति समूह सरदर बार्षिक रु.८००००।- का दरले थप आम्दानी गरेका हुनेछ ।
- दुई गाविसमा एक/एक वटा बजार समनवय समिति गठन भएका हुनेछन् ।
- ३६ जनाले बार्षिक प्रगतीको बारेमा जानकारी हासिल गरि बार्षिक कार्ययोजना तयारीको लागि पृष्ठपोषण गरेका हुनेछन् ।
- दुई गाविसमा सामाजिक परिक्षण तथा सार्वजनिक सुनुवाई गरिएको हुनेछ ।
- समग्र आयोजनाको भिडियो डकुमेन्ट्री तयार भएको हुनेछ ।
- आयोजनाबारे जानकारीको लागि आयेजना स्थलमा होडिङ्बोर्ड राखिएको हुनेछ ।
- कार्यक्रमको नियमित अनुगमन तथा बार्षिक रुपमा संयुक्त अनुगमन तथा परियोजनाको अन्तिम मूल्याङ्कन गरिएको हुनेछ ।
- बार्षिक रुपमा आयोजनाको उपलब्धी, असर तथा प्रभावको समिक्षा प्रतिवेदन तयार गरि सरोकारवाला निकायमा पेस गरिएको हुनेछ ।

### Project Outputs

आयोजना तीन बर्षको भएपनि हाल सम्म निम्न उपलब्धी हांसिल गर्न सफल भएको छ ।

- दुई गाविसमा कृषि बाली र पशुपालनको अवस्थाको अभिलेख तयार गरिएको ।
- दुई गाविसमा प्रत्येक वडा वाट २५ जनाको दरले १८ समूह गठन गरिएको ।

- ३०५ जनाको कम्पोष्ट, गहुत तथा झोलमल तयारी गहुंत सङ्कलन र सदुपयोग सम्वन्धी क्षमता अभिवृद्धि भएको ।
- ५ समूहमा करेसाबारी व्यवस्थापन क्षमता अभिवृद्धि भएको ।
- ३६ जनाको व्यवसायिक तरकारी उत्पादन क्षमता अभिवृद्धि भएको ।
- १२ जनाले नमुना भकारो सुधार गरेका ।
- २४ जनाले व्यबसायिक तरकारी खेती गरेका ।
- १२३ जनाले प्राङगारिक तरकारी उत्पादन का लागि करेसाबारी स्थापना गरेका ।

## Upscaling pathways

प्रस्तावित अयोजनाका क्रियाकलापहरुको कार्यान्वयन समुहगत रुपमा सञ्चालन हुने गरी तर्जुमा गरिएको छ । लक्षित गाविसहरुमा कृषकसमूह गठन गरी आयोजना कार्यन्वयन गर्न लागिएको छ । दुई गाविस का कुल १८ वटै वडाका कृषकहरुको भेला वाट एक समूहमा २५ जना कृषक सहभागि गरि कुल ४५० जना कृषकहरु कार्यक्रममा संलग्न रहेकाछन । १८ वटै समूका ४५० जना कृषकलाई गोठेमल ब्यवस्थापन र गहुत सङ्कलन र सदुपयोग क्षमता अभिवृद्धि गरिनेछ । १८ समूहका प्रति समूह चार चार जना गरी जम्मा ७२ जनालाई कम्पोष्ट तथा झोलमल तयारी क्षमता अभिवृद्धि गरिनेछ । १८ समूहका प्रति समूह चार चार जना गरी जम्मा ७२ जनालाई व्यवसायिक तरकारी खेती गर्ने क्षमता अभिवृद्धि गर्नुको साथै वीउ विजन एवं कृषि औजार उपलब्ध गराईनेछ । १८ समूहका प्रति समूह चार चार जना गरी जम्मा १८९ जनालाई करेसाबारी स्थापना र ब्यवस्थापन बारे क्षमता अभिवृद्धि गराई मौसमी तरकारी सीमी, काउली, रायो र मुलाको वीउ उपलब्ध गराई प्रांगारिक खेतिको लागि प्रोत्साहन गरिने छ । उद्देश्य नं. १ ले सम्वन्धीत विषयमा ज्ञान, सीप र धारणमा परिवर्तन गरी क्षमता अभिवृद्धि गर्ने तथा उद्देश्य नं. २ ले उनीहरुलाई आवश्यक पर्ने प्रविधि, श्रोत तथा औजार सामाग्री उपलब्ध गराउने छ । प्राप्त बस्तु एवं स्थानीय अवसरहरुको उपयोग गरी आफ्नै अभ्यासमा खेतबारीमा स्रोत संरक्षण तथा कृषि जैविक विविधता प्रवर्द्धन बाट प्रांगारिक खेती गरी आयअर्जनमा वृद्धि गर्ने गरी क्रियाकलापहरु सञ्चालन गरिएको छ ।

## Synopsis of Project Status

## Targeted Outputs:

**प्रतिफल १.१.** दुई गाविसमा १८ समूहका ४५० जना साना किसानले कृषि बालीको लागि स्थानीय स्रोत ब्यवस्थापन सम्वन्धी ज्ञान, सीप हासील गरेका हुनेछन् ।

**प्रतिफल १.२.**१८ समूहमा आवद्ध कृषकहरुको माटोको गुणस्तरमा सुधार एवं संरक्षण खेतीपातीका प्रविधिहरु प्रवर्द्धन भएका हुनेछन् ।

**प्रतिफल २.१.** १८ समूहमा कृषि स्रोत परिचालन तथा करेसावारी र व्यवसायिक तरकारी बाली ब्यवस्थापनको निम्ति आर्थिक तथा प्राविधिक सहयोग प्राप्त गरी आय आर्जनमा वृद्धि गरेका हुनेछन् ।

**प्रतिफल २.२.** १८ वटा समूहमा प्रांगारिक बाली प्रवर्द्धन तथा ब्यवस्थापनको प्रभाव बाट प्रांगारिक बाली प्रवर्द्धनका असल प्रविधिको अनुसरण गर्ने कृषकहरुको संख्यामा बृद्धि भएको हुनेछ ।

## Activities Proposed:

| Activities | Activity status | Remarks |
|---|---|---|
| १.१.१ कार्यक्रम अभिमुखिकरण गोष्ठी<br>१.१.२ कृषक समूहको गठन तथा पुनर्गठन<br>१.१.३ कृषक समूह परिचालन<br>१.१.४. आधारभुत सर्भेक्षण<br>१.१.५ गोठे/झोलमल/गंहुँत र घरेलु विषादी तयारी तथा व्यवस्थापन तालिम | • २०७१ बैसाखमा सम्पन्न<br>• २०७१ बैसाखमा सम्पन्न<br>• सञ्चालित<br>• २०७१ ज्येष्ठमा सम्पन्न<br>• १२ समूहमा सम्पन्न ६ मा सञ्चालित | • १८ समूह |
| १.२.१ करेसा बारी व्यवस्थापन तालिम<br>१.२.२ व्यवसायिक तरकारी उत्पादन तालिम<br>१.२.३ परिक्षण प्रदर्शन (झोलमल, गोठेमल,गहुँत, घरेलु विषादी) | • ५ समूहमा सम्पन्न २ मा सञ्चालित<br>• ४ समूहमा सम्पन्न ४ मा सञ्चालित<br>• सञ्चालित | |
| २.१.१ नमुना गोठे मल व्यवस्थापनमा सहयोग<br>२.१.२ गंहुँत/झोल मल/घरेलु विषादी व्यवस्थापनमा सहयोग<br>२.१.३ करेसा बारी व्यवस्थापन मा सहयोग<br>२.१.४ व्यवसायिक तरकारी उत्पादनमा सहयोग | • १२ जनामा सम्पन्न २४ मा सञ्चालित<br>• १२ जनामा सम्पन्न २४ मा सञ्चालित<br>• १२३ जनामा सम्पन्न ७५ मा सञ्चालित<br>• २४ जनामा सम्पन्न ४८ मा सञ्चालित | |
| २.२.१ बजार समन्वयमा सहयोग<br>२.२.२ बार्षिक समिक्षा एवं योजना तयारी कार्यशाला र अन्तिम समिक्षा गोष्ठी<br>२.२.३ सामाजिक परिक्षण एवं सार्वजनिक सुनुवाई<br>२.२.४ भिडियो डकुमेन्ट्री तयारी<br>२.२.५ होडिङ बोर्ड व्यवस्थापन<br>२.२.६ कार्यक्रमको संयुक्त अनुगमन<br>२.२.७ कार्यक्रमको मुल्यांकन<br>२.२.८ कार्यसम्पादन अन्तिम सर्वेक्षण<br>२.२.९ प्रगती प्रतिवेदन तयारी र पेश | • सञ्चालित<br>• सञ्चालित<br>• सञ्चालित<br>• काम बांकी<br>• सञ्चालित<br>• दुई पटक सम्पन्न २ पटक सञ्चालित<br>• काम बांकी<br>• काम बांकी<br>• सञ्चालित | |

## Achievements (also include Findings in case of Research Projects)

- १८ वटा कृषक समूहको गठन, पुनर्गठन गरि परिचालन भएका
- एक पटक आधारभुत सर्भेक्षण गरिएको ।
- ३०५ जनाले गोठे/झोलमल/गंहुत र घरेलु विषादी तयारी तथा व्यवस्थापन तालिम प्रप्त गरेका ।

- १२३ जनाले करेसा बारी व्यवस्थापन तालिम प्रप्त गरेका ।
- ३६ जनाले व्यवसायिक तरकारी उत्पादन तालिम  प्रप्त गरेका ।
- ९ जनाले झोलमल, गोठेमल, गहुत, घरेलु विषादी सम्बन्धी परिक्षण प्रदर्शन गरेका ।
- कृषि बिकास कार्यालय पशुबिकास कमर्यालय बाट नियमित प्राबिधिक सहयोग उपलब्ध भएको ।

| | |
|---|---|
|  |  |
| २०७१ भाद्र २२ गतेदेखि २५ गतेसम्म भएको गोठेमल, गँहुत तथा घरेलु विषदी तयारी तालिमका सहजकर्ता एवं सहभागि क्याक्मी गाविस वडा नं. ५ स्याङ्जा | २०७१ फाल्गुण महिनामा भएको संयुक्त अनुगमनका क्रममा क्याक्मी गाविस वडा नं ७ का कृषकहरुसँग अन्तरक्रिया गर्दै सरोकारवालाहरु |

# Project Title: Promotion of organic vegetable production and marketing for income generation in Siraha District

**Project No. :** 1008-2070/71

| | |
|---|---|
| ***Project Coordinator*** | Mr. Satyanarayan Sah |
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| ***Collaboration/Partners*** | District Agriculture Development Office (DADO), Siraha |
| ***Duration of Project*** | Two years (March, 2014-February, 2016) |
| ***Project Cost*** | NRs 19, 96,032.00 |
| ***Location of Project*** | Dhangadhi, Fulkaha Katti and Bishnupur Katti VDCs of Siraha District |

## Project Summary

## Background:

Use of chemical fertilizers as well as synthetic pesticides is commonly practiced in commercial vegetable production for higher productivity. These chemicals used in fresh vegetable production persist for a long time with different toxic residues, which might directly or indirectly be hazardous to human health. Many evidences suggest a series of health problems due to overuse of chemical fertilizers as well as synthetic chemical pesticides. The risks to human health caused by pesticides as well as inorganic fertilizers have widely been researched, but residual chemical risks to human health as perceived by the farmers is one area that has so far got little attention, which is particularly true in developing countries.

Similarly, in Nepalese context, majority of farmers only know that chemical fertilizers and chemical pesticides can produce more yield and control insects and pests respectively but they are not aware of the hazardous effects of these chemicals to their health. Also, regular use of inorganic fertilizers and chemical pesticides leads towards the depletion of organic matter from soil and also reduction in beneficial micro flora and fauna respectively. Other consequences from the use of these inorganic formulations are pollution in air and ground water.

Siraha district possesses 73913 ha of agricultural land of which only 60757 ha land is being used for cultivation. About 80.52 percent population has agriculture as a main occupation and 31.82 % resident survive below poverty line in the district (DADO, Siraha, 2065). In proposed sites *(Dhangadi, Fulkaha Katti and Bishnupur Katti of Siraha*), high value green vegetables as cabbage, cauliflower, tomato, brinjal, chilli, beans, gourds and okra etc are the major source of household

earning. However, the use of pesticides and chemicals are highest in these vegetables especially in off season cultivation. Some indigenous knowledge and skills have been equally practiced in the proposed sites for vegetable production. Thus, encouragement to these areas for organic vegetable production would be highly advantageous. At this time, Government has thrust in organic production of agricultural commodities and prioritized in all policies and programs. Thus, this project has been implemented in the proposed sites in order to raise the socio-economic condition of the people through development and dissemination of organic vegetable production technologies.

## Main purpose:

This project aims to improve the livelihood and socio-economic status of the farmers involved in the organic vegetable production residing in the targeted VDCs of Siraha district. The main purpose of the project is to start organic vegetable production for the disadvantaged groups. The project is imparting the technology regarding organic vegetable production with emphasis on the use of local organic inputs as well as providing information on organic products available in the market.

## Some specific purposes are as follows:

- To organize targeted farmers in groups and support them to adopt organic vegetable production technologies and practices and to produce large volume organic vegetables,
- To aware and improve the knowledge and skills of farmers on post harvest handling especially cleaning, grading and packaging for the improvement in quality and marketability of vegetables,
- To promote marketing of organic vegetables by establishing linkages of producers with traders.

## Beneficiaries:

300 disadvantaged and low income farmers of the project locations are the primary target groups of the proposed interventions of which are the women farmers. Beside 300 direct beneficiaries, there will be about 1500 indirect beneficiaries to take advantage from spill over effect of project activities and of course many consumers will be benefited from the use of organic vegetable products at the same time. The participants of the project VDCs selected as follows on the basis of field survey of their population living there.

| VDCs | No. of Farmer groups | Dalit | | Aadibasi (Tharu) | | Others | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | Male | Female | Male | Female | Male | Female | Male | Female |
| Dhangadhi | 4 | 20 | 10 | 15 | 10 | 25 | 20 | 60 | 40 |
| Fulkaha Katti | 4 | 30 | 20 | 10 | 10 | 15 | 15 | 55 | 45 |
| Bishnupur Katti | 4 | 30 | 20 | 10 | 10 | 15 | 15 | 55 | 45 |
| Total | 12 | 80 | 60 | 35 | 30 | 55 | 50 | 170 | 130 |

## Objectively Verifiable Indicators (OVIs):

1.1 12 farmer's groups formed by 1st trimester of the 1st year,

1.2 By the first trimester of the first year, 300 farmers start pre-organic vegetable production,

1.3 By the end of first year at least 300 farmers learnt theoretical and practical knowledge about preparation and use of organic manure,

1.4 By the end of first year at least 300 farmers learnt preparation of organic pesticides by local plant materials,

2.1 By the end the first year, 300 farmers learnt appropriate knowledge and skills on post harvest handling of vegetables,

2.2 By the end of first year at least 300 farmers start post harvest handling of organically produced vegetables

3.1 By the 2nd trimester of 2nd year, organic vegetable producers' cooperative established,

3.2 By the end of the project, farmers' cooperative developed linkages with village and district traders to sell organic vegetables

## Up scaling pathways

For the scaling up of the technologies to the wider scales in terms of the population as well as the area, booklets on vegetable production and marketing and final technical reports will be published and distributed to the farmers in the project area. As much of the non-group farmers are encouraged to visit and learn the technologies from the field demonstration. The information about the project outputs will be made available to government bodies (DADO, NARDF), NGOs, CBOs, and other relevant stakeholders for dissemination through organizing workshops/meetings.

Furthermore, the farmer groups and cooperatives will be encouraged and supported to spread and disseminate generated output collectively to other farmers, farmer groups and cooperative for wider diffusion of the outputs. The farmer groups and cooperative will be viable and effective local organizations for the up scaling of project output.

This project has taken group based approach for the uptake and scaling up of the vegetable production and marketing technologies. It collaborates with all stakeholders such as DADO, and all other concerned stakeholders for implementing project activities which are related to the uptake and scaling up and thereby promotion of the vegetable in the project area.

### Synopsis of Project Status

## Targeted Outputs:

**Output-1:** Farmers organized and organic vegetable production technologies promoted.

**Output-2:** Recommended post harvest handling practices of vegetable promoted.

**Output-3:** Farmers' cooperative established and marketing of organic vegetable started.

## Activities Proposed

| S.N. | Activities | Status | Remarks |
|---|---|---|---|
| 1.1 | Project initiation workshop | Completed | |
| 1.2 | Formation and mobilization of groups | On-going | |
| 1.3 | Baseline survey | Completed | |
| 1.4 | Hoarding board preparation and installation | Completed | |
| 1.5 | Demonstration of organic manure preparation | Completed | |
| 1.6 | Field based training on method of organic vegetable cultivation and management practices (Summer season), preparation of bio-pesticides and identification of natural enemies | Completed | |
| 1.7 | Preparation and distribution of booklets | Completed | |
| 1.8 | Group based nursery bed preparation and seedling raising | Completed | |
| 1.9 | Field preparation and seedling planting | On-going | |
| 1.10 | Training on organic cultivation practices of winter season vegetables | Completed | |
| 2.1 | Field based training on post-harvest handling of vegetables | On-going | |
| 2.2 | Support on packaging materials | Completed | |
| 2.3 | Transformation of the groups into cooperative | Yet to begin | |
| 2.4 | Farmers Field Day cum Exhibition | Yet to begin | |
| 3.1 | Linkage establishment between producers and traders | Completed | |
| 3.2 | Internal and Joint monitoring and evaluation | On-going | |
| 3.3 | Public Hearing and social auditing | Yet to begin | |
| 3.4 | Video documentary preparation | On-going | |
| 3.5 | Post Survey | Yet to beging | |
| 3.6 | Dissemination of project activities and output via FM radio and publication in local language | On-going | |
| 3.7 | Project output Sharing workshop | Yet to begin | |
| 3.8 | Preparation and distribution of reports | On-going | |

Photo 1: Inception Workshop

Photo 2: Nursery Bed

# PROJECT TITLE: ENHANCING FOOD SECURITY OF POOR HOUSEHOLDS THROUGH OFF-SEASON VEGETABLE PRODUCTION AND MARKET PROMOTION IN 3 VDCS OF BAITADI DISTRICT

**Project No. :** 1009/2014/015

| | |
|---|---|
| ***Project Coordinator*** | Mr. Deepak Bhusal |
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| ***Collaboration/Parters*** | District Agriculture Development Office, Baitadi |
| ***Duration of Project*** | 2014 February to 2016 January |
| ***Project Cost*** | NRs. 1999736 |
| ***Location of Project*** | Far Western Development Region, Baitadi District, Hat VDC (Ward Number: 1,2,3,4 and 8), Kotila VDC (Ward Number: 1 and 3), Siddheshwor VDC (Ward Number: 4 and 9) |

## Project Summary

Climatic condition of Baitadi district ranges from sub-tropical to temperate type which offers year round production of potato, cabbage, tomato and others vegetables. Availability of 2680.9 ha of irrigated land is good asset for Baitadi district which could be used for year round production of vegetable. Hat, Kotila, Siddheshwor, the proposed project VDC's of Baitadi is one of the backward areas in terms of socio-economic development. Introduction of off season vegetables production in these areas could increase the level of income and improve the economic status of farmers.

The main purpose of the project is to increase the level of income and improve livelihoods of poor, marginalized and socially deprived farmers by increasing production and productivity of off season vegetables and enhancing competitive business through intervention of recommended post harvest technologies and efficient marketing system.

The beneficiaries of the project would be 60 farmers (50% women and 33% dalits) of Hat, Kotila and Siddheshwor VDCs and other 1776 farmers of these VDCs privileged. Other beneficiaries of the project will be traders who will get fresh vegetables in large quantities from the participant producers and help them to scale up their business leading to small business enterprises development. Equally, local consumers will get good quality fresh vegetables at a reasonably low price produced in their own locality.

## Objectively verifiable indicators

1. Farmers organized and additional 135 mt of fresh vegetables produced each year
2. Post harvest handling and processing of vegetable promoted which increased the price of vegetables by 20-30% by the end of project

3. Soil nutrient status of farmers land identified reduces the cost on fertilizer by 50%
4. Findings published and disseminated through radio, TV, booklets at the end of project period

Organization of workshop and circulation of project completion report at the end of project period

For uptake of the appropriate production and marketing technologies, beneficiaries will be organized and capacitated through their active participation in series of activities such as training, field demonstration of the appropriate vegetable production technologies, workshop and meetings etc. Project outputs will be disseminated to mass through publication of booklet, hoarding board display and documentary. Group will be graduated to cooperative and cooperative production program will be initiated. Farmers from nearby VDC's will be encouraged to visit the sites and learn the technologies.

Moreover, the information about the project outputs will be delivered to governmental bodies, NGOs, CBOs and other relevant stakeholders. Different level of meetings and workshops will be organized for dissemination of project outputs.

## Synopsis of Project Status

Though Baitadi has potential to produce off season vegetables, major portion of vegetables is imported from outside. This is due to low level of income of farmers, lack of motivation and inadequate technical support. Also, Baitadi DADO limited resources can't influence the farmers towards commercialization. Organizing farmers and supporting them through series of field based activities i.e. nursery bed preparation and seedling raising, organic manure preparation, field preparation and seedling planting, day to day care of vegetables etc will motivate farmers to adopt recommended practice of off season vegetable production achieving good harvest from grown vegetables. Such activities not only subsidies the import, also increase the level of income of farmers.

Farmers will be trained for post-harvest of handling of vegetables especially harvesting techniques, cleaning, grading, sort out and packaging to minimize the losses during transportation and marketing of vegetables. Market demand based production plan will be initiated. Marketing co-group in each group will be formed and trained for exploring the potential markets for their product.

Result obtained from soil nutrient testing will help the farmers to apply the necessary deficit nutrients for production of vegetables accordingly. Identified status of soil not only minimizes the cost imposed in application of chemical fertilizer also aware farmers about use and misuse of chemical fertilizer and attracts them towards organic farming.

To assure the quality of vegetables market promoting materials will be distributed to groups. Market promoting materials includes weighing machine and weight, plastic crates and other necessary utensils. Farmers will be trained and supported to develop networking with traders for better marketing of their products. Farmers will be motivated to sell vegetables collectively via cooperative.

## Activities Proposed

| Activities | Activities Status | Remarks |
|---|---|---|
| 1.1 Baseline survey | Baseline survey of proposed VDCs was conducted to collect demographic information. This activity was carried out from 1 March 2014 and was completed in 14 March 2014. | |
| 1.2 Project inception meeting | For delivery of project activities to concerned authorities, project inception meeting was conducted. This activity was conducted in 22 March 2014. | |
| 1.3 Group formation | 3 groups comprising 60 farmers one in each VDCs were formed. This activity was carried out from 6 April 2014 and was completed in 23 April 2014. | |
| 1.4 Soil test campaign for farmers | Total 100 samples (60 from selected farmers and 40 from non-selected) were tested to identify the soil status of farmers. This activity was carried out from 15 May 2014 to 18 May 2014. | |
| 1.5 Nursery bed preparation and seedling raising | This activity will be implemented in 2nd trimester of project period. | |
| 1.6 Organic manure preparation training | This activity will be implemented in 2nd trimester of project 1st year | |
| 1.7 Field preparation and seedling planting | This activity will be implemented in 2nd trimester of project period. | |
| 1.8 Training on day to day care of vegetables | This activity will be implemented from 2nd trimester of project 1st year till end of the project. | |
| 1.9 Post-harvest handling related training | This activity will be implemented in 2nd trimester of project period. | |
| 2.1 Distribution of market promoting materials | This activity will be implemented in 3rd trimester of project1st year. | |
| 2. Graduating the groups into cooperative | This activity will be implemented in 3rd trimester of project end period | |
| 2.3 Linkage with traders | This activity will be implemented in 1st trimester of project end period. | |
| 2.4 Monitoring and evaluation | This activity will be implemented throughout the project period. | |
| 2.5 Public hearing | This activity will be implemented in 3rd trimester of project end period. | |
| 2.6 Hoarding board display | This activity will be implemented in 1st trimester of project end period. | |

| | | |
|---|---|---|
| 2.7 Booklet publication | This activity will be implemented in 3rd trimester of project end period. | |
| 2.8 Documentary making | This activity will be implemented throughout the project period. | |
| 2.9 Post performance survey | This activity will be implemented after completion of project. | |
| 3.1 Preparation and distribution of report | This activity will be implemented throughout the project period. | |

## Achievements

1.1 Baseline survey of proposed VDCs was conducted to collect demographic information. This activity was carried out from 1 March 2014 and was completed in 14 March 2014.

1.2 For delivery of project activities to concerned authorities, project inception meeting was conducted. This activity was conducted in 22 March 2014.

1.3 Three groups comprising 60 farmers (1 in each VDC) were formed. This activity was carried out from 6 April 2014 and was completed in 21 April 2014.

1.4 Total 100 samples (60 from selected farmers and 40 from non-selected) were tested to identify the soil status of farmers. This activity was carried out from 15 May 2014 to 18 May 2014.

# PROJECT TITLE: PROMOTION OF QUALITY PROTEIN MAIZE SEED IN GORKHA DISTRICT

**Project No. :** PP-1010/2013/014

| | |
|---|---|
| ***Project Coordinator*** | Prakash Bastakoti |
| ***Address*** | Gorkha Municipality -5, Gorkha (Temporary),<br>Lekhanath-4, Kaski (Permanent) |
| ***Mobile and Telephone*** | Project coordinator : 9846364340 and Office : 064-420894 |
| ***Fax*** | 064-420894 |
| ***Email*** | bastaiaas@gmail.com and sdscgorkha@gmail.com |
| ***Collaboration/Partners*** | District Agriculture Development Office, Gorkha<br>National Maize Research Program, Rampur, Chitwan<br>Regional Seed Laboratory, Bhairahawa |
| ***Duration of the project*** | March, 2014 to October, 2015 |
| ***Project Cost*** | NRs. 2,128,488 |
| ***Location of Project*** | Taklung, Ghairung, and Fujel VDCs of Gorkha District |

## Project Summary

## Project Background

In rural areas of Gorkha, household diets are dominated by staple foods such as rice and maize, mostly produced at the homestead, while consumption of other foods that would improve dietary quality, such as legumes, vegetables, fruits, and animal source foods, is limited by availability and price. The majority of farm families especially infants, pregnant and lactating women, and elderly persons are suffering from quality protein malnutrition. In order to solve the malnutrition and food insecurity problem of rural areas of Nepal, National Seed Board of Neapal has released a quality protein maize variety i.e. Posilo Makai-1 in 2007. This quality protein maize (QPM) is similar to ordinary maize in terms of production, disease and insect pest tolerance and many other aspects except the nutritional value of QPM. Normally Posilo Makai-1 has 8-12 percent protein. Two amino acids: lysine and tryptophan are nearly doubled in Posilo Makai-1 as compared to ordinary maize. These two amino acids are essential to man and non-regrugrating animals: swine, chicken, fish etc. because they cannot synthesize for their requirements. Posilo Makai-1 has 90 percent protein digestibility of milk protein digestibility while it is only 39 percent in ordinary maize indicating this maize has good digestibility. Thus, this QPM has paramount importance to make the regular diet of rural farm families more balanced (Shah, 2007). This maize could be helpful in developing healthy and quality persons by avoiding quality protein malnutrition in rural areas of Gorkha district. Realizing the role of this QPM variety in nutritional and food security of rural families, it could be widely adopted and produced in Gorkha. But, the adoption of the maize variety is poor because of poor extension program on assuring the availability of quality seed and awareness creation.

## Project Main Purpose

This project will enhance technical, managerial and marketing capability of community based seed production groups and cooperative in partnership with government and collaborating partners resulting quality seed production and marketing that will help to promote QPM in Gorkha, improve food and nutritional security and reduce poverty.

## Expected beneficiaries

The main target beneficiaries will be rural poor farmers involved in CBSP program will get benefit through commercialization of QPM seed. Mainly disadvantage groups (dalit, janjati, and female farmers) are benefited by including them in seed production program and other development activities. The total number beneficiaries will be 95 who will be directly involved in the seed production and demonstration programme. Out of the total beneficiaries, women farmers will be 43 (60%) and all 75 (100%) farmers will be disadvantaged farmers involved. The ultimate beneficiaries will be at least 1000 poor rural farm households whose diets depend on home grown staples with low nutritional quality; they have little access to other sources of nutritious food such as legumes, vegetables, fruits, and animal source foods. As the consumption of QPM will help to make the diet of poor rural farm households nutritionally balanced.

## Objectively verifiable indicators (OVS)

The indicators that can be verified for the measurement of the attainment of the above outputs are presented below;

1.1 At least three seed producer groups will be formed and mobilized in Gorkha district by the end of 2014

1.2 At least one cooperative for production of QPM seed will be formed and registered by the end of 2014

1.3 At least 75 farmers will be trained in QPM seed production program

2.1 At least 30 Mt of QPM seed produced and 20 mt marketed by the end of October, 2015.

2.2 The Household income of the seed producers will be increased by 20% by the end of the project as compared to baseline survey.

3.1 At least 800 ha area in Gorkha district will be covered by QPM by the end of June, 2015.

3.2 Leaflets describing the importance of QPM will be distributed to the farmers of Gorkha district by the end of May, 2015

## Up calling Pathways

Most of the farming communities in the project area lack motivation, technical knowhow and skills in promotion of the seed enterprise in commercial scale. More importantly, farmers lack sustainable and efficient seed production groups and market network for quality QPM seed promotion. In this regards, the seed production program is carried out by farmers group and group

empowerment through training regarding seed production, storage and marketing will make the group sustainable and strong enough to conduct the program after the completion of the project. Merging and graduating the groups into a seed production and marketing cooperative will help in the institutional development for the sustainability of the program. The achievement, impact and success of the project will be disseminated to the all concerned organization through leaflets, reports and video documentary. This will encourage more farmers and stakeholders for the involvement in seed production and marketing. The strong and organized marketing system will be established and the seed production program becomes a sustainable agribusiness. Large number of farmers from different places will get the improved kits and production demonstration of the cultivar. These seed kits and the seeds form demo plot will be the source of planting material for most of them from next year. Farmer to farmer dissemination is most important pathway for up scaling of project outputs. DADO, Gorkha is the principal collaborator in this project and has already agreed to institutionalize and upscale the project outputs. The seed production program will be directly linked with the regular seed production program under DADO, Gorkha. The agriculture technicians from related Agriculture Service Centers will be mobilized in the project activities. It will help institutionalize the project outcomes. The SCDC, Gorkha and DADO, Gorkha will continuously provide technical support to the farmers' group and the seed cooperative after the completion of the project when required.

### Synopsis of Project Status

## Targeted Outputs

At the completion of the project, following outputs will be achieved from this project;

**1. QPM seed producer groups and cooperative established and strengthened**

Sustainable community based QPM seed production system will be established: three farmers' seed production group in three different VDCs will be developed. The farmers' group will be merged and graduated into a seed cooperative. This cooperative will help in coordinating and marketing of seed produced by the farmers' group

**2. Quality QPM seed produced and marketed**

At least 75 farmers involved in seed production and marketing will be benefited by increasing the household income due to additional employment generation and marketing of QPM seed

**3. QPM (Posilo Makai-1) adopted and disseminated in Gorkha District**

Promotion for quick adoption of QPM will be enhanced by rapid uptake of the certified or improved seed by rural farm households. The promotional activities will be carried out from March, 2014 to October, 2015. The area covered by improved maize seeds in Gorkha district will be increased. Similarly production and productivity as well as SRR of maize will also be increased in Gorkha district. The adoption of the cultivar will facilitate in the consumption of the maize by end users after the harvest in the next year. This will be helpful to overcome the malnutrition and food insecurity problem in remote areas of Gorkha district.

## Activities Proposed

| Activities | Activity Status | Remarks |
|---|---|---|
| 1.1 District level orientation workshop | Completed in March Second Week | |
| 1.2. Site selection | Completed in March Third Week | |
| 1.3. Base line survey | Completed in May Fourth Week | |
| 1.4. Groups formation and mobilization | Completed in April First Week | |
| 1.5. Cooperative formation and mobilization | Yet to begin | |
| 1.6. Trainings on group management and record keeping | Completed in April | |
| 2.1 Seed collection and distribution | Completed in March Fourth Week | Insufficient source seed, only 175 kg source seed was available for seed production. Thus seed production program is conducted in only 2 locations. |
| 2.2. Training on seed production techniques | Out of 6, 2 Trainings for 2 groups Completed in April First Week<br>and 2 trainings for 2 groups will be conducted in June Third Week | Out of 6, 2 training for one group will be conducted in April First Week , 2015 and June Third Week, 2015 |
| 2.3. Support for fertilizer management | 50 % Completed in March and the rest Yet to begin | The rest amount of fertilizer will be distributed in March, 2015 |
| 2.4. Market workshop | Yet to begin | |
| 2.5 Field inspection | One inspection completed April first week,<br>the rest inspections Yet to begin | Seed production plot is highly suffered from drought of about 2 month. |
| 2.6 Support for harvesting and storage facility | Yet to begin | |
| 2.7 Seed Certification and labelling | Yet to begin | |
| 2.8 Workshop for Pre-sowing seed contract agreement | Yet to begin | |

| | | |
|---|---|---|
| 3.1 Demonstration of QPM production technology | Ongoing | |
| 3.2 Distribution of mini kit of QPM | Ongoing | |
| 3.3 Production and distribution of advisory leaflets | Yet to begin | |
| 3.4 Radio jingles and notices | Yet to begin | |
| 3.5 Video Documentary Preparation | Yet to begin | |
| 3.6.1 Internal monitoring | Yet to begin | |
| 3.6.2 Joint monitoring | Yet to begin | |
| 3.7 Public hearing | Yet to begin | |
| 3.8 Hoarding board display | Yet to begin | |
| 3.9. District level dissemination workshop | Yet to begin | |
| 3.10 Post Completion Survey | Yet to begin | |
| 3.11 Report Preparation | Yet to begin | |

## Achievements

1. The concerned stakeholders i.e. DADO, DDC representatives, district level political party representatives, VDC secretary, NGO federation representatives, cooperatives and journalists participated in the district level orientation workshop has been oriented about the project activities and outputs. A base line survey in the three project site has been conducted to collect the base line information regarding agrarian conditions and economic status of seed producer farmers.
2. The field of resource poor farmers for seed production and demonstration of QPM has been selected by project team with considering the suggestions of the orientation workshop. Insufficient source seed, only 175 kg source seed was available for seed production. Thus seed production program is conducted in only 2 locations. Because of the availability of insufficient source seed, the seed production has been conducted in 7 hectare land in the first year of the project. In the second year of the project, area under the seed production will be at least 8 hectare meeting the project target 15 hectare by combining the two years' seed production area.
3. Two Community Based Seed Producer (CBSP) groups, each consisting 25 farmers has been formed and mobilized by project team in coordination with District Agriculture Development Office, Gorkha. The capacity of 3 farmers' group in maintaining the group records, meeting minutes and production plans, cost of production, as well as strategy for commercial production has been strengthened. The capacity of 2 farmers' group in quality maize seed production has been strengthened.

## आयोजनाको शीर्षक: व्यावसायीक बेमौसमी तरकारी उत्पादन आयोजना

**आयोजना नं.: PP No. 1011/2013/14**

| | | | |
|---|---|---|---|
| ***आयोजना संयोजक*** | दिना बन्दु पौडेल | | |
| ***ठेगाना*** | ग्रामिण कृषि तथा पशु विकास संस्था नेपाल (RAADO Nepal) | | |
| ***टेलिफोन*** | ९८४७४७४५९०, ९७४७०००२३४,९८४७०८३७०४,९८०२६४७३७९ | | |
| ***इमेल*** | dinabandu_paudel@yahoo.com, dinspaudel@gmail.com | | |
| ***सहयोगी संस्था*** | १) कृषि बहुउद्देश्यिय सहकारी संस्था.लि., मोतिपुर ४, कपिलवस्तु<br>२) जिल्ला कृषि विकास कार्यालय, कपिलवस्तु | | |
| ***आयोजना शुरु मिति*** | २०७० चैत्र | ***आयोजना पूरा हुने अपेक्षित मिति*** | २०७२ फाल्गुन |
| ***आयोजनाको लागत*** | **आयोजनाको जम्मा लागत :- रु ३०,०२,५५९।९१** | | |
| | रा.कृ.अ.तथा वि.कोषको योगदान :- रु १९,९९,९९५।४८<br>सहभागि सस्थाको योगदान :- रु ३,१४,०००<br>लक्षित समुदायको योगदान :- रु ६,२२,४५०<br>कृषि ब.उ.सहकारी संस्था.लि.को योगदान : रु.६६,११४।४३ | | |
| ***आयोजना स्थल*** | कपिलवस्तु जिल्लाको मोतिपुर, वाणगंगा, भलवाड र कोपवा गा.वि.स.हरु | | |

### Project Summarys

आवश्यक उपयुक्त मौसम अघि वा पछि उपयुक्त वातावरणको श्रृजना गरी तरकारी उत्पादन गर्ने प्रविधिलाई बेमौसमी तरकारी खेती भनिन्छ। हाम्रो जस्तो निर्वाहमुखी खेती प्रविधि भएको देशमा बेमौसमी तरकारी खेतीबाट प्रशस्त आम्दानी लिन सकिन्छ, साथै बर्ष भरी रोजगारी प्राप्त गर्न सकिन्छ । उपभोक्ताहरुले महंगै भए पनी बेमौसममा ताजा तरकारी खान पाउछन्। बेमौसमी तरकारीको लागी बजारको समस्या पर्दैन। बेमौसमी उत्पादनबाट किसानहरुमा आत्मविश्वासको विकास भई तरकारी खेतीलाई मुख्य पेशाको रुपमा अपनाउने सम्भावना हुन्छ। मागको तुलनामा अत्यन्तै न्युन आपुर्ति भईरहेको यस जिल्लामा बेमौसमी तरकारीको सम्भावना राम्रो छ।

कपिलवस्तु जिल्लाको ४ वटा गा.वि.स.का कृषि पेशामा निर्भर रहेका २०० जना गरिव, सिमान्त कृषकहरुको तरकारी खेती गर्ने प्रयासलाई थप टेवा दिदै बेमौसममा समेत तरकारी खेती प्रर्वद्धनमा जोड दिई साना किसानहरुको व्यवसायिक बेमौसमी तरकारी उत्पादनबाट प्रतिस्पर्धात्मक क्षमता र आय आर्जनमा सुधार ल्याउने उद्देश्य सहित **"व्यावसायीक बेमौसमी तरकारी उत्पादन आयोजना"** को डिजाईन गरिएको हो। वि.स.२०७२ सम्म व्यावसायीक बेमौसमी तरकारी उत्पादन आयोजना द्धारा लक्षित ४ गा.वि.स.का कृषकहरुको बार्षिक आम्दानीमा २७ प्रतिशतले बृद्धि गरी लक्षित समुदायको जिविकोपार्जनमा सुधार आई खाद्य सुरक्षाको सुनिश्चता, गरिवि निवारण र दिगो कृषि विकास गर्न यस आयोजनाले विविध कार्ययोजना अगाडी वढाएको छ। यस परियोजना संञ्चालन गर्नको लागी सरकारी विषयगत निकाए जिल्ला कृषि विकास कार्यालय, कृषि ब.उ.सहकारी संस्था र कृषक समुहसंग साझेदारीमा परियोजनाको सहभागितात्मक व्यवसायीक योजना तर्जुमा, कार्यान्वयन, अनुगमन र मुल्यांकन गर्ने रणनिति लिएको छ। समुहहरुको गठन/पुनर्गठन, आधारभुत सर्भेक्षण, अभिमुखिकरण गोष्ठि, कृषक तालिम, तरकारी नर्सरी स्थापना,

बेमौसमी तरकारी उत्पादन, विभिन्न कृषि उपकरण वितरण, संकलन केन्द्रको स्थापना, बजार व्यवस्थापन सम्बन्धि तालिम, बजार मुल्य संकलन तथा प्रकासन, कृषक दिवस, उत्पादन प्रद्धर्शन, अनुगमन तथा मुल्यांकन, बुकलेट तथा पम्पलेट प्रकासन मार्फत जम्मा **रु.३०,०२,५५९।९१** बजेट परिधिभित्र रही २ वर्ष भित्रमा कार्य सम्पादन गर्ने लक्ष्य यस आयोजनाले लिएको छ। यस आयोजनाका प्रतिफल अन्य समुदायमा विस्तार तथा अनुसरण गराउनको लागि विभिन्न गोष्ठिहरु, कृषक दिवस र एफ.एम तथा भिडियो छायांकन, पम्पलेट तथा बुकलेट प्रकाशन, उत्पादन प्रर्दशन र सार्वजनिक सुनुवाई द्वारा प्रतिफलको प्रचार प्रसार गर्ने रणनिति यस आयोजनाको रहेको छ।

यस कपिलवस्तु जिल्लाका ७१.५२ प्रतिशत जनसंख्या कृषि पेशामा संलग्न भई आफ्नो जिविकोपार्जन यसै पेशा बाट गरिरहेका छन्। यस जिल्लाको सम्पुर्ण भु-भाग तराई क्षेत्रमा रहेकोले यहाँको जलवायु उष्ण किसिमको रहेको छ। कपिलवस्तु जिल्लाको कुल क्षेत्रफलको ४७.७६ प्रतिशत जमिन खेतियोग्य रहेको छ। ८३००० हे. खेतीयोग्य जमिन मध्ये ९८.२४ प्रतिशतमा मात्र खेती भईरहेको छ। खेती गरिएको जमिन मध्ये धान ८८.२९, गँहु ३६.७८, मकै १.७२, दलहन १२.१३, तेलहन ५.०२, उखु ६.४१, प्रतिशत क्षेत्रफलमा खेती भईरहेको छ भने तरकारी खेती ४.११ प्रतिशत क्षेत्रफलमा मात्र भएको छ, जसमध्ये बेमौसमी तरकारी खेतीले कुल तरकारी खेती भएको क्षेत्रफल मध्ये ९.७० प्रतिशत क्षेत्रफल र कुल खेती गरिएको क्षेत्रफलमा ०.४० प्रतिशत क्षेत्रफल मात्र ढाकेको छ। यस जिल्लाको कुल जनसंख्याको लागी बार्षिक रुपमा ६३९३३.७७ मे.टन तरकारीको आवश्यकता पर्दछ भने यस जिल्लामा ५२८०० मे.टन मात्र तरकारीको उत्पादन हुने गरेको छ। यो समग्र जिल्लाको आवश्यकताको तुलनामा १७.४२ प्रतिशत न्युन परिमाण हो। जिल्लामा विशेष गरेर बेमौसममा तरकारीको अभाव भई छिमेकी जिल्ला रुपन्देही र भारतबाट आयात हुने गरेको छ। यस क्षेत्रका कृषकहरु हाल आफ्नो पारिवारिक आवश्यकताको लागी मात्र जि.कृ.वि.का. तथा अन्य संस्था हरुको सहयोगमा प्राप्त भएको बिउ बाट मौसमी तरकारी खेती तर्फ उन्मुख हुन थालेका छन्। गरिव, सिमान्त कृषकहरुको उक्त प्रयासलाई थप टेवा दिदै बेमौसममा समेत तरकारी खेती प्रर्वद्धनमा जोड दिई साना किसानहरुको व्यवसायिक बेमौसमी तरकारी उत्पादनबाट प्रतिस्पर्धात्मक क्षमता र आय आर्जनमा सुधार ल्याउने उद्देश्य सहित यो आयोजनाको डिजाईन गरिएको हो।

मौसममा अधिकांश कृषकहरुले तरकारी उत्पादन गर्ने भएकोले यस क्षेत्रमा मौसममा तरकारीको अभाव नहुने भएपनी बेमौसममा तरकारी उत्पादन कम हुने भएकोले बार्षिक २०-२२ करोड रुपैयाको तरकारी छिमेकी देश भारत बाट आयात गईरहेको छ। तरकारी उत्पादनको लागी जिल्ला कृषि विकास कार्यालयले नियमित कार्यक्रम अनुसार व्यावसायीक तरकारी बिकास आयोजना अन्तर्गत क.व.न.पा., गजहेडा, धनकौली, पटना, निग्लिहवा, हथौसा, तिलौराकोट, बाणगंगा, गोटिहवा, मोतिपुर, बेदौली, सिहखोर, बासखोर, नन्दनगर, बिजुवा, विरपुर, सिसिहवा, महाराजगंज, तितिर्खि, सौरहा, हरिहरपुर, महेन्द्रकोट, गा.वि. स. हरुमा १७२५ हे. क्षेत्रफलमा तरकारी खेतीको लागी सहयोग गरिरहेको छ। त्यसै गरी यु.एस.ए.आई.डी.र प्याक्टको आर्थिक सहयोगद्धारा समेत विभिन्न स्थानमा समय समयमा विभिन्न स्थानिय संस्थाहरुले आयोजना संचालन गरिरहेका छन्। यसरी तरकारी खेतीको लागी सरकारी, सहकारी, गैह्र सरकारी र निजि क्षेत्रबाट पहल भएपनी बेमौसमी तरकारी उत्पादन तर्फ खासै प्रगति भएको पाईएको छैन।

यस क्षेत्रको पुर्व पश्चिम राजमार्गको छेउ छाउको वस्ति विस्तारै नगरउन्मुख तिर विकास भईरहेको अवस्थामा तरकारीको माग अत्याधिक वृद्धि भएकोले यहाँका गरिव तथा सिमान्त कृषकहरु लाई बेमौसमी तरकारी खेतीमा व्यावसायीक रुपले संलग्न गराई उत्पादित तरकारीको सहकारीको माध्यम बाट संकलन केन्द्रमा तरकारी संकलन गरी सहज रुपमा बजार व्यवस्थापन गरी बेमौसमी तरकारी उत्पादनमा संग्लन कृषकहरुलाई व्यावसायी वनाई उनिहरुको जिविकोपार्जनमा सुधार ल्याउने अभिप्रायले यो आयोजनाको विकास गरिएको छ।

(सन्दर्भ सामाग्री : बार्षिक कृषि विकास कार्यक्रम तथा तथ्याङ्क एक झलक आ.व. २०६७/०६८, जि.कृ.वि.का., क.व., कृषि डायरी २०६९, जिल्ला प्रोफाईल ०६८, क.व.)

## Project Goal

व्यावसायीक बेमौसमी तरकारी उत्पादन आयोजनाद्धारा तरकारी उत्पादनमा वृद्धि भई बजारमा पहुचद्धारा लक्षित समुदायको जिविकोपार्जनमा सुधार आई खाद्य सुरक्षाको सुनिश्चता, गरिवि निवारण र दिगो कृषि विकास हुनेछ ।

## Project Purpose/Objectives

साना किसानहरुको व्यवसायिक बेमौसमी तरकारी उत्पादनबाट प्रतिस्पर्धात्पक क्षमता र आय आर्जनमा सुधार ल्याउने ।

## Beneficiaries

यस आयोजनाले कपिलवस्तु जिल्लाका ४ वटा मोतिपुर, वाणंगगा, कोपवा र भलवाड गा.वि.स हरुमा श्रोत साधान नभएका, अन्य सरकारी तथा गैर सरकारी संस्थाहरु बाट सुविधा नपाएका र कृषि पेशामा निर्भर रहेका कृषकहरुलाई लाभान्वित समुदायका रुपमा लिएको छ । यस आयोजनाका क्रियाकलापहरुको कार्यान्वयन विशेष गरेर महिला समूहद्धारा सम्पन्न गरीने भएकोले महिलाहरु यो आयोजनाबाट लाभान्वित हुनेछन् । यस आयोजनामा ४ वटा मोतिपुर, वाणंगगा, कोपवा र भलवाड गा.वि.स. अन्तर्गत सरकारी, गैर सरकारी स्तर र स्वंय आफ्नै पहल बाट गठन भएका तर सेवा र सुविधा नपाई निष्क्रय भएका समूहहरुलाई पनी सहभागी गराइने छ । महिलाहरुको हरेक क्षेत्रमा निर्णय तहमा पुऱ्याउनको लागि यस आयोजनाको तर्जुमा, कार्यान्वयन, अनुगमन, मुल्यांकन, अन्य तालिम तथा गोष्ठिहरुमा पनि महिलाको सहभागितालाई प्राथमिकता दिइने छ । यसरी यो आयोजनावाट प्रत्यक्ष रुपमा ४ गा.वि.स.मा भएका १० वटा समुहमा आवद्ध २०० घरधुरी लाभान्वित हुनेछन्, जसमा ५० प्रतिशत महिलाको सहभागिता रहने छ । यसको साथै ताजा तरकारीको खरिद बिक्रि, बिउ, कृषि उपकरणहरुको बिक्रि वितरणमा संलग्न व्यापारीहरु, विभिन्न प्रकासन तथा प्रसारण बाट प्रविधिको बारेमा जानकारी प्राप्त गरी प्रविधि अवलम्वन गर्ने विभिन्न समुदायहरु र ताजा तरकारीको सुलभ र सस्तो रुपमा प्रयोग गर्ने उपभोक्ताहरु गरी लगभग अप्रत्यक्ष रुपमा १२०० घरधुरी लाभान्वित हुनेछन् ।

## Objectively Verifiable Indicators (OVIs)

- वि.स. २०७२ सम्ममा लक्षित ४ गा.वि.स.का कृषकहरुले गुणस्तरीय तरकारीको बिउ/कृषि उपकरण र कृषि पद्धतिमा पँहुच द्धारा हालको बेमौसमी तरकारीको क्षेत्रफलमा २०० प्रतिशतले (हालको प्रति घरधुरी ०.५ कट्ठा बाट १.५ कट्ठा) वृद्धि हुने छ ।
- आयोजनाको अन्त्य सम्ममा उत्पादकत्वमा ५० प्रतिशतले (हालको १३ मे.टन./हे बाट १९.५ मे.टन./हे.) वृद्धि हुने छ ।
- वि.स. २०७२ सम्ममा लक्षित ४ गा.वि.स.का कृषकहरुले कम से कम बार्षिक रुपमा १८५ मे. टन तरकारी बिक्रि गरेका हुनेछन् ।
- वि.स. २०७२ सम्ममा लक्षित गा.वि.स. मा बेमौसमी तरकारीको व्यवसायीक उत्पादन र बजार व्यवस्थापनद्धारा प्रति घरधुरी वार्षिक रुपमा तरकारी बिक्रिबाट रु. १८,५०० का दरले पारिवारिक आयमा वृद्धि भएको हुनेछ ।
- वि.स. २०७२ सम्ममा लक्षित समुदायका कृषकहरु सम्म बेमौसमी तरकारी खेती प्रविधि तथा आयोजनाका उपलब्धि तथा सिकाईहरु कृषक देखी कृषक सम्म प्रविधि, एफ.एम. द्धारा प्रसारण, विभिन्न प्रकासन, गोष्ठि, कृषक दिवस द्धारा प्रचार प्रसार भई बेमौसमी तरकारी खेतीको व्यापक रुपमा अनुसरण भएको हुने छ ।

## Up-scaling Pathways

आयोजनालाई जवाफदेही, पारदर्शि वनाउनको लागी मोतिपुर गा.वि.स. वडा नं. ६ मा २०७१ बैषाकमा अभिमुखिकरण गोष्ठिको आयोजना गरी कृषक समुदाय लागायत सम्पुर्ण सरोकारवालाहरु लाई आयोजनाका लक्ष्य, उद्देश्य, प्रतिफल, प्रस्तावित क्रियाकलापहरु र कार्यान्वयन विधिको बारेमा जानकारी गराईएको थियो । यसका साथै उक्त कार्यक्रमका अतिरिक्त आयोजनाका अन्य गतिविधिहरु समेत समेटि एफ.एम. बाट कार्यक्रम प्रसारण प्रत्येक चौमासिक रुपमा भईरहेको छ ।

अन्य समुदायमा आयोजनाका प्रतिफल तथा उपलब्धिहरुको आयोजनाका उपलब्धिहरुको प्रचार प्रसार र विस्तार गर्नको लागि एफ.एम. बाट कार्यक्रम प्रसारण, भिडियो छायांकन, बेमौमसी तरकारी उत्पादन प्रविधि सम्वन्धि पम्पलेट तथा बुकलेट प्रकासन तथा आयोजनाका विभिन्न प्रारम्भिक, चौमासिक, वार्षिक प्रगति प्रतिवेदन साझेदार संस्थाहरुको साथै अन्य सरोकारवाला निकाएहरुलाई उपलब्ध गराइएको छ । कृषकहरु माझ प्रतिफलको अनुसरण र विस्तार गर्नको लागि कृषक दिवस आयोजना गरी उत्पादन प्रर्द्धशनको अवलोकनको साथै आयोजना स्थलमा उत्पादन गरीएका विभिन्न बेमौसमी प्लटहरु र आयोजनाका अन्य क्रियाकलापहरुको समेत अवलोकन गराईने छ । यसरी कृषक दिवसमा सहभागी गराउन नसकेका कृषकहरुको लागी एफ.एम. बाट समेत आयोजनाका प्रतिफलहरुको प्रसार गरिने छ, बजार व्यवस्थापनको जिम्मा पाएको साझेदार संस्था कृषि ब.उ.सहकारी संस्था.ले समेत आयोजनाका विभिन्न क्रियाकलाप र प्रतिफलहरुको बारेमा आफ्ना नियमित बचत गर्ने कृषक समुहहरु तथा कृषकहरुलाई र उक्त संस्थाले आयोजना गर्ने विभिन्न गोष्ठी तथा साधारण सभा वाट समेत व्यापक रुपमा प्रविधिहरुको प्रचार प्रसार गर्ने छ । जिल्लाका अन्य संघ संस्थाहरुसंग अन्तर सम्बन्धको विकास र प्रवर्द्धन गर्दै कार्यान्वयनको क्रममा देखीएका समस्याहरुको समाधानको लागी अनुभव साटासाट गरिने छ । बेमौसमी तरकारी बालीहरुको आम्दानी तथा खर्चको अभिलेख प्रत्येक कृषक तथा कृषक समुहहरुले राख्ने पद्दती रहने भएकोले र उक्त खर्च तथा आम्दानीको विवरण अन्य समुदायमा समेत जानकारी गराइने भएकोले समेत आयोजनाका क्रियाकलाप तथा प्रतिफलहरु दिगो रुपमा अनुसरणमा सहायक हुनेछन् ।

## Synopsis of Project Status

## Targeted Outputs:

- बेमौसमी तरकारी खेतीको क्षेत्रफल तथा उत्पादकत्वमा वृद्धि भएको हुने छ ।
- तरकारीको मुल्य श्रृखलामा आवद्ध सरोकारवालाहरु बिच सम्वन्ध स्थापित भई तरकारीको बजार व्यवस्थापनद्वारा विक्रि परिमाणमा बृद्धि भएको हुने छ ।
- आयोजनाका प्रतिफलहरु तथा बेमौसमी तरकारी उत्पादन प्रविधिको प्रसार तथा अनुसरण भएको हुने छ ।

**Project Status Reports: - (२०७२ जेष्ठ सम्म भएको प्रगति )**

| Activities | Progress status | Remarks |
|---|---|---|
| १.१) **अभिमुखिकरण गोष्ठि** | २०७१ बैषाक महिनामा मोतिपुर गा.वि.स. वडा नं. ६ मा सम्पन्न । | |
| १.२) **समुह गठन/ पुर्नगठन** | लक्षित ग.वि.स.हरुमा १० वटा कृषक समुह गठन/ पुर्नगठन गर्ने कार्य २०७० चैत्र मा सम्पन्न | |
| १.३) **आधारभुत सर्भेक्षण** | २०७० चैत्रमा मोतिपुर, भलवाड, कोपवा र बाणगंगाका लक्षित घरधुरीहरुको अधारभुत तथ्यांक संकलन गर्ने कार्य सम्पन्न । | |

| Activities | Progress status | Remarks |
|---|---|---|
| **१.४) कृषक तालिम** | | |
| १.४.१) नर्सरी व्यवस्थापन तालिम | २०७१ बैषाक सम्म १ दिने तालिम ८ पटक संञ्चालन गरि सम्पन्न गरि सकिएको छ । | |
| १.४.१) बाली तथा शत्रुजिव व्यवस्थापन तालिम | २०७१ जेष्ठ/आषाढमा सम्पन्न । | |
| **१.५) तरकारी नर्सरी स्थापना** | २०७१ जेष्ठ /आषाढमा सम्पन्न । | ४ वटा स्थापना गरिएको । |
| **१.६) बेमौसमी तरकारी उत्पादन** | बेमौसमी तरकारी उत्पादन कार्य २०७१ जेष्ठ/आषाढ देखी निरन्तर रुपमा भईरहेको छ । | हाल लक्षित गा.वि.स.मा १० वटा कृषक समूहमा आवद्ध भएका २०० कृषकहरुले काउली २ हे., गोलभेडा २ हे., काका १ हे., लौका १ हे., करेला २ हे. र खुर्सानी २ हे. गरी कुल १० हे. क्षेत्रफलमा बेमौसमीक तरकारी उत्पादन गरेका छन् । |
| **१.७) विभिन्न कृषि सामाग्री तथा उपकरण वितरण** | | २०७१ जेष्ठ देखि कार्यान्वयन गरिने । |
| १.७.१) जैविक मल | जैविक मल वितरण कार्यक्रम निरन्तर रुपमा भई रहेको । | |
| १.७.२) जैविक विषादी | जैविक विषादी वितरण कार्यक्रम निरन्तर रुपमा भई रहेको । | |
| १.७.३) स्प्रेयर | २०७१ आषाढमा सम्पन्न । | |
| १.७.४) हजारी | २०७१ आषाढमा सम्पन्न । | |
| १.७.५) क्रेट वितरण | २०७१ आषाढमा सम्पन्न । | |
| १.७.६) डिजिटल तराजु | २०७१ आषाढमा सम्पन्न । | |
| **२.१) संकलन केन्द्रको स्थापना** | २०७१ आषाढमा सम्पन्न । | |
| **२.२) बजार व्यवस्थापन सम्वन्धि तालिम** | २०७१ आषाढमा सम्पन्न । | |
| **२.३) बजार मुल्य संकलन तथा प्रकासन** | नियमित रुपमा संकलन तथा प्रकाशन भई रहेको । | हाल सम्म ३ पटक प्रकाशन भएको । |
| **२.४) कृषक व्यापारी अर्न्तरक्रिया गोष्ठि** | | २०७२ आषाढमा कार्यान्वयन गरिने । |
| **३.१) प्रदर्शन कार्यक्रम** | २०७१ आषाढ देखि निरन्तर रुपमा संञ्चालन भएको छ । | |
| **३.२) भिडियो छायांकन** | अभिमुखिकरण गोष्ठि देखि नै लगातार भिडियो छायांकन भईरहेको | |
| **३.३) एफ.एम द्वारा प्रसारण** | निरन्तर रुपमा संञ्चालन भईरहेको । | हाल सम्म ३ वटा प्रसारण भईसकेको । |

| Activities | Progress status | Remarks |
|---|---|---|
| **३.४) कृषक दिवस** | | २०७२ आषाढमा कार्यान्वयन गरिने । |
| **३.५) अनुगमन तथा मुल्यांकन** | | |
| ३.५.१) आन्तरिक अनुगमन तथा मुल्यांकन | आन्तरिक अनुगमन आयोजना संयोजक तथा अध्यक्ष बाट निरन्तर रुपमा भईरहेको छ । | |
| ३.५.२) संयुक्त अनुगमन तथा मुल्यांकन | १ पटक भएको । | २०७१ कात्तिकमा प्राविधिक उप समिति, नार्डेफ टिम बाट निरिक्षण भएको । |
| **३.६) बुकलेट तथा पम्पलेट प्रकासन** | २०७१ आषाढमा सम्पन्न । | १००० थान बुकलेट र ४००० थान पम्पलेट प्रकासन भएको । |
| **३.७) प्रतिवेदन प्रकासन :** | निरन्तर | |
| ३.७.१) प्रारम्भिक | २०७१ बैषाक पहिलो हप्ता सम्पन्न | |
| ३.७.२) चौमासिक | निरन्तर | ३ पटक प्रकाशन |
| ३.७.२) वार्षिक | निरन्तर | १ पटक प्रकाशन |
| ३.७.३) फाईनल | | |
| **३.८) सार्वजनिक सुनुवाई** | | |
| **३.९) समन्वयन** | निरन्तर | |
| **३.१०) हस्तान्तरण** | | |

## Achievements:

- यस आयोजनामा १० कृषक समुहहरुका कृषकहरुले समुहमा निक्षेप संकलन गर्ने र सो को तरकारी खेती लगायत अन्य कृषि क्षेत्रको लागी ऋण परिचालन गर्न आवश्यक निति बनाई शुरुवात गरिसकेका छन् ।
- विभिन्न अभिमुखिकरण गोष्ठि तथा कृषक तालिम सम्पन्न गर्ने क्रममा जि.कृ.वि.का. लगायत अन्य लाईन एजेन्सीहरु संग कृषकहरुको सम्बन्ध विस्तार भएको छ । यसका साथै उनिहरुको प्राविधिक, व्यावस्थापकिय क्षमत्ता समेत वृद्धि हुनुका साथै कृषक समुहहरुको संस्थागत सुदृढिकरण समेत भएको छ ।
- नर्सरी व्यावस्थापन तालिमको कारणले कृषकहरुको नर्सरी व्यवस्थापनमा ज्ञान, व्यावहारिक सिप तथा मनोवृतिमा समेत सकारात्मक परिवर्तन आएको छ ।
- विभिन्न कृषक तालिमको कारणले कृषकहरुको बेमौसमी तरकारी उत्पादन तथा बजारिकरणमा ज्ञान, व्यावहारिक सिप तथा मनोवृतिमा समेत सकारात्मक परिवर्तन आएको छ ।
- यस आयोजनामा संलग्न विभिन्न कृषक समुहहरुका कृषकहरुले समुहमा निक्षेप संकलन गर्ने र सो को बेमौसमी तरकारी उत्पादन तथा बजारिकरणमा लागी ऋण परिचालन शुरु गरिसकेका छन् ।
- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स. का २०० गरिब तथा पिछडिएका कृषकहरुले काउली २ हे., गोलभेडा २ हे., काका १ हे., लौका १ हे., करेला २ हे. र खुर्सानी २ हे.गरी कुल १० हे. क्षेत्रफलमा व्यावसायीक रुपमा बेमौसमी तरकारी उत्पादन गरेका छन् ।

- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स.मा १० वटा कृषक समूहमा आवद्ध भएका २०० कृषकहरुले काउली ३१ मे.टन., गोलभेडा ४१ मे.टन., काका १७ मे.टन., लौका २५ मे.टन. हे., करेला २५ र खुसानी ३१ मे.टन. गरी कुल १८५ मे.टन.बेमौसमी तरकारी उत्पादन गरेका छन् ।
- वि.स. २०७२ जेष्ठ सम्ममा लक्षित गा.वि.स.मा १० वटा कृषक समूहमा आवद्ध भएका २०० कृषकहरुले काउली २९.५ मे.टन., गोलभेडा ४१ मे.टन., काका १५ मे.टन., लौका २२ मे.टन. हे., करेला ३९ र खुसानी ३० मे.टन. गरी कुल १७६.५ मे.टन.बेमौसमी तरकारी बिक्रि गरी सकेका छन् ।
- १९.५ मे.टन प्रति हेक्टर उत्पादकत्व अनुमानित गरिएकोमा वि.स. २०७२ जेष्ठ सम्ममा उत्पादकत्व १८.५ मे.टन.प्रति हेक्टर रहेको छ । यसरी हाल सम्म लक्षित उत्पादकत्व भन्दा ५.१२ प्रतिशत उत्पादकत्वमा कमी आएको छ ।
- वि.स.२०७२ जेष्ठ सम्ममा लक्षित गा.वि.स.मा १० वटा कृषक समूहमा आवद्ध भएका २०० कृषकहरुले १७६.५ मे.टन. तरकारी बिक्रि द्वारा प्रति कृषक रु. २१ हजार १८० आम्दानी गरेका छन् ।
- आयोजनाका प्रतिफलहरुको प्रचार प्रसार तथा अनुसरणको लागी आयोजनाका विभिन्न क्रियाकलापहरुको कार्यान्वयनको शुरुवात देखि नै भिडियो छायांकन गर्ने कार्य भईरहेको छ । हाल सम्म १००० कृषकहरुले विभिन्न बुकलेट तथा पम्पलेट प्रकासन बाट र १२०० कृषक घरधुरीले एफ.एम.बाट कार्यक्रम प्रसारण, प्रर्द्धशन कार्यक्रम, अभिमुखिकरण गोष्ठि, कृषक देखि कृषक सम्म बाट बेमौसमी तरकारी उत्पादन प्रविधि सम्वन्धि जानकारी प्राप्त गरेका छन् ।

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| चित्रः अभिमुखिकरण गोष्ठी | सामाग्री वितरण कार्यक्रम | अनुगमन कार्यक्रम |

# PROJECT TITLE: COMMERCIAL PRODUCTION, VALUE CHAIN, AND SUSTAINABLE MARKET DEVELOPMENT OF GINGER IN KAVRE DISTRICT OF NEPAL

**Project No.:** PP-1012/2014/015

| | |
|---|---|
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| ***Collaboration/Partners*** | District Agriculture Development Office, Kavre |
| ***Duration of Project*** | 30 months |
| ***Project Cost*** | NRs 1996032. |
| ***Location of Project*** | Raviopi, Ugrachandinala, Tukuchanala and Nasikasthan sanga VDCs of Kavre in Central Development Region of Nepal. |

## Project Summary

Ginger (*Zingiber officinale*) is one of the most important spices grown in Nepal. It is widely used as a flavoring substance in the food. In addition, it has many medicinal properties. Ginger farming is one of the main sources of cash income for the small farmers of the mid-hills in Nepal including present project area. The net income of farmers involved in ginger cultivation is significantly higher than that of competing crops (paddy, maize, wheat and fresh vegetables). There are high demands of ginger and processed ginger products (SUTHO) in internal and external markets. Despite the opportunities, small holding farmers are deprived from grabbing "window opportunities" due various production, processing (value chain) and marketing constraints in the project area. This project has been designed in aforesaid constraints and backdrop.

The aim of this project is to improve household economy and livelihood conditions of small holding farmers, however, the purpose is to provide an alternative access to additional household incomes through commercial production, value chain and sustainable market development of ginger and ginger products in the project area. The beneficiaries of the project will be small holding farmers with emphasis to women, Dalits, Janajatis and other poor resource base households. The total number of beneficiary households will be 300. The results anticipated from this project include: (i) increment in numbers of ginger based commercial farmers; (ii) increment in coverage (area), production, productivity and processing of ginger and ginger products; (iii) increment in access of ginger farmers to ginger and processed ginger products (SUTHO) based sustainable markets and (iv) wider dissemination of project outputs in and adjacent of the project area.

Each participating household will commercially promote ginger in 5 ropanies of land. The total area under ginger cultivation will be 75 hac. The annual total production of the ginger will be

1097.25 MT out of which 877.8 MT of fresh ginger (20% consumption and 80% marketing) will be annually marketed. 500 additional HHs in and around the project area will adopt commercial ginger farming by the spillover effect of the project intervention. These results will support NARDF's thematic area of crops and horticulture research and extension to reflect user-demand and the need to generate additional household income of the project beneficiaries in the project area. The results of this project will be reported to end-users through preparation and dissemination of IEC materials, output sharing workshop, preparation and broadcasting of audio-visual documentary, organizing public hearing events, personal contact and preparation and dissemination technical series paper and project completion reports and so forth.

### Synopsis of Project Status

## Targeted Outputs:

**Output-1:** Increased numbers of ginger and ginger products based commercial farmers in the project area.

**Output-2:** Increased level of area, production, productivity and processing of ginger and ginger products in the project area.

**Output-3:** Increased access of ginger farmers to ginger and processed ginger products based sustainable markets in the project area.

**Output-4:** Wider dissemination of project outputs in and adjacent of project area.

### Activities Proposed

| Activities | Activity Status | Remarks |
|---|---|---|
| **Output-1:** | | |
| 1.1 Project introductory workshop | Yet to start | |
| 1.2 Selection of project beneficiaries and group organization | Completed in April and May, 2014 | ▪ Community and stakeholder consultations in each program VDC.<br>▪ Group approach orientation trainings provided in each group in the project area.<br>▪ 15 Groups each comprising 20 members disaggregated by gender, caste and ethnicity.<br>▪ 15 lead farmers one each from 15 farmer groups. |
| 1.3 Conduction of baseline survey (BLS) | Yet to start | ▪ Baseline Survey Questionnaire has been recently developed. |
| 1.4 Promotion/strengthening of farmer groups/organization | Yet to start | - |

| | | |
|---|---|---|
| 1.5 Transformation of groups into respective VDC level cooperatives | Yet to start | - |
| 1.6 Linking groups and cooperatives with existing service providers | On going | - |
| 1.7 Internal monitoring of the project | On going | - |
| 1.8 Joint monitoring of the project | Yet to start | - |
| 1.9 Post project assessment | Yet to start | - |
| **Output-2:** | | **-** |
| 2.1 Dissemination, adoption and promotion of high yielding ginger varieties. | Yet to start | - |
| 2.2 Ginger source seed production area development | Yet to start | - |
| 2.3 Provide field level training on improved ginger cultivation technologies | Yet to start | - |
| 2.4 Improvement of suitable on farm processing methods as post harvest operation like washing, sorting, grading, lime treatment. | Yet to start | - |
| 2.5 Provide processing training on processed product development | Yet to start | - |
| 2.6 Promotion of solar dryer technology for processed product development | Yet to start | - |
| **Output-3:** | | **-** |
| 3.1 Carry out ginger based market survey | Yet to start | - |
| 3.2 Organize market management trainings | Yet to start | - |
| 3.3 Provide market information and linking with traders & marketers and linking with traders & marketers. | Yet to start | - |
| 3.4 Inter CBO/Group exchange visits | Yet to start | - |
| 3.5 Development of labeling and certification systems | Yet to start | - |
| 3.6 Development of networks of producer farmers, cooperatives and traders | Yet to start | - |

| Output-4: | | |
|---|---|---|
| 4.1 Preparation and dissemination of IEC materials like brochures, booklets & leaflets. | | |
| 4.2 Output sharing workshop | | |
| 4.3 Preparation and broadcasting of audio-video documentary. | | |
| 4.4 Organize public hearing events for dissemination of project outputs. | Yet to start | - |
| 4.5 Installation of hoarding board | Yet to start | - |
| 4.6 Preparation and submission of technical report (series). | Yet to start | - |
| 4.7 Preparation and submission of project completion report. | Yet to start | - |

## Achievements

- Contract sign with NARDF.
- Appointment of Project Coordinator and Field/Research Assistant.
- Development of ToRs and JDs for the project staff.
- Orientation to the project staff.
- Consultative meetings with stakeholders in each program VDCs.
- Selection of potential wards in Program VDCs.
- Group approach orientations in each selected wards.
- Organization of Ginger producing farmer groups (15 nos).
- Selection of Lead Farmers one each from 156 FGs.
- Development of questionnaire for carrying out Baseline Survey.

# PROJECT TITLE: ENHANCING LIVELIHOOD OF POOR FARMERS THROUGH THE PROMOTION OF SUSTAINABLE GOAT HUSBANDRY

**Project No. :** 1013/2013/14

| | |
|---|---|
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| ***Collaboration/Partners*** | |
| ***Duration of Project*** | Three Years (March 2014 to February 2016) |
| ***Project Cost*** | NRS 1999931 (Nineteen lakh Ninety-nine thousand Nine hundred Thirty-one only) |
| ***Location of Project*** | Dehimandau and Bhaunali VDC of Far Western Development Region, Baitadi, Nepal. |

## Project Summary:

Goat farming plays an important role in the livelihood of rural families. Most of the people living in these rural areas are economically deprived and indigenous goat farming can provide social security, food and cash income, helping to alleviate poverty and hunger. Goats are particularly useful for poor, rural people because they are highly productive and easier to manage that many other animals.Livestock is an integral part of rural livelihoods of Nepal. Buffalo, sheep, goat, pig, chicken and duck are reared for various purposes including meat products in the country (Devkota, 2007; 2010). Among livestock, goats are mostly raised in hills for meat (Kolachhapati and Devkota, 2010). The Baitadi district has 1, 08,288 populations of goat and goat meat production per year is 408 Mt which is insufficient. Government of Nepal has been implemented three years plan that well covers the livestock sector emphasizing production and consumptions of milk and meat by its people. Goats can withstand heat stress and can endure prolonged water deprivation. They have additionally great adaptability to adverse climatic and geophysical conditions, where cattle and sheep cannot survive. Moreover goats can efficiently utilize poor quality forage; their peculiar feeding habits make it easier to choose diets to meet their requirements. It is also learned that farmers and pastoralists are increasingly relying on goats as means of survival and a way of boosting their income (Peacock, 2005).

Over the years, goats have made a significant contribution to rural economy in the form of meat and manure. In the absence of adequate knowledge on goat husbandry, improved breeds and its effective marketing, its importance becomes overshadowing. Thus, the small marginalized farmers have to develop the tendency to increase their herd size to generate additional income. Realizing this fact, the project is focusing on goat husbandry to enhance livelihood of poor farmers. Realizing the

importance of goat husbandry in rural economy, decided to take up genetic upgrading of low productive, non-descript goat through providing cross breeds. This project will introduce improved buck, forage and fodder, supporting to improve shed house, co-ordinate with the local stakeholders as well as establishment of effective marketing system. Thus the project tries to organize 60 goat keepers into 3 Farmers Group, having 20 members in a group. For the first year each members of the group will be provided with a doe and each group will be provided a superior quality buck for genetic improvement. After returning of one female kid by the farmers, they will be provided with another doe in the 2nd year. Formation of a market management committee, they were further linked to the market directly to fetch better price. As a result, these goat keepers will able to enhance their income. Production of forage and fodder to meet shortage of feed should also be taken up on priority, to produce superior quality, easily digestible forage and fodder, instead of feeding highly fibrous roughages. Seeding of forage like Flamengia, Mendula, and Napier as well as plantation of fodder tree mainly Ipil-ipil, bakaino, vimel etc on degraded and dry land.

The expected beneficiaries of this project are the unprivileged, Dalit and disadvantaged poor population of Bhaunali and Dehimandau VDC of Baitadi District. Majority of them belongs to the backward ethnic groups like Dewaki, dalit etc. Among them, priority will be given to the women members of the participating households.

Table 1: Direct beneficiaries from the project

| VDC | Ward no. and Tole | Direct beneficiaries (HH) | Cast wise (HH) | Head of household | |
|---|---|---|---|---|---|
| | | | | Male | Female |
| Bhaunali | 7, Jogiyana | 20 | Dalit- 20 | 8 | 12 |
| Bhaunali | 2, Lamgada Goyali | 20 | Dewaki- 8, others-12 | 10 | 10 |
| Dehimandau | 2, Labadbasti | 20 | Dalit-20 | 6 | 14 |

The local traders, entrepreneurs and exporters will also benefit through increased transaction of goat meat. However, we cannot ignore the benefit associated with increased supply of goat meat at local market leading to significant increment in economic activities, import substitution and assurance of quality meat availability to the consumers.

The output wise objectively verifiable indicators are as follows:

1. By the end of 2016, goat farmers will be organized in to three farmers group.
2. By end of project period, at least 5 cross breed goat per household will be increased.
3. By the end of 2016, one demonstration plot will be established and coverage of forage and fodder will be increased.
4. By the end of project, one effective market management committee will be established and regular supply of 50 goats will be done every year after second year.
5. By the end of project, publication of 200 booklets and one video documentary will be done.

The support for the improved bucks in the farmer's group will help in the improvement of the genetic quality of the goat that ultimately leads for the qualitative meat production. The improved buck in the locality will be the point of attraction for the farmers from the peripheral regions for improvement in their buck rearing as well. The project will also facilitate the farmers for the good marketing strategies so that the goat product could have better market access and this will be helpful to motivate other house hold in the community towards the improved method of goat rearing and its proper marketing. Similarly, the enhancement in the income of the farmers raising goat will also help other farmers to be attracted towards goat rearing activities. The workshop and interaction program with concerned stakeholders will facilitate the efficient execution of planned activities and provide a platform for the dissemination of project findings. Similarly, the Annual Review Workshop organized by NARDF during the project period will facilitate the dissemination of project findings among the national dignitaries.

### Synopsis of Project Status

## Targeted Outputs:

Output 1: Local communities facilitated and empowered

Output 2: Low productive and non-descriptive goat will be genetically upgraded.

Output 3: Feeding and pasture management

Output 4: Market linkage established and project outputs disseminated.

## Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Community Assessment and Base line Survey | completed in April 2014 | |
| 1.2 Formation & orientation on farmers group | completed in May 2014 | |
| 1.3 Training on group dynamics to FGs | completed in June 2014 | |
| 1.4 Inception workshop | completed in June 2014 | |
| 1.5 Farmers' training | completed in June 2014 | |
| 1.6 Shed improvement program | Completed in Jan.,2015 | |
| 1.7 Establishment of revolving fund | Ongoing | |
| 2.1 Upgrading of animal breeds | | |
| 2.1.1 Distribution of Doe | Completed in August, 2014 | |
| 2.1.2 Distribution of Breeding Buck | Completed in Feb., 2015 | |
| 3.1 Formation of Demonstration plot as well as forage and fodder plantation | Ongoing | |
| 4.1 Establish marketing network | Yet to begin | |
| 4.2 Hoarding Board | Completed in Sep,2014 | |
| 4.3 Joint Monitoring | Yet to begin | |
| 4.4 Public auditing | Completed in Feb., 2015 | |
| 4.5 Final workshop | Yet to begin | |
| 4.6 Reporting | Ongoing | |
| 4.7 Booklets publication | Yet to begin | |
| 4.8 Preparation of short video documentary | Yet to begin | |
| 4.9 Post project completion survey | Yet to begin | |

## Achievements:

- The 60 farmers of the three VDC are organized in to three goat rearing farmers group with the involvement of womens, Dalit and economically poor households.
- Farmers are encouraging to increase their heard size. They have Buck of improved breed in a group.
- They improved the goat shed house; Capacity enhancements of the farmers help them practice the improved method of goat farming in their locality.

| | |
|---|---|
|  |  |
| Distribution of Doe | Inception workshop |

# PROJECT TITLE: PROMOTION OF UNDERUTILIZED CROP BUCKWHEAT FOR ENSURING THE FOOD SECURITY AND IMPROVING THE LIVELIHOOD OF THE MARGINALIZED FARMERS OF KALIKOT DISTRICT

**Project No.:** 1014

| | |
|---|---|
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| ***Collaboration/Partners*** | Center for Environment Protection and Development of Remote Areas of Nepal (CEPDRA), Kalikot |
| ***Duration of Project*** | 2 years |
| ***Project Cost*** | 2998850.00 |
| ***Location of Project*** | Ramnakot, Pakha, and Chapre V.D.C.s of Kalikot District. |

## Project Summary

Kalikot is highly food insecure district. Tons of Rice each year is transported to Kalikot to combat hunger. This dependence on outside supply of food has slowly paralyzed the local people by creating a rice based food security culture which results in a huge investment of money as well as avoidance of locally cultivated crops in the name of Pseudo- Prestige**.** The population of the kalikot district is 1, 36,948 (Male-68,833 and Female-68,115) and the total food deficit is 12,571 metric ton (DADO, kalikot, 069/70). During the past three decades, however, the public-sector-sponsored agricultural extension programme has been promoting the use of improved exotic varieties of major cereal crops, which is forcing the landraces and underutilized crops out of the picture consequently, these species have been neglected and genetic erosion of their gene pools has become severe (IPGRI, 2006). These crops have under-exploited potential for contributing to food security, health (nutritional/medicinal), income generation and environmental services (Arora, 1995).

The proposed intervention will be carried out in three V.D.C.s of Kalikot district. The proposed V.D.C.'s are Pakha, Chhappre, and Ramnakot. Two farmers groups will be formed in each V.D.C and all together there will be six farmers group. Each group consists of 25 farmer's household and all together there will be 150 households as direct beneficiaries. The project aims to support, strengthen all the proposed farmers household for promoting the locally cultivated buckwheat by introducing improved cultivation practices, creating awareness for increasing the consumption of

locally cultivated buckwheat and increasing the income of the buckwheat growers by facilitating the marketing of their product.

The project aims to increase the production of buckwheat by 50% as compared with the baseline period. The increase in production is mainly due to adoption of improved cultivation practices of buckwheat and increase in the amount of farmyard manure / compost in the buckwheat field. The project also aims to increase the household consumption of buckwheat along with increasing the income of buckwheat growers by facilitating in the marketing of their product.

### Synopsis of project status

## Targated Outputs

1. The current status of buckwheat production and marketing in the project locations identified: During the first year and first trimester of the project period the data regarding the current production, consumption and marketing status of the buckwheat in the project area will be carried out. This data will be systematically and scientifically analyzed, which will be a great asset not only the donor agency but also to the district level stakeholders. During the project period consumption of buckwheat will be increased.
2. Increased the production of buckwheat by 50% as compared to the baseline period in the project locations and at the farmer's level by utilizing the fallow as well as marginal land and promoting the proper use of farmyard manure. In addition to this dissemination and adoption of improved cultivated practices will help to achieve the proposed output.
3. Capacity enhancement of the local buckwheat growers and develop entrepreneurship among the lead farmers and marketers, and introduce effective buckwheat marketing models and strategies.

## Activities Proposed:

| Activities | Activity Status | Remarks |
|---|---|---|
| 1.1 Baseline Survey | Ongoing | |
| 1.2 Group formation | Ongoing | |
| 1.3 Group orientation workshop | Ongoing | |
| 2.1 Buckwheat production training to the farmers | Ongoing | |
| 2.2 Training on preparation of farm yard manure and compost | Ongoing | |
| 2.3 Demonstration of farm yard manure/ composting | Yet to begin | |
| 2.4 Demonstration of Improved cattle shed | Yet to begin | |
| 2.5 Seed and Material support | Yet to begin | |

| | | | |
|---|---|---|---|
| 2.6 | Conduct agronomic trials ( seed rate, sowing time, intercultural operation, post harvest handling of buckwheat | Yet to begin | |
| 3.1 | Training on Preparation of different recipe of buckwheat | Yet to begin | |
| 3.2 | Market strategy workshop at the district level | Yet to begin | |
| 3.3 | Capacity development of farmers on Improved cultivation Practices of buckwheat | Yet to begin | |
| 4.1. | Prepare the extension materials based on the basis of project findings | Yet to begin | |
| 4.2 | Internal Monitoring | Yet to begin | |
| 4.3 | Joint Monitoring | Yet to begin | |
| 4.4 | Video documentary Preparation | Yet to begin | |
| 4.5 | Public hearing | Yet to begin | |
| 4.6 | District level final workshop | Yet to begin | |
| 5.1 | Post Project Assessment Survey | Yet to begin | |
| 5.2 | Report Preparation and submission | Yet to begin | |

**Achievements**: Yet to achieve

# PROJECT TITLE: PROMOTION OF INDIGENOUS YAM AND SWEET POTATO CULTIVATION TO IMPROVE THE LIVELIHOODS OF POOR AND MARGINALIZED CHEPANG COMMUNITY OF DHADING DISTRICT

**Project No.** PP-1015/2013/14

| | |
|---|---|
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| ***Collaboration/Partners*** | District Agriculture Development Office, Dhading |
| ***Duration of Project*** | 2 Years 8 Months( March 2014 to October 2016 ) |
| ***Project Cost*** | Total cost of the project is NRS. 3,211,687<br>Approved From NARDF is NRS 2,956,687 only.<br>From Collaborator is 2,55,000 only. |
| ***Location of Project*** | Ward No 8 of Gajuri and Ward No 1, 2, 3 and 5 Mahadevsthan VDCs of Dhading district. |

## Project Summary

### Background

This project is exclusively focusing on Mahadevsthan & Gajuri VDC, where Chepang are living in dire poverty and are in severe food insecure condition. Owing to lack of employment and alternative sources of income, majority of youths work as laborers in the city areas for solving the food and mouth problems. Each Chepang household has around 5-10 ropani of terraced, sloppy land and major crops grown in these land are maize, upland rice and millet. But because of rainfed condition and unmanaged terraces, the production and productivity of these crops are very low in comparison with other parts of the district. Therefore, the production of crops is just enough to feed the families for 3-5 months of a year.

Indigenous crops like **Yam** and **Sweet Potato** which are resilient to adverse climatic conditions and can be grown successfully in these terraced and sloppy lands. Although Yam and Sweet Potato are nutritious food items and can contribute substantially to food and nutrition security of poor marginalized Chepang communities owing to higher volume of food production and nutrient content in Yam and Sweet Potato than the currently grown maize, millet and upland rice crops.

Both of Yam and Sweet Potato can be grown well in many farming conditions and have few natural enemies. Hence, pesticides are rarely needed. They are grown on a variety of soils and also can be grown in poor soils with little fertilizer. Even though Yam and Sweet Potato have several

advantages from nutritional points of view and can be cultivated successfully in the marginal lands of the proposed project sites, they have been neglected for improving their cultivation practices and producing them commercially.

In this context, improved cultivation practices and large scale production of Yam and Sweet Potato have been introduced in order to conserve these vanishing crops and varieties, to attain food security, reduce poverty and improve the livelihoods of highly marginalized and poor communities of the proposed areas.

The cultivation of Yam and Sweet Potato has been promoting successfully because the proposed project areas have most congenial environment such as abundant sunshine, warm climate and rainfed together with motorable road access to Prithivi Highway.

## Purpose/Objectives

The project purpose is basically linked with the promotion of Yam and Sweet Potato cultivation in the marginal landscapes.

- Promote improved and commercial cultivation of Yam and Sweet potato to improve the food security situation of the poor and marginal Chepang communities;
- Conserve and protect indigenous Yam and Sweet Potato from disappearance and improve the agro-biodiversity and agro-ecology of degraded hilly terraced landscapes; and;
- Promote the marketing of Yam and Sweet Potato by establishing collection centre and collective marketing practices in the lead of cooperative.

## Expected Beneficiaries

The marginal farmers especially 300 Chepang households of the project locations are the primary target groups and main beneficiaries of the proposed interventions. More categorically, 150 (50%) women and youths will also be the targeted beneficiaries of the project. Along with this, the extension as well as development partners will also be benefited with the outputs of this work, which will open the scope for them to work with the farmers in the following days.

## Objectively Verifiable Indicators (OVIs)

**Output-1: Participant farmers identified and organized in groups**

- By the first trimester of the first year (2014) 300 chepang households indentified
- By the first trimester of the first year (2014), 300 chepang farm families organized in 12 functional groups
- Participation of women in groups at least be 50 percent

**Output-2: Improved cultivation practices of Yam and Sweet Potato promoted**

- By the end of 2014, at least 300 chepang farmers trained on improved and commercial cultivation of local Yam and Sweet Potato
- By the end of the first year (2014), 300 chepang households started commercial cultivation of Sweet Potato and Yam

- By the end of project 2016, 1000 rapani of land brought under commercial cultivation of sweet potato and 500 ropani of land used for commercial Yam cultivation.
- By the end of 2016, chepang households harvest 750 tons of sweet potatoes annually.
- By the end of project (2016) chepang households harvest 500 tons of Yam annually.

**Output-3: Yam and Sweet Potato marketing enhanced and project output disseminated**

- By the end of 2016 one collection centre established for Yam and Sweet Potato,
- By the end of 2016, collective marketing of Yam and Sweet Potato started
- By the end of the project cooperative (by up-scaling the farmers groups) established for selling Yam and Sweet Potato with a selling stalls established in the district headquarters
- By the end of 2015, each individual farmer earns at least NRs. 20,000-30,000 by selling Yam and Sweet Potato.

## Upscaling Pathways

Following pathways will be adapted to upscale project;

The cooperatives will take leading roles and support for the up scaling **of project outputs** in and around the proposed project areas. The cooperative will be encouraged and supported to spread and disseminate generated outputs collectively to other farmers, farmer groups and cooperatives for **wider diffusion of the outputs** horizontally. Farmers' cooperative will be viable and effective local organizations for up scaling of project outputs.

**Booklets, leaflets, posters and pamphlets related to project initiatives and outputs** have been preparing and distributing to the farmers and concerned organizations. Through these materials participant farmers and related organizations **initiate to replicate and use** the generated outputs in other similar areas. Project Outputs will be delivered via FM radio.

### Synopsis of project Status

## 1. Targeted outputs

To enhance the socio-economic conditions of marginalized farmers through promotion of commercial cultivation of Yam and Sweet Potato and marketing activities, a competitive income generating opportunities in the project area. The followings are the intended outputs of the project.

The proposed project aims to achieve the following out puts:

**Output-1: Participant farmers identified and organized in groups**

Firstly 300 chepang households has been identified and organized in 12 groups. Participation of women in groups has ensured at least 50 percent and among the men and women youths will be prioritized to be included in the groups to reduce out-migration of rural youths.

**Output-2: Improved cultivation practices of Yam and Sweet Potato promoted**

Tuber seed and local plant materials have gathered, participatory variety selection, establishment of group managed nurseries, preparation of tuber seed and planting materials,

preparation of main field, sowing the seed/tuber and vines in the field and field management. Similarly, improvement in compost preparing and application etc for promoting the improved Sweet Potato and Yam cultivation practices in the targeted areas.

**Output-3: Yam and Sweet Potato marketing enhanced and project output disseminated**

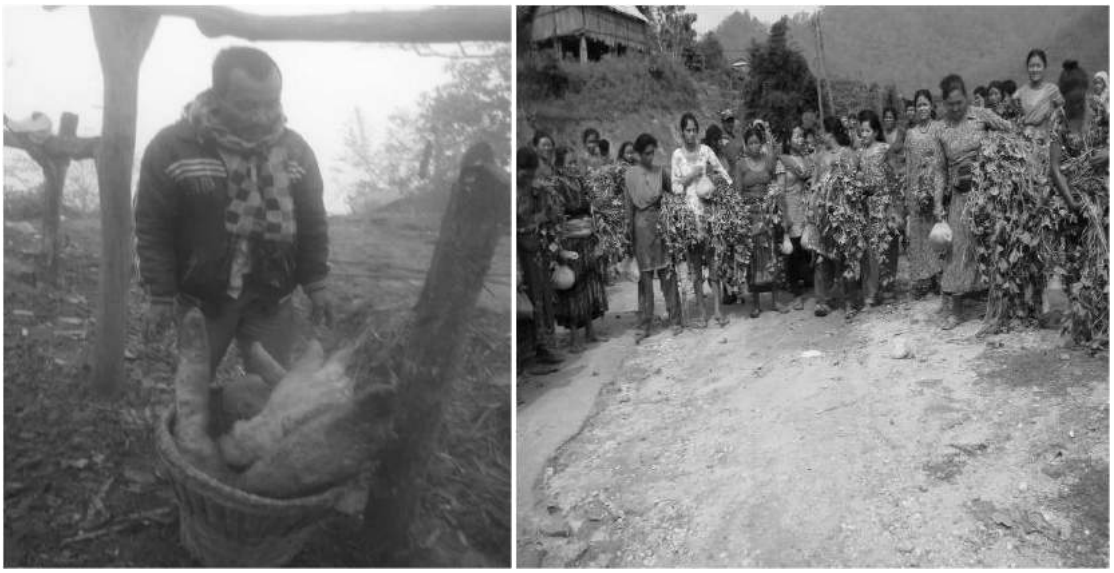
Construction of Yam and Sweet potato collection and storage structures, video documentary preparation for the dissemination project outputs and publication and distribution of final reports. Project initiatives and outputs will be disseminated through FM radio and publications.

## 2. Activities Proposed

| SN | Activity Detail | Activity Status | Remarks |
|---|---|---|---|
| 1.1 | Project start up meeting with farmers and stakeholders | Completed | |
| 1.2 | Formation and mobilization of groups | Completed | |
| 1.3 | Base line survey | Completed | |
| 1.4 | Preparation and distribution of technical booklet | Ongoing | |
| 1.5 | Demonstration on preparation of organic manure | Ongoing | |
| 2.1 | Rain water harvesting | Ongoing | |
| 2.2 | Collection of local genotype as tuber seed | Ongoing | |
| 2.3 | Preparation of planting materials | Ongoing | |
| 2.4 | Field preparation and planting of seed tuber/vines | Ongoing | |
| 2.5 | Management of crops in the field | Ongoing | |
| 2.6 | Establishment of tuber seed bank | yet to begin | |
| 2.7 | Up-scaling groups into cooperative | yet to begin | |
| 2.8 | Harvesting, post-harvest handling and marketing of Yam and Sweet potato | Ongoing | |
| 3.1 | Construction of collection centre | yet to begin | |
| 3.2 | Celebration of Yam and Sweet Potato Day | yet to begin | |
| 3.3 | Preparation of video documentary | Ongoing | |
| 3.4 | Monitoring and evaluation of project activities | Ongoing | |
| 3.5 | Organization of Public hearing | yet to begin | |
| 3.6 | District level project output dissemination workshop | yet to begin | |
| 3.7 | End line survey | yet to begin | |
| 3.8 | Report preparation and distribution | Ongoing | |

## Achievements

- 112 Kg of Yam is produced from 2 Bushes
- 80 Kg of is sold in an average prices of 20 NRs/Kg by each households
- 4 water collecting pond are constructed operated in dry areas
- 600 kg sweet potato tuber was sold average 4o NRs/Kg as seed tuber outside the project area
- All the farmers has increased the area of sweet potato and no of yam bushes by their own



Sweet potato and yam bushes

# PROJECT TITLE : ENHANCING THE ADAPTIVE CAPACITY OF FARMING COMMUNITIES TO THE IMPACTS OF CLIMATE CHANGE IN CENTRAL TERAI REGION OF NEPAL

**Project No.** : 1016/2013/014

| | |
|---|---|
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| ***Collaboration/Partners*** | Regional Agriculture Research Station (RARS), Parwanipur, Bara<br>District Agriculture Development Office (DADO), Bara |
| ***Duration of project*** | 2 years ( March 2014 to February 2016) |
| ***Project cost*** | NRs. 1999931 |
| ***Location of project*** | Kakdi, Bharatgunj Singual, Basatpur and Badki Phulbariya VDCs of Bara district |

## Project Summary

## Project Background

There is a large concern regarding the impacts of climate change and its variability upon agricultural practices worldwide. Agriculture is the most vulnerable sector to climate change and variability. Nepal is identified as highly vulnerable country to Climate Change. Observed data indicates consistent warming and rise in maximum temperature at an annual rate of 0.04 – 0.06º C. High mountains are warming faster ($0.08^{0C}$ per year) than lower hills and the plains (0.040C per year). Trends of average rainfall for Nepal for the period 1971-2005 have shown the higher intensity of rains with less number of rainy days. This change has brought about major new challenges; its severe impact is seen on local natural resources, biodiversity and environment, leads to changes in geophysical, biological and socio-economic systems. Various studies of UNDP/RRFADC-Global Fund, SNV and other organizations have shown that the impacts of climate change in Terai regions of Nepal are evident on forests, water resources, agriculture and other sectorsl. Understanding the potential impact of climate change on agriculture in Terai, it is critical for two reasons. First, the existing system of food production is highly climate sensitive because of its low level of capital and technology. Second, agriculture is the main source of livelihood for majority of the population. If agricultural production is adversely affected in Bara district by climate change, the livelihoods of even greater number of people will be at risk. Soil erosion in Siwalik region and flooding in plain region especially during rainy season are the common problems of Bara district. Similarly, extreme cold waves and continuous foggy days are the major climate related problems in Bara. The issue maize cob without grain filling and protest of farmer against government for their compensation and

government loss of money and other resources as a compensation to farmers in the districts in government run Maize Mission Program was a daily hot news of almost all local and even national level newspapers few years before in Bara districts. The findings of investigation teams pointed out the main reason for not filling the grain in maize is due to the pollen sterility caused by extreme and long lasting cold web in winter season in the district. This is attributed to the fact that climate change affects the two most important direct agricultural production inputs, precipitation and temperature.

## Purpose of project

The project aims at assessing the climate change impacts on the agriculture in Central Terai Region of Nepal with farmers' perception and local adaptations on climate change. The project will identify and promote the best (adaptive and cost-effective) local adaptation technologies to cope with the climate change. It is therefore crucial to find the ways to respond to the changing climate and reduce the risk of it on agriculture and the people's livelihoods through climate adaptive technologies and practices. There is less dissemination of improved production technologies (RATWG, 2010) and farmers may not have the access to the climate change adaptation technologies developed by the research stations and other institutions. The farmers in Bara district will adopt new climate change resilient technologies through training, exposure visit and extension activities and that ultimately help them to reduce the impact and increase their income. Therefore, this project also seeks to introduce the validated technologies that are suited and supportive to farmers in adapting the climate change conditions. Hence, such condition expands the need to assess climate change impacts at the local conditions across the agro-ecological zones as well as to promote the climate adaptive interventions at the local conditions as a basis for future replication in similar local cultures.

## Expected Beneficiaries

Drought and flood affected farmers of Kakdi, Bharatgunj Singual, Basatpur and Badki Phulbariya VDCs of Bara district will be the primary beneficiaries of this project. Farmers belonging to Dalit, Janajaties and Madhes ethnic groups will be given the first priority in project activities and outputs. This project intends to cover about 160 households directly and more than 1400 households indirectly (awarness of technology will be effective for farmer society) during the course of project implementation. The farmer groups, extension agencies, NGOs/INGOs will be benefitted from the technologies generated by this project. In the long run, the technologies developed by this project can be replicable at a wider scale to other regions having similar agro-ecological condition.

| SN | Dalit | Adibasi/Janajaties | Madhesies | Others | Total |
|---|---|---|---|---|---|
| Number of Direct Beneficiaries households | 10 | 20 | 50 | 80 | 160 |
| Number of Beneficiaries households | 50 | 250 | 700 | 400 | 1400 |

## OVIs Project outputs/Up scaling pathways:

a. By the end of project, climate change trends, and impacts on livelihood resources and agriculture of the project locations will be identified.

b. By the end of project, at least three local adaptation technologies to climate change will be identified, and disseminated.

c. By the end of project, at least eight climate change response groups of farmers will be formed and climate change awareness and sensitization to the farmers of project locations will be increased by 50% .

d. By the end of project, at least three validated technologies of research stations to the farmers field of project locations will be introduced and promoted.

e. By the end of project, at least 50% farmers of the project locations will adopt the adaptive technologies to respond to drought, flood and landslide.

## Synopsis of project Status

**1. Outputs :**

- The climate change impacts on livelihood resources of the project locations with special attention on agriculture identified
- Community based adaptation techniques of the farmers to climate change identified, promoted and disseminated
- The Climate Change Response Group (CCRG) of farmers in the project locations formed mobilized and sensitization and awareness amongst the farmers on climate change increased
- The research generated climate change adaptation technologies developed by NARC and other institutions introduced and promoted in the farmers field

**Activities Proposed**

| Activities | Activity status | Remarks |
|---|---|---|
| 1. Baseline study | | |
| 1.1 Literature collection and review | Completed in March 2014 | No major Problems |
| 1.2 Exploratory visit to the project locations | Completed in March 2014 | No major Problems |
| 1.3 Program Inception Workshop In Bara districts | Completed in April 2014 | No major Problems |
| 1.4 Field Survey/ Data Collection | Completed in April 2014 | No major Problems |
| 1.5 Collection of climate data of different years from meteorological stations | Completed in May 2014 | No major Problems |
| 1.6 Data analysis and report preparation | Completed in June 2014 | No major Problems |
| 2. Formation of climate change response group of farmers (CCRG) | | |
| 2.1 Group Formation (8 groups each group containing 20 members) | Completed in May 2014 | No major Problems |
| 2.2 Two day group and fund mobilization training | Completed in June 2014 | No major Problems |

| | | |
|---|---|---|
| 3. Identification and promotion of effective local adaptation technologies | | |
| 3.1 Field Trial (Result Demonstration) of Submerged Rice varieties Recommended by NAARC in 2 VDCs (Basatpur and Badki Phulbariya ) | Completed in June 2014 | No major Problems |
| 3.2 Field Trial (Result Demonstration) of Upland Rice varieties Recommended by NAARC 2 VDC (Kakdi, Bharatgunj Singual) | Completed in June 2014 | No major Problems |
| 3.3 Field Trial (Result Demonstration) of Winter Maize varieties Recommended by NAARC in 4 VDCs Kakdi, Bharatgunj Singual, Basatpur and Badki Phulbariya | Completed in November 2014 | No major Problems |
| 3.4 Introduction and promotion of validated (promising) technologies to farmers through district level one day workshop | Completed in June 2015 | No major Problems |
| 4. Capacity building of farmers | | |
| 4.1 Training on Food Security, Agriculture and Climate change (3 day trainig for 50 farmers in 2 training events ) | Completed in October 2014 | No major Problems |
| 4.2 Exposure Visit to 40 farmers in Chitwan district | Completed in April 2015 | No major Problems |
| 4.3 Exposure Visit to 45 farmers CCS | Yet to begin | |
| 5. Development of Model Village for adaptations to climate change in one VDC | | |
| 5.1 Formation of climate change sensitization school (CCS) | Completed in March 2015 | No major Problems |
| 5.2 Distribution of Rice seed (both up land and submersed variety) (50 Kg (25 kg of each type)) to farmers Recommended by Research Stations for Practice in Farmer's field through climate change sensitization school (CCS) (Bharatgunj Singual VDC) | Completed in June 2015 | No major Problems |
| 6. Public Hearing in each Project VDC | Yet to begin | |
| 7. Video Documentary Preparation | On going | |
| 8. Endline Study and Report Development | | |
| 8.1 Field Survey | Yet to begin | |
| 8.2 Collection of climate data of different years from meteorological stations | Yet to begin | |

| | | |
|---|---|---|
| 8.3 Data analysis and report preparation | Yet to begin | |
| 9. Publication | | |
| 9.1 Program Browser | Completed in October 2014 | No major Problems |
| 9.2 Technical Browser | Yet to begin | |
| 10. Joint monitoring visit | | |
| 10.1 Internal monitoring | On going | |
| 10.2 External Monitoring | Completed in Febaury 2015 | No major Problems |
| 11. Trimester and Final report preparation | On going | |
| 12. Closing Workshop of the project | Yet to begin | |

**2. Achievements :**

a. The understanding of the climate change trends and impacts on agriculture and people's livelihoods is one of the major achievement of this project.

b. The climate change impacts on livelihood resources of the project locations with special attention on agriculture identified.

c. The Climate Change Response Group (CCRG) of farmers in the project locations formed, mobilized and sensitization and awareness amongst the farmers on climate change increased.

d. Helpful for setting strategies further to capacitate farmers to cope with the climate change.

e. The capacity building of climate change response group (CCRG) of farmers has enhance their skills and knowledge on climate change and consequent adaptation technologies.

f. Helpful for linkage and coordination of farmer groups with the line agencies like DADO, Agricultural Research Stations (ARS) and Bikash Darpan.

| | |
|---|---|
|  |  |
| NARDF Monitoring team with farmer in field VDC – Kakdil | Submerged Rice varieties Recommended by NAARC |

# PROJECT TITLE: PROMOTION OF BUFFALO FATTENING FOR COMMERCIAL MEAT PRODUCTION

**Project No. :** 1017 (March, 2014)

| | |
|---|---|
| ***Project Coordinator*** | Dr. Kamarullah Ansari |
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| ***Collaboration/Partners*** | DLSO, Rautahat<br>DDC, Rautahat |
| ***Duration of Project*** | 3 years (March,2014-February,2017) |
| ***Project Cost*** | NARDF Contribution: NPR 29,99,895.8 |
| ***Location of Project*** | Rampurkhap, Jatahara and Paroha Dumaria VDCs of Rautahat District |

## Project Summary

## Background

Buffalo is one of the important livestock sub-sectors which contribute about 63 percentages of the livestock GDP and its share in total AGDP and national GDP is significantly high as compared to other farm animals. There is huge demand of buff in the cities which is fulfilled mainly by the importation of live buffaloes form the neighboring countries. Male buffalo calves are deliberately abandoned or reared with inadequate attention & feeding in different parts of the country leading to low survivability, poor growth rate and low farm off take of buffalo meat (*Bastola et.al. 2006*). There is a wrong perception among the farmers that male calf would consume lots of milk by the time of weaning thus they are disposed at birth or forced to death to save milk for sell or home consumption. Fattening the male calves for slaughtering purpose as a parallel enterprise is often neglected despite having the potentiality of income generation, import substitution and entrepreneurship development among the rural communities. Earlier studies on buffalo fattening suggest that there is a scope of forage based fattening of male buffalo calves for increased meat production which are otherwise left to forced mortality or deliberate abandonment. Hence the project envisage to promote male buffalo calves fattening among the underprivileged and disadvantaged groups of dalit communities in Rautahat district as a means for entrepreneurial capability development and enhancement of their socio-economic status and livelihood. Project was implemented at Rampurkhap, Jatahara, Dumariya Paroha VDCs of Rautahat District for a duration of three years.

## Project Purpose:

Buffaloes are often regarded as “Black Gold” because of their multiple uses in producing milk, meat, manure, traction and draft power. The ethnic groups like Mallah, Baniya, Teli,

Kushbaha, Chamar, Dusadh, Dom, Halkhor, Muslim etc. predominant in Rampurkhap, Jatahara and Paroha Dumaria VDC of Rautahat District has a long tradition of buffalo rearing for milk purpose. However, they often neglect the male calves, provide less care & attention and even restrict them from suckling in their early age as to fetch more milk. Farmers in the locality are neither aware of the technology on fattening of male buffalo calves nor they practice the rearing of fattened male valves for meat purpose. Proposed project thus envisage supporting the poor people to adopt the male buffalo fattening technology as a potential option to ensure the food security, income generation and enhancing their livelihood. It also aims to introduce the improved forage species and promote their plantation in the area so that forage based buffalo fattening could be adopted for the sustainability and cost effectiveness of the production system. These efforts will ultimately enhance the food security, family nutrition, household income and entrepreneurial abilities of the resource poor families. The increasing demand of buffalo meat in the country can be fulfilled only if sufficient numbers of buffaloes are reared for meat purpose.

## Beneficiaries:

The target groups of the proposed project are the unprivileged, Dalit and disadvantaged poor population of Rampurkhap, Jatahara and Paroha Dumaria VDC of Rautahat District. Majority of them belongs to the backward ethnic groups like Mallah, Baniya, Teli, Kushbaha, Chamar, Dusadh, Dom, Halkhor, Muslim etc. Among them, priority was given to the women members of the participating households. About 200 households were participated in implementation of project activities would be the direct beneficiaries as they were provided access to inputs and got opportunities to take part in training programs on various aspects of buffalo fattening; forage cultivation, preservation and utilization of agro-by-products; health care and management of buffalo etc. Proposed project envisaged to form the Male Buffalo Calves Fattening Groups and mobilize them to implement the activities in close consultation with District Livestock Services Office (DLSO) and Livestock Service Centres (LSCs). The details of beneficiaries are as follows.

| VDC | Number of Groups | Male | Female | Dalit | Muslim | Other |
|---|---|---|---|---|---|---|
| Rampur khap | 3 | 30 | 30 | 15 | 35 | 10 |
| Jatahara | 4 | 40 | 40 | 15 | 55 | 10 |
| Paroha Dumaria | 3 | 30 | 30 | 20 | 10 | 30 |
| **Total** | **10** | **100** | **100** | **50** | **100** | **50** |

## Objectively Verifiable indicators (OVIs):

1. By the end of 2015, existing buffalo production, management, and marketing systems in the project implemented sites understood and farmers are sensitized for the adoption of buffalo fattening technology.
2. By the end of project, at least 200 households will adopt the forage based male buffalo calf fattening technology for quality meat production.
3. By the end of project, market linkage for the fattened buffaloes established and the project findings disseminated through various form of extension materials.

## Upscaling Pathays:

Male Buffalo Calves Fattening Groups formed during project implementation will be transformed into "Meat Buffalo Producer Cooperative" by the end of second year. The cooperative will be strengthened and make capable of conducting buffalo calves fattening and meat entrepreneurship development among the member households. This will promote and upscale the buffalo fattening practice in the area even after the accomplishment of project activities. Periodic visit, meeting, discussion and training organized in participation of concerned stakeholders during the project period will help disseminate the information on various aspects of project activities and achievements made on buffalo fattening. The coordination meeting organized with the market operators, traders, entrepreneurs, and slaughterhouse operators will create awareness about the project, help disseminate the outcome and establish linkage & harmonious relation to ensure the sustainable marketing of fattened male buffaloes.

The workshop and interaction program with concerned stakeholders will facilitate the efficient execution of planned activities and provide a platform for the dissemination of project findings. Similarly, daylong workshops organized at the end of project in the district headquarter will be instrumental in dissemination of project findings among the concerned stakeholders. Similarly, the Annual Review Workshop organized by NARDF during the project period will facilitate the dissemination of project findings among the national dignitaries.

The outputs of project activities will be documented and published in the form of booklets, pamphlets, posters, leaflets, brochures and so forth for dissemination in the larger perspective. In addition, the project completion report, technical papers and project compilation report prepared out of the project findings will favours the dissemination of project progress, activities, methodology adopted and outputs achieved during the project period. Project findings will be disseminated through the local FMs in Bhojpuri language.

## Synopsis of Project Status:

### Targeted Outputs:

1. Existing socio economic status of the participatory farmers studied and are sensitized for the buffalo fattening technology.
2. Buffalo calves fattening technology introduced and adopted.
3. Market linkage established and project outputs disseminated.

### Activities Proposed:

| Activities | Activity Status | Remarks |
|---|---|---|
| 1.1 Consultative meeting with stakeholders | Completed in April | A one day consultative meeting was completed with participation of concerned stakeholders. |
| 1.2 Buffalo raising group formation and strengthening | Completed during 2nd trimester | |
| 1.3 Household survey | Completed | 200 households were interviewed to generate baseline information. |

| | | | |
|---|---|---|---|
| 1.4 | Selection and collection of buffalo calves | Completed during second trimester and third trimester | 5 MBCFGs comprising 20 members in each group was formed including the backward ethnic groups like Mallah, Baniya, Teli, Kushbaha, Chamar, Dusadh, Dom, Halkhor, Muslims etc. |
| 2.1 | Forage and fodder management | Completed during second trimester. | During winter season farmers were provided Berseem and Oat grass seed. Plantation of perennial forage Napier was done in marginal, follow and underused public and private land and forestry areas . |
| 2.2 | Training to the farmers | Completed during second trimester. | All participatory farmers including both man and women of the participatory household were provided in situ training on various aspects of buffalo rearing in general and fattening of male buffalo calves in particular. |
| 2.3 | Record keeping and management | Completed during second trimester. | Participating farmers trained to keep records on various aspects of fattening like feeds and feeding, growth performance, vaccination and veterinary medication etc. |
| 2.4 | Routine management and feeding | Completed during second trimester as per target and this activity is ongoing process throughout the project | |
| 2.5 | Establishment of revolving fund | Yet to begin | |
| 2.6 | Exposure visits | This activity has not been completed and has been planned for first trimester of second year. | |
| 2.7 | Regular monitoring | Completed during second and third trimester of first year. | |
| 3.1 | Establish market network linkage | Yet to begin | |

| | | | |
|---|---|---|---|
| 3.2 | Publication and distribution of extension material | Yet to begin | |
| 3.3 | District level project dissemination workshop | Yet to begin | |
| 3.4 | Public hearing and video documentary production | Yet to begin | |
| 3.5 | Final technical report publication | Yet to begin | |

## Achievements:

- A one day consultative meeting was completed with participation of concerned stakeholders and project intended outputs were shared with expectation of supports from every stakeholders.
- Baseline information of the project location has been generated by completing the households' survey.
- Five MBCFGs comprising 20 members in each group was formed including backward ethnic groups like Mallah, Baniya, Teli, Kushbaha, Chamar, Dusadh, Dom, Halkhor, Muslim etc.
- Altogether 100 selected buffalo calves were distributed to the participating farmers for rearing.
- Buffalo calves' rearing technical training has been provided to participating farmers.
- Participating farmers were provided seasonal forage seeds for cultivation. This project is designed to deliver forage based buffalo calf fattening protocol to the resource poor farmers.

# PROJECT TITLE: INCOME GENERATION THROUGH DOMESTICATION OF HIGH VALUE MEDICINAL AND AROMATIC PLANT "PATCHOULI"

**Project No. :** 1018

| | |
|---|---|
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| ***Collaboration/Partners*** | Shree Chisapani Community Forestry Users Group, Barghat, Nawalparasi. |
| ***Duration of Project*** | 2 years (March,2014 – Feb 2016) |
| ***Project Cost*** | NRs.3428730.00 (NARDF – 1989534.00 + CBNL – 1439196.00) |
| ***Location of Project*** | Chisapani Community Forestry Users Group, Barghat, Nawalparasi. |

## Project Summary

The project "Income generation through Domestication of High Value Medicinal and Aromatic Plant "Patchouli" emphasizes on building the capacity of the locally marginalized forest users group to develop the means of alternative livelihood opportunities by the cultivation, harvesting, processing, packaging and marketing of high value medicinal and aromatic plants like Patchouli ( Pogostemon cablin (Blanco) Benth).This is the initiation of domestication of high value plants in Nepal with a vision of improving the livelihood of Community Forestry Users Group (GFUG) by this type of income generating program. The project will actively engage the local community specially the woman group making earnings from plant resources in their own Community Forestry.

## Project background

NTFPs are potential sources of income for the rural communities in Nepal. They play an important role to raise status of income for the users group of community forestry too. So this project aims to provide benefit to the local women of Chisapani Community Forestry Users Group (CFUG) of Nawalparasi district. For this the plant Patchouli is selected for cultivation in Chisapani CFUG on the basis of its global market demand, available technicians and previous cultivation experience and market contact of company, suitable climatic condition for plant etc. The export of patchouli oil is also a good source of revenue for the country from overseas.

## Main purpose /Objectives

- Main goal of the project is to improve the livelihood of the participating farmers and community through increased income through Patchouli oil production in their community forestry. Besides this the major purpose of the project has the following specific purposes

- Motivation, technical skill development and involvement of community forestry users group, especially women in Medicinal and Aromatic Plants cultivation, harvesting processing and marketing.
- Commercial MAPs production area extension and provide market guarantee on the targeted MAPs.
- Use of degraded land of community forestry and transform it into agro-forestry.
- Capacity building of the farmers in the area of MAPs
- Aware the CFUG about environmental and energy conservation.
- Value addition by processing the plant for essential oil production
- Revenue generation by export of essential oil.

## Expected beneficiaries

Beneficiaries of the project can be headed under the following groups

- **Primary beneficiaries** -The small scale marginal and disadvantaged ethnic people of the project location are the primary beneficiaries .The project is focused to the women of at least 50 households of Chisapani CFUG
- **Secondary beneficiaries** - will be the other women /farmers of same or other adjoining community forestry users groups where the technology will be transfer by seeing and understanding .
- **Tertiary beneficiaries** - The third type of beneficiaries will be development institutions, researchers, students, private company and the country itself by earning revenue.

## Objectively Verifiable Indicators (OVIs)

| SN | Outputs | Objectively Verifiable Indicators |
|---|---|---|
| 1 | Targeted CFUG organized and mobilized for Patchouli cultivation | Formation of 5 growers groups<br>Site selection for cultivation<br>On the job training for each necessary activities<br>Nursery of 2 ha. of Patchouli cuttings cultivated<br>10 ha. forest land planted with Patchouli saplings |
| 2 | Patchouli harvested stored and processed for value addition. | Machineries one set of distillation unit installed for value addition<br>CFUG trained for harvesting and post harvesting activities<br>Leaves collected from plants and processed |
| 3 | Project up scaling & marketing of Patchouli oil started | Market network with traders and buyback guarantee of CFUG production<br>Participatory monitoring and evaluation<br>Outputs dissemination via reports, workshops, video documentary |

## Project Outputs and Up-scaling pathways

The main out- put is the farmers training and technological package dissemination.

MAPs grower groups is formed for cultivation/harvesting/Processing and marketing.

Increasing in the income of participating households.

A set of distillation unit with vessels/condensers/ boilers/receiver is established in the Chisapani CFUG for patchouli processing.

The projects outputs /results will be up-scaled for dissemination and adoption in other adjoining CFUG and surrounding regions. At the time of output dissemination workshop the members of the users groups of surrounding communities, regions with all concerned stakeholders will be invited in Chisapani CFUG and the result will be presented .An interaction will also be organized in the same time with each other for knowledge sharing about income generating program performed in Chisapani CFUG. These will be the up scaling pathways for the project.

## Synopsis of Project Status

At present the project status is completely performed according to approved project plan. The duration of this project is of 2 years ( from March, 2014 – Feb,2016) .

All the approved activities of 1st year (From March,2014 –Feb,2015) such as Project initiation meeting with CFUG, Formation and strengthening of grower group, ,Baseline survey, Establishment of nursery,, Field preparation and Patchouli Cutting transplantation in the Community Forestry, Support on processing, Physical facilities, Training on Nursery development, organic cultivation and plant protection ,processing, etc. are completed.

The 2nd year (From March 2015 – Feb, 2016 ) project approved activities are in progress and will be completed as approved work schedule.

## Targeted Outputs:

Output 1: Targeted CFUG organized and mobilized for Patchouli cultivation.

Output 2: Patchouli harvested stored and processed for value addition.

Output 3: Project up scaling & marketing of Patchouli oil started

**Activities Proposed**

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Project initiation meeting with CFUG | Completed in March, 2014 | |
| 1.2 Formation and strengthening of grower groups | Completed in March, 2014 | |
| 1.3 Baseline survey | Completed in June, 2014 | |
| 1.4 Establishment of nursery | Completed in June, 2014 | |
| 1.5 Training on nursery development | Completed in June, 2014 | |
| 1.6 Training on organic cultivation and plant protection. | Completed in Sept, 2014 | |
| 1.7 Field preparation and cutting transplantation | Completed in Sept, 2014 | |

| Activities | Activity status | Remarks |
|---|---|---|
| 2.1 Harvesting and processing related training | Completed in Feb ,2015 | |
| 2.2 Support on processing | Completed in Feb, 2015 | |
| 2.3 Physical facilities | Completed in Feb, 2015 | |
| 3.1 Direct networking with traders | Continue | |
| 3.2 Participatory monitoring and evaluation | Continue | |
| 3.3 Public hearing | Continue | |
| 3.4 Preparation of video and hoarding board | Continue | |
| 3.5 Post performance survey | Yet to begin in 2nd year | |
| 3.6 Dissemination of project activities and outputs via workshop | Yet to begin in 2nd year | |
| 3.7 Preparation and distribution of reports | Continue | |

## Achievements

The achievements of this project up-till now (during first year) can be headed as follows

1. 10 ha. Patchouli plantation completed in Chisapani Community Forestry Users Group, Bardghat, Nawalparasi.
2. 126 participants were trained for Nursery management, Organic Patchouli cultivation, harvesting, processing and plant protection.
3. Formation of 6 Female MAPs grower groups having 60 members.
4. Formation of one female business group having 9 members under the co-ordination of secretary of Chisapani CFUG.
5. Establishment of one mobile Distillation Unit set of modern technology with its required physical facilities in Chisapani CFUG for processing of Patchouli and other essential oil production plants like Chamomile, Citronella. Lemongrass, Mentha, Palmarosa etc. with the capacity of 1200 Kg of Raw materials processing.
6. Net working with national and international traders for marketing is continue.

Instruction by agriculturist before transplantation of Patchouli

Joint monitoring of Patchouli cultivation by NARDF, CBNL, CFUG

# PROJECT TITLE: ENHANCING THE COMMERCIALIZATION OF GOAT FARMING SYSTEM BY INCREASING GOAT MEAT PRODUCTION

**Project No:** 1019

| | |
|---|---|
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| ***Collaboration/Partners*** | District Livestock Development Office (DLSO), Sunsari |
| ***Duration of Project*** | Three years |
| ***Project Cost*** | Rs 1999.9 (Rs in '000') |
| ***Location of Project*** | Barahachhetra,Mahendranagar and Bharoul VDCs of Sunsari district |

## Project Summary

Goat (*Capra hircus*) is one of the most important livestock commodity used widely in development/sustainable programs by mostly all house-holds for poverty reduction, livelihood enhancement and food security in Nepal. The annual transaction number of meat goats (Khasi/Boka) at Dharan whole sell market was 14,551 which is imported from Dhankuta, Bhojpur, Sunsari, Terhathum etc (APMC, annual report, 2068). The consumption of chevon per year per head is only 2.5 kg in Dharan (data is estimated total annual transaction of boka khasi in APMC Dharan, and calculated with population of Dharan Municipal those who are preferred Khasi/boka …katuwal 2065), which is less than average consumption in Nepal. This project aims to formulate least cost balance feed by using local feed ingredients and develop suitable improve management practices based on local resources for quality goat meat production under stall/semi-stall feeding system which will be compared meat quantity and quality production. The project distributes goats to farmers and identified local ingredients for goat feeds and their nutritive value. The living standard of farm families will be enhanced through import substitution and increase income by developing cost effective goat meat production technology**.** This project will lead to the self-employment, income level of the people will increased by commercializing the goat husbandry practice.

## Purpose/objectives

1. To select areas, farmers, baseline survey and group formation for them.
2. To identify the indigenous feeding materials and available nutrients for economic goat meat production and productivity.
3. To find out the pattern of kid mortality and compared it by improve management.
4. To train farmers for improved kid raring and shed management.

5. To construct sheds, record body weight of goats which helps food security by generating income.
6. To monitor project activities for smoothly completion.
7. To publish information materials and reports.

## Expected beneficiaries

The targeted beneficiaries are:

- Firstly, goat rearing farmer who are small land holder and poor farmers (100 farmer) of 3 VDCs (Barahackshetra, Mahendrenagar and Bharol).
- Encouraged/ participated Dalit, Janajati and women of project coverage areas.
- Indirectly, goat rearing farmers of the whole 3 VDCs (Barahackshetra, Mahendrenagar
- and Bharol).
- Who has small piece of land can manage goat farming and can fetch good price/income from increased production of goat.
- Up to 5 years, 175 farmers directly benefitted.
- DLSO Sunsari can replicate to other groups in the district.
- Adopted Farmers/ Extension workers /researchers/ GO/ NGOs/ INGOs/ VDCs as successfully.
- Who wants low cost and high performance technology to boost up the practice of goat farming.
- Community forest as well as forest user groups also copied this project.
- Goat excretion used by themselves or other neighboring farmers to their crop field.

## Objectively Verifiable Indicators (OVIs)

1. Conducted 2 workshop at the beginning (inception) and the last of the project (evaluation). Identified 100 goat raring farmers by baseline survey from 3 VDCs and formed farmer groups having 16-20 members in each group. Trained them goat raring, feeding, disease control measures to 50% groups and distributed 100 does and 4 bucks at the first year and returned 50+50 does and 4 bucks at second year.
2. Utilized with growing indigenous/improved forage grasses, which is planted half ropani of fallow/marginal land of each participating farmers. That will support economic goat meat production and productivity by first year.
3. Prevented kid/goat mortality by vaccination, de-worming, parasite control, dipping by first up to last year by 50 percent of pre survey results.
4. Constructed model sheds by using local materials at each group with the capacity of 12 goats having 3 parts at first and second year. Body weight recorded monthly.
5. Published 500 booklets, 100/100 annual/project reports and prepared 1 video documentary.

## Up-scaling pathways

The proposed promotion pathways for up scaling and sustainability of the project outputs are as follows:

- Up scaling of the technology is performed through the interaction / workshop with goat farmers, entrepreneurs, extension worker and other agencies working for goat rising for livelihood improvement. This is done in close coordination with small holder farmers, department of livestock services, private farms, and commercial farmer.
- At the end of the project the workshop will be organized to disseminate the technology to different stakeholders and final output that was achieved will be disseminated through reports and brochure.

### Synopsis of Project Status

## Targeted Outputs

**Output 1:** Smallholder farmers' (goat raising farmers) capacity enhanced for efficient production.

Nepalese rural farmers are still unknown about the economic potentiality of commercial goat production. A total of 100 farmers will be identified from the different wards of three VDC's namely: Barhakshetra, Mahendranagar and Bharol of Sunsari district from baseline survey. From those 100 farm households, four farmers group will be formed.

Those smallholder farmers will be enhanced with the latest technology and utilization of improved and indigenous management practices. The farmers will be trained with improved shed, health management and improved kid raring technology for better production. Pre and post survey will be depicted the present and post status of the goat scenario.

The life insurance of initial purchase goat will be jointly done collaboration with government farmers and AERDC according to the rules of government and insurance company.

**Output 2.** Low cost indigenous feeding strategies for goat meat production developed

Economic feeding regimes for goat kid fattening by utilization of locally available indigenous feed resources, their nutrient values, requirement of economic goat meat production and productivity will be identified as well as to be aware of them.

**Output 3.** Pattern of kid mortality in comparison with improve husbandry and disease management is identified.

One of the major problems while raising goat is kid mortality. The pattern of kid mortality will be recorded after providing improved health (vaccination/de-worming) and husbandry management.

**Output 4**. Demonstration sheds (model sheds) constructed and monthly body weight of goats recorded.

The model or demonstration shed will be constructed to one in each group (4 model shed) from locally available material so that other farmer will visit and apply the same pattern to their shed. The monthly body weight recording system will be designed/developed and implemented for growth pattern of kids up to 6 month.

**Output 5.** Improved technology of indigenous feeding verified and fed into dissemination mechanism

The technology generated will be verified and scaled up by publishing leaflet, booklets, annual and technical reports and distributed to related stakeholders.

During the project implementation to the post evaluation period, a series of Video clips, will be recorded, hoarding boards in each group will be show and, joint monitoring, public hearing will be done.

## Activities Proposed

| Proposed Activities | Status to date |
|---|---|
| Activity 1.1 Stakeholder workshop | Finished |
| Activity 1.2 Site selection group formation | Finished |
| Activity 1.3 Baseline survey | Finished |
| Activity 1.4 Goat distribution | |
| Activity 1.5 Insurance | |
| Activity 1.6 Organized farmers' training | |
| Activity 2.1 Identification and utilization of indigenous feed sources | |
| Activity 2.2 Fodder and fallow land management | |
| Activity 3.1 Organize vaccination and de-worming camp | |
| Activity 4.1 Establishment of model or demonstration shed at 4 groups | |
| Activity 5.1 Organize joint/Internal monitoring | |
| Activity 5.2 Publication of pre and post survey report, | Only Pre survey |
| Activity 5.3 Public hearing | |
| Activity 5.4 Video Clip Preparation | |
| Activity 5.5 Booklets publication | |
| Activity 5.6 Report Publication | |
| Activity 5.7 Hoarding Board | |

## Achievements (also include Findings in case of Research Projects)

The following three activities are finished and activity 5.2 is only pre survey report produced and first trimester report also forwarded to NARDF.

| | |
|---|---|
| Activity 1.1 Stakeholder workshop | Finished |
| Activity 1.2 Site selection group formation | Finished |
| Activity 1.3 Baseline survey | Finished |
| Activity 5.2 Publication of pre and post survey report, | Only Pre survey |

# आयोजनाको शीर्षक: सल्यान जिल्लामा प्रांगारिक ताजा तरकारी उत्पादन आयोजना

**Project No. :** Example 1020

| | |
|---|---|
| ***Project Coordinator*** | कृष्णमान श्रेष्ठ |
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| ***Collaboration/Partners*** | जिल्ला कृषि विकास कार्यालय, सल्यान<br>दलित विकास संस्था सल्यान |
| ***Duration of Project*** | **चैत्र २०७० देखि फाल्गुण २०७२ सम्म** |
| ***Project Cost*** | १९९९६३८ |
| ***Location of Project*** | **सल्यान जिल्लाका ३ गा.वि.स.** |

## Project Summary


सल्यान जिल्ला मध्यपश्चिमाञ्चलमा पर्ने पहाडी जिल्ला हो । यस जिल्लाको कुल क्षेत्रफल १९५१ वर्ग किलो मिटर र समुद्री सतह देखि ३३६ मिटर देखि २८२७ मिटर उचाईमा फैलिएको छ । नेपालमा मानव सशक्तिकरण सुचाङ्कमा यस जिल्ला ६३औं स्थानमा पर्दछ भने लैंगिक सशक्तिकरण सुचाङ्कमा ७२औं स्थानमा पर्दछ । यस जिल्लाको कुल १९५१७८ हेक्टर जमिन मध्ये खेती/कृषि योग्य जमिन ४५५३७ हेक्टर रहेकोमा ७०२९ हेक्टर जमिनमा मात्र सिंचाई सुविधा पुगेको छ । यस जिल्लामा वार्षिक ११०५५ मे.टन तरकारी उत्पादन हुने गरेको छ ।

सल्यान जिल्लामा महिला, विपन्न, दलित र वेरोजगार युवाहरुलाई स्वरोजगारमूलक व्यवशायिक तरकारी खेतीमा आकर्षित गर्ने गरी आयोजना कार्यान्वयन गरिएको छ । कपुरकोट क्षेत्रमा पर्ने ३ वटा गाविसमा व्यवशायीक तरकारी खेती गरी कृषकको आम्दानी वृद्धि वृद्धि गर्न शुरु गरेका छन । प्रांगारिक ताजा तरकारी उत्पादन गरी कृषकहरुको आम्दानीमा वृद्धि गर्ने उद्देश्यले यो आयोजना कार्यान्वयन गरिएको हो । आयोजनाको अन्त सम्ममा कार्यक्षेत्रका ३ गा.वि.स.का २०० कृषक परिवारको प्रांगारिक पदार्थ व्यवस्थापन गरी सरदर वार्षिक ३५,०००।- दरले थप आम्दानी गर्ने उद्धेश्य लिइएको छ ।

सिमान्तकृत कृषकहरुको सहभागितामा पाखोवारीमा प्रांगारिक पदार्थको व्यवस्थापन गर्दै ताजा तरकारी उत्पादन मार्फत कृषकहरुको आम्दानी वृद्धि गरी गरिवी निवारण गर्ने आयोजनाको मुख्य उद्देश्य रहेको छ । आयोजनाले नेपालको कृषि नीतिमा उल्लेख भएका आर्थिक वृद्धिका सवै पक्षहरुमा साना किसान तथा महिलाहरुको सहभागितालाई सुनिश्चित गरेको छ । महिला, दलित, जनजाती र विपन्न कृषक यस आयोजनाको प्राथमिकतामा परेका छन । तरकारी खेती गर्ने उपयुक्त जमिन भएका कृषक परिवारलाई यस आयोजनामा समावेश गरिएको छ ।

पहिलो वर्ष लक्ष्य गरे अनुसारको सवै क्रियाकलापहरु सम्पन्न भएका छन जसले गर्दा आयोजनाको अन्त सम्ममा तय गरिएका उपलव्धीहरु हांसिल हुने देखिन्छ ।

## Synopsis of Project Status

## Targeted Outputs

**Output 1 :**

**प्रांगारिक पदार्थको व्यवस्थापन गरी व्यापक रुपमा ताजा तरकारी उत्पादन भएको हुनेछ ।**

सल्यान जिल्लाका धनवाङ्ग, त्रिवेणी र फलवाङ्ग गाविसका आयोजनामा समावेश २०० कृषक परिवारले प्रांगारिक तरकारी खेति गर्न शुरुवात गरेका छन् । सबै घरमा गँहुत संकलन, जैविक विषादीको प्रयोग गरि तरकारी खेति गर्न शुरुवात भएको छ । आयोजना सञ्चालन पश्चात कृषकहरुले प्लास्टिक हाउसमा गोलभेडा खेति गर्न शुरुवात गरेका छन् ।

**Output 2 :**

**उत्पादित ताजा तरकारीको सहज रुपमा वजार व्यवस्थापन भएको हुनेछ ।**

आयोजना क्षेत्रका २०० घरपरिवारले नै गोठेमल व्यावस्थापन तथा जैविक विषाधि निर्माण गरि प्रांगारिक तरकारी खेति गर्ने अभियान सञ्चालन गरेका छन । कृषकहरु रासायनिक विषादिलाई न्यूनिकरण गर्दै जैविक विषादि तर्फ आकर्षित भएका छन् । आयोजनामा सहभागी कृषकहरुले आश्विन देखि चैत्र सम्म कुनै तरकारी नलगाउने कृषकहरु ताजा तरकारी खेती गर्न सक्ने भएका छन । ताजा तरकारी खेती गरी प्रति कृषक परिवार सरदर वार्षिक ४.५ क्विन्टल ताजातरकारी उत्पादन तथा विक्रि गरी रु.१०,५०० थप आम्दानी गरेका छन ।

**Output 3:**

**व्यवशायिक ताजा तरकारी उत्पादनको क्षेत्र विस्तार भएको हुनेछ ।**

प्रांगारिक ताजा तरकारी उत्पादनका विषयमा समुह वाहिरका किसानले समेत चासो लिएका छन । कृषक समुहमा छलफल तथा तालिम संचालन हुंदा समुह वाहिरका कृषक समेत तालिम स्थलमा आई चासो लिने गरेका छन । समुहमा आवद्ध कृषकहरुको देखासिकी गरी वरपरका किसानहरुले समेत पशु मुत्रको सदुपयोग गर्न थालेका छन । कृषक समुहमा आवद्ध हुन समेत चासो देखाएका छन ।

**Activities Proposed**

| Activities | Activity status | Remarks |
|---|---|---|
| १.१ अभिमुखिकरण गोष्ठि | सम्पन्न भएको | |
| १.२ कृषक समुह गठन | ८ वटा गठन | |
| १.३ आधारभूत तथ्याङ्क संकलन | सम्पन्न भएको | |
| १.४ सहभागितात्मक योजना तर्जुमा | ८ वटै समुहमा सम्पन्न | |
| १.५ गोठेमल सुधार, कम्पोष्टमल तथा जैविक विषादी निर्माण अभियान | २०० घरमा नै पशुमुत्रको सदुपयोग | |
| १.६ प्लास्टिक हाउसमा गोलभेंडा खेती तालिम | १७ जनाले तालिम लिई टनेल निर्माण | |
| १.७ व्यवशायिक ताजा तरकारी उत्पादन फिल्ड अभ्यास | ८ वटै समुहमा संचालन | |

| Activities | Activity status | Remarks |
|---|---|---|
| १.८ सिंचाई प्रविधि प्रदर्शन | विपन्न र दलित वस्तीमा २० वटा | |
| १.९ कृषक समुह परिचालन | नियमित रुपमा समुह परिचालन भएको | |
| १.१० कृषकको खेतवारीमा फिल्ड अवलोकन तथा प्राविधिक सहयोग | नियमित संचालनमा रहेको | |
| २.१ विउ कोष स्थापना तथा व्यवस्थापन | आगामी चौमासिकमा गर्ने कार्ययोजना छ | |
| २.२ आयोजनाको भिडियो डकुमेन्टी निर्माण | नियमित भैरहेको छ | |
| २.३ आयोजनाको सार्वजनिक सुनुवाई | आगामी वर्ष गर्ने कार्ययोजना रहेको छ | |
| २.४ आयोजनाको सूचना पाटी व्यवस्थापन | कृषि सेवा केन्द्र र सम्पर्क कार्यालय | |
| २.५ संस्थाद्धारा आन्तरिक अनुगमन | सम्पन्न भएको । | |
| २.६ संयुक्त अनुगमन तथा मुल्याङ्कन | पत्रकार, कृषि र डिडिएसको सहभागीता | |
| ३.१ जिल्ला स्तरिय समिक्षा तथा अन्तक्रिया | आगामी वर्ष गर्ने गरी कार्ययोजना रहेको | |
| ३.२ लिफ्लेट प्रकाशन | ३०० प्रति तयार गरी वितरण गरिएको | |
| ३.३ आयोजनाको समिक्षा तथा मुल्याङ्कन | आगामी वर्ष आयोजना गर्ने कार्ययोजना | |

## Achievements (also include Findings in case of Research Projects)

यस आयोजनाको कार्यान्वयनवाट भएको मुख्य मुख्य उपलव्धी देहाय अनुसार छ ।

- कार्यक्षेत्रका २०० कृषक परिवार ८ वटा समुहमा आवद्ध भै नियमित रुपमा दीगो कृषि प्रविधिको वारेमा छलफल गर्न थालेका छन ।
- २०० कृषक परिवारले नै ताजातरकारी उत्पादन गरी विक्रि वितरणवाट पहिलो वर्ष सरदर प्रति परिवार १०,५०० का दरले थप आम्दानी गरेका छन ।
- २०० कृषक परिवारले गहुंतको सदुपयोग गरी जैविक विषादी तयार गरी ताजा तरकारीमा प्रयोग गरेका छन ।
- ८ वटै कृषक समुहमा नमुना नर्सरी स्थापना भै विरुवा उत्पादन भएको छ ।
- १७ कृषक परिवारले टनेल निर्माण गरी टमाटर खेती गरि रहेका छन ।
- २०० कृषकको नियमित फिल्ड अभ्यास तालिमवाट प्रांगारिक ताजा तरकारी खेती प्रविधिमा थप क्षमता वढेको छ ।
- कृषक समुहको छलफलवाट वजारको माग अनुसार तरकारी उत्पादन गर्ने कार्ययोजना तयार भएको छ । जसले गर्दा वजार व्यवस्थापनमा सहयोग पुगेको छ ।
- कृषकहरु एक आपसमा छलफल गर्ने समुहगत रुपमा सेवा प्रदायक निकायमा सम्पर्क समन्वय गर्ने परिपाटीको विकास भएको छ ।

# PROJECT TITLE: USE OF LOCAL RESOURCES FOR SUSTAINABLE AGRICULTURE DEVELOPMENT

| | | | |
|---|---|---|---|
| ***Project No:*** | 1021 | | |
| ***Project Coordinator:*** | Mr. Ram Swarth Mandal | | |
| ***Address:*** | Janasewa Yuva Utthan Kendra, Tarapatti Sirsiya-6 | | |
| ***Telephone:*** | 9849594089, 9804805455 | | |
| ***Collaborating organisations:*** | 1. District Agriculture Development Office, Dhanusha<br>2. Research Station, Hardinath, Dhanusha<br>3. Soil Testing Lab., Hetauda | | |
| ***Start Date:*** | 2070.12.6 | ***End Date:*** | 2072.12.5 |
| ***Project Cost:*** | NRs. 19,94,733.00 | | |
| ***Location of Project:*** | VDCs- Tarapatti and Mithileshwar of Dhanusha district | | |

## Project Summary

### Background

Dhanusha district is the major food and vegetable producing district in the Central Development Region where total land under rice, wheat and vegetable are 57,105 ha, 38,450 ha and 7605 ha respectively .The production and productivity of winter, summer and off-season vegetable are 37881 mt and 12.2 mt/ha, 44993 mt, and 13 mt/ha and 11216 mt, and 10.79 mt/ha respectively. The existing production of vegetable is very dependent on the heavily use of chemical fertilizer and pesticide in project area. The use of chemical fertilizer is 375 kg/ha (Urea: 120 kg, DAP: 150 kg, Potash: 90 kg and Micronutrient: 15 kg per hectare), use of chemical pesticide is 23 kg as solid form and 3 lt/ha as liquid form and use of poor quality bio-fertilizer (FYM/compost manure) is 6 mt/ha in vegetable production (DADO, 2012). The average cropping intensity of the district is 180%. This heavily use of chemical fertilizers and pesticides may harm us as slow poison at the one hand and may bring scarcity of resources in the future on the hand for incoming generation.

In agriculture sector, the yield of crops' per unit area of land has been increased substantially due to the past several attempts of development activities. In that course of action, the role of high yielding crop varieties, chemical fertilizers, insecticides, pesticides and crop management practices remain crucial. Since a long, it has been advocated against negative impact of chemical inputs on soil quality, environmental status, health of human and other living beings including micro-flora and fauna. Hence, it remains always a matter of great concern to go through alternative but safe measures to avoid haphazard use and hazardous effect of chemical inputs on soil quality and on related aspects. Resource saving cultivation practices for sustainable agriculture development is one of the alternatives way of resource conservation and agro-biodiversity promotion for sustainable agriculture and earning opportunity for many jobless poor youths and women in rural area of Nepal.

Since last few years, attention is being paid by the agriculturist and the end users of the products to introduce substitutes of chemical inputs and practice of suitable cropping patterns to minimize the degradation of soil and environment quality. Therefore use of locally prepared bio-fertilizers and bio-pesticides along with application of decreasing doses of chemical fertilizers to fulfill for a short period the probable deficiency of the plant nutrients in the process. At the same time, cultivation operations must be coincided within suitable climatic range and cropping modules that could best address the situational demand of the project area and the beneficiaries four groups, two from each of project VDC having 25 members in each group will be formed for the project purposes. Tree plantation on fallow and public land will also support the objective of the project. Resource saving cultivation practice followed by crop management practices shall ensure increase of production from same piece of land within stipulated period giving space to next crop sowing in appropriate time. This project has been chosen for saving of valuable resources and increase of crop production at the same time. Transfer of proven resource saving technologies at farmers' doors through training and demonstration, learning by doing process and follow-up will boost up the capabilities of the beneficiaries of the project as well as the adjoining location.

Thus, the target beneficiaries will get opportunity to reduce their poverty level from improved and safe agriculture practices. For successful conduction of the project, the target beneficiaries will be motivated and mobilized and they will be managed for their institutional development during and after the project period.

## Project Purpose/Objectives

The use of chemical fertilizer is 375 kg/ha (Urea: 120 kg, DAP: 150 kg, Potash: 90 kg and Micronutrient: 15 kg per hectare), use of chemical pesticide is 23 kg as solid form and 3 liter /ha as liquid form and use of poor quality bio-fertilizer (FYM/compost manure) is 6 mt/ha in vegetable production (DADO, 2012). The purpose of resource conservation and agri-biodiversity promotion could be achieved through application of resource saving cultivation practices. The use of chemical fertilizers and pesticides will be decreased about 100 kg/ha (40%) and the use of quality bio-fertilizer will be increased 15 mt/ha or more than that amount by the end of the project period by making compost pits and vermin compost pits with training of its technologies as well as application to targeted groups. Similarly, cropping intensity will be increased from 180% to 225% or more than that in project areas. Transfer of suitable resource saving cultivation technologies through carrying out six training and outreach action research (demonstration), and a field tour for interaction and discussion with target groups' beneficiaries will be executed properly. Preparation and use of one organic manure plant, one vermi-compost plant, four Zero budget natural system program, one bio-pesticides preparation demonstration from locally available bio-raw materials, practice of crop rotation, use of crop diversification strategy, practices of suitable cropping modules and crop management practices will serve the purpose of the project. This project will also lead to ensure beneficiaries to create employment opportunity and the regular source of income generation for them. Different approved activities will be carried out in selected VDCs in time to achieve the purpose of the project. The project will activate and facilitate beneficiaries to be familiar with and prepare different types of organic manures, green manures, vermi-compost, bio-fertilizers and their use in the crop field. All activities will be carried out in active participation of the target groups' members. Concerning staffs will facilitate/assist the group members in performing the activities

properly. This action will make the target groups capable of doing things themselves confidently, afterwards. Follow-up of on-going activities after completion of the project will be provided from this organization for sustainability of the project purpose.

## Beneficiaries

The Project target beneficiaries will be selected from poor farmer families who are involving directly in agriculture, particularly Madhesi Dalit, Janajati (ethnic groups), disadvantaged groups and other poor and marginal groups. Many youths and women of these communities in rural area are either illiterate or less-educated. As these people are from farm families, they know more or less about agriculture practices. Majority of the farm families of the proposed project VDCs will be from subsistence farm families. These farm families are not able to meet their livelihood requirement from very limited piece of land property. Lack of reliable sources of technical information dissemination, the farm families of aforesaid VDCs have been haphazardly using chemical fertilizers and pesticides, losing more and more quality and bio-diversity status of soil. Youths and women will find develop their skills and capacity, and will take advantage of proven cultivation practices after action research for income generation and improvement of livelihood with conservation of their scarce resources. Altogether, about 100 households will be directly and above 200 households will be indirectly benefited from the implementation of this project; and this number will increase afterwards.

## Beneficiaries from this project will be as below.

| VDC | Group | Male | | | | | Female | | | | | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dalit | Janajati/ Aadivashi | Bahun/ Chhetri | Others | Total | Dalit | Janajati/ Aadivashi | Bahun/ Chhetri | Others | Total | |
| Tarapatti | 1 | 4 | 3 | 1 | 5 | 13 | 3 | 1 | 1 | 7 | 12 | 25 |
| | 2 | 2 | 5 | 2 | 6 | 15 | 1 | 2 | - | 7 | 10 | 25 |
| Mithilleswor | 1 | 4 | 2 | 2 | 10 | 18 | 1 | 2 | - | 4 | 7 | 25 |
| | 2 | 4 | 3 | 1 | 8 | 16 | 1 | 1 | - | 7 | 9 | 25 |
| **Grand total** | **4** | **14** | **13** | **6** | **29** | **62** | **6** | **6** | **1** | **25** | **38** | **100** |

### Objectively Verifiable Indicators (OVIs)

## Up-scaling Pathways

CBOs, and NGOs lunched such activities to small extent, having no positive change in production, poverty reduction, and no additional job. The project outputs that will be obtained by the target beneficiaries in terms of technical know-how and skills development will improve their capacity to utilize their resource in better way for their sustained farming and income generation activities. The organization will facilitate the target groups to use acquired knowledge and skills and technology for improving their farming using resource conservation technology for suitable income

generation activities. The linkage between the target groups and the market management will be developed for selling the products and buying of the agro-inputs, from reliable sources. A committee in each group will be formed and will be guided by the organization even after completion of the project for sustainability of the outputs and achievements of the project. Establishment of vermin-compost plant by the committee, in active participation of the beneficiaries will help in continuation of the project intervention, even in the future. The committee of the groups will take all necessary action during and after the project period. Collaboration with the District Agriculture Development Office (DADO), will help in technical backing of the groups in present as well as in future. The DADO is also expected to expand these program activities in other parts of the district with the great priority. The participating members having technical knowledge on resource saving practice and its appropriate utilization, output sharing among members, video documentary and good linkage. It results in increase of their income and encourage to expand and disseminate the ideas of their practices.

## Synopsis of Project Status

### Targeted Outputs:

1. The target groups' members gets trained and Resource Saving Cultivation (RSC) activities practiced.
2. Use of chemical fertilizers and pesticides replaced by bio-fertilizers and bio-pesticides.
3. Conditions of soil and environment and crop bio-diversity improved.
4. Net farm income of beneficiaries increased.
5. The technologies and project outputs disseminated

### Activities Proposed :

| Activities | Progress status | Remarks |
|---|---|---|
| **1. The target groups' members gets trained and Resource Saving Cultivation (RSC) activities practiced .** | | |
| Activity 1.1. Project Introduction Workshop | Completed in Baisakh, 2071 | |
| Activity 1.2. Baseline Survey | Completed in Baisakh, 2071 | |
| Activity 1.3. Group formation and mobilization | Completed in Baisakh, 2071 | |
| Activity 1.4. Training | Completed in Baisakh, Bhadra and Poush, 2071 | |
| Activities 1.5. Field Tour | Yet to begin | |
| Activities 1.6. Demonstration | Ongoing | |
| Activities 1.7. Monitoring and evaluation | Ongoing | 1st Quarter in first year |
| **2. Use of chemical fertilizers and pesticides replaced by bio-fertilizers and bio-pesticides.** | | |
| Activity 2.1. Irrigation Structure | Ongoing | |
| Activity 2.2. Compost preparation and use | Completed in Shrawan,2071 | |

| | | |
|---|---|---|
| Activity 2.3. Vermin compost preparation and use | Yet to begin | |
| Activity 2.4. Zero budget natural system and use | Completed in Aashin,2071 | |
| Activity 2.5. bio pesticide preparation and use | Completed in Shrawan,2071 | |
| **3. Conditions of soil and environment and crop bio-diversity improved.** | | |
| Activity 3. Soil testing | Completed in Jestha,2071 | 2nd Quarter in first year |
| **4. Net farm income of beneficiaries increased.** | | |
| Activity 4. Establishment of market linkage between producers and traders | Completed in Kartik,2071 | |
| 5. The technologies and project outputs disseminated. | | |
| Activity 5.1.Hording board Preparation and installation | Completed in Baisakh, 2071 | |
| Activity 5.2. Video documentary Preparation | Completed in Falgun, 2071 | |
| Activity 5.3. Publication and documentation | Completed in Mansir, 2071 | |
| Activity 5.4. Public hearing | Completed in, Falgun, 2071 | |

## Achievements / Findings

- Compost preparation and use in both VDCs.
- Zero budget natural system and use in both VDCs.
- Bio pesticide preparation and use in both VDCs.
- Soil testing in both VDCs.
- Establishment of market linkage between producers and traders.
- Organic vegetables produced and sold at local markets.
- Publication : Booklets, Leaflets and Poster pumplets published and distributed


The participants of the training of organic vegetable farming


Field monitoring by Mr. Ram Chandra Yadav, J T

# PROJECT TITLE: PROMOTION OF INDIGENOUS CROPS LIKE FINGERMILLET, BUCKWHEAT AND *JUNILO* FOR ENSURING FOOD SECURITY AND IMPROVING LIVELIHOOD CONDITION OF PEOPLE OF HUMLA DISTRICT

**Project No.:** 1022

| | |
|---|---|
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| ***Collaboration/Partners*** | Himalaya Community Development and Service Centre, Humla |
| ***Duration of Project*** | 2 years and 4 month |
| ***Project Cost*** | 29,99,960 |
| ***Location of Project*** | Humla district ( Lali, Rodikot and Shreemastha VDC) |

## Project Summary

Mid-western region is one of the most food deficit regions where large chunk of population is living below poverty line. The incidence of food insecurity and poverty is disproportionately higher in mid-western and far-western hill and mountain districts. The majority of farmers are poor, who are often vulnerable in terms of food security and suffer from hunger and malnutrition. Food needs to be brought in from surplus area (mostly from Terai region) to the deficit area. Low purchasing power of the people limits commercial traders and import of commodities with high transportation costs. Increase in the use of underutilized crops is one of the better options for nutritional, environmental and financial security. Humla district, mainly where there is no irrigation facilities and marginal lands are being cultivated; there is plenty of scope for cultivating underutilized crop species and exploiting their products to provide food for the rural poor. Underutilized crop species have a potential but has not been fully exploited so the promotion and their utilization should be explored to contribute to food security and poverty alleviation. In the food deficit areas the production of modern crop varieties is also limited due to requirement of high external input, marginality of land, unusual rainfall, drought etc.

The overall purpose of this project is to promote the production and consumption of the locally adapted underutilized crops for reducing the food insecurity condition of the Humla district. However, the specific objectives of the project includes technical training about improved cultivation practices of underutilized crops, awareness of local people about the nutritional importance of crops and advocate the importance of these crops with different stakeholders about its promotion for ensuring food security in the district.

In the proposed VDCs, of the total population 5296, about 70% people do not have food sufficiency for more than six months a year and 52% people have food sufficiency for less than 3 months in a year. The temporary migration is very high. The beneficiaries of the project will be dalit, marginalized Poor, Women and food insecure people. These groups of the people are dependent on off- farm activities such as collection of fire wood, collection of medicinal herbs such as *panch aule, yarsagumba*, etc. and temporary migration to India in search of job. All such income generating activities are done mostly for buying food for the family. Mostly women in the entire social stratum fall under marginalized and vulnerable groups. Moreover, due to the radiation effect of the project could benefit not only the direct beneficiaries of the project but also the people of the entire belt where large numbers of people are living below poverty line. The direct beneficiaries of the project are 150 households and indirect beneficiaries will be about 200. 150 households will be organized in 6 farmers groups for the promotion of underutilized crops.

At the end of the project the production of underutilized crops will be increased by 35% as compared with the baseline period. Likewise, food security condition of the beneficiaries will be increased by additional 2 months due to increased production and consumption of underutilized crop.

The project aims to disseminate the appropriate cultivation practices of underutilized crops by practical training and demonstration. Likewise, people will be aware about the nutritional importance of these underutilized crops and they will be trained for making different value added products of underutilized crops. For the implementation of the program, the people will be organized in the groups. Different means of dissemination like trainings, demonstrations and publications will be used to disseminate the knowledge and technologies to the farmers and other clients. Successful messages will be disseminated through workshop, publication of booklet in Nepali language about the cultivation method of these crops, their nutritional importance and methods of making value added products.

### Synopsis of project status

## Targated Outputs

1. The existing scenario of the food security of the project area identified and farmers are organized to utilize the local agro-biodiversity.
2. Consumption of underutilized crops increased through product diversification.
3. Improved cultivation practices of fingermillet, buckwheat and *Junilo* adopted.
4. Best practice for further scaling up of the technologies documented and disseminated.

## Activities Proposed:

| Activities | Activity Status | Remarks |
|---|---|---|
| 1.1 Conduct baseline survey in the project site | Completed | |
| 1.2 Group formation and mobilization | Completed | |
| 1.3 Farmers group orientation workshop | Completed | |
| 2.1 Training about the cultivation practices of underutilized crops | Completed | |

| | | |
|---|---|---|
| 2.2 Demonstration of agronomic practices of underutilized crops | Completed | |
| 2.3 Seed and equipment support | Completed | |
| 3.1 Training on nutritional values of underutilized crops and preparation of different receipe from these crops. | Ongoing | |
| 3.2 Training on preparation of organic manure/ compost manure preparation | Ongoing | |
| 4.1 Publication of booklet | Ongoing | |
| 4.2 Joint monitoring of the project activities | Yet to begin | |
| 4.3 Internal Monitoring | Ongoing | |
| 4.4 Post project assessment survey | Yet to begin | |
| 4.5 Public hearing | Yet to begin | |
| 4.6 Video documentary preparation | Ongoing | |
| 4.7 Project report preparation | Ongoing | |
| 4.8 Final dissemination workshop | Yet to begin | |

## Achievements:

- The existing scenario of the food security of the project area identified through baseline survey.
- 150 households are organized in 6 farmers groups for the promotion of underutilized crops.
- Trainings on improved cultivation practices of underutilized crops and preparation of organic manure.
- Improved cultivation practices of the targeted crops adopted.
- Training on nutritional values of underutilized crops and preparation of different receipe from these crops.

# PROJECT TITLE: IMPROVEMENT IN THE LIVELIHOOD OF POOR AND MARGINAL FARMERS THROUGH INTRODUCTION OF IMPROVED VEGETABLE CULTIVATION AND MARKETING PRACTICES IN GORKHA DISTRICT

**Project No.** PP-1023/2013/14

| | |
|---|---|
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| ***Collaboration/Partners*** | District Agriculture Development Office, Gorkha<br>Bindrawoti Agricultural Cooperative Ltd, Masel, Gorkha |
| ***Duration of Project*** | 2 Years 4 Months( April 2014 to July 2016 ) |
| ***Project Cost*** | Total cost of the project is NRS. 2,154,859<br>From NARDF is NRS 1,989,859 only.<br>From Collaborator is 1,65,000 only. |
| ***Location of Project*** | Tandrang and Masel VDCs of Gorkha District |

## Project Summary

### Background

The project VDCs, Tandrang and Masel of Gorkha District is connected with motorable road. But most of farmers are following traditional based farming practices. This is because of low level of motivation and support by government and non-government organizations. Various seasonal and off-seasonal vegetables like cauliflower, cabbage, tomato, chili, guards can be grown successfully both along the corridor and farmers can sell their produces both in the local markets and to the nearby urban centers. However, the local demand for most of the seasonal and off-seasonal vegetables has been met by importing from other districts. There is ample scope for substituting the imports of import of vegetables by promoting the vegetable production and marketing in this road corridor.

Gorkha district has been lagging behind the national development process from the national development perspective. The average socio-economic indicators show that the District is far below the national average and needs specific efforts to bring up to the national level. In the absence of adequate development infrastructures and difficult terrain, the available economic opportunities for the people are very limited. In case of Gorkha 55.7% populations are actively engaged in the agriculture where as 44.1% male and 68.5% female (DADO Gorkha, 2012)

However, majority of the households are not able to make their subsistence living with conventional cereal based traditional farming. Due to the small landholding size and lack of alternative income opportunity, majority of the farmers are poor and are not being able to meet their food demand from own production. There is lack of adequate knowledge on improved production and marketing practices. Moreover, they are unorganized. Socio-economic conditions of the small and marginal farm families could be improved if they could adopt improved technology and marketing of vegetables.

Considering this facts, commercial production of vegetables has been proposed to utilize the natural potentialities and improve the livelihoods of the poor and marginal.

## Purpose/Objectives

To increase income and livelihoods of poor and marginalized farmers through introducing commercial vegetable production, post harvest handling and strengthening market promoting infrastructures. However, the specific purposes of the project are:

- to introduce commercial vegetables and increase the production, productivities of vegetables through promoting the use of recommended cultivation practices,
- to support for post harvest handling and improve the quality and marketability of vegetables,
- To support for the marketing of vegetables by establishing collection centre and promoting collective marketing of vegetables.
- There will be at least 60 hectares of the land brought under commercial vegetable cultivation, 400 metric tons of vegetables will be produced annually

## Expected Beneficiaries

Poor, women, dalit and Janajati farmers are the main beneficiaries of the project. They will be empowered by involving them in groups and cooperative through promoting them in groups and cooperative. Women farmers will be involved in the project and get trained. The farmers group will be organized in this proportion,

| VDC | Targeted Beneficiaries | | | | |
|---|---|---|---|---|---|
| | **Women** | **Dalits** | **Janajati** | **others** | **Total** |
| Masel | 75 | 20 | 30 | 100 | 150 |
| Tandrang | 75 | 20 | 20 | 110 | 150 |
| Total | 150 | 40 | 50 | 210 | 300 |

Directly or indirectly, business sector as well as tourism sector would also be greatly benefited from this project. The extension and researchers involved in the vegetable production will get the information of vegetable production that could be incorporated in their future programs. Similarly, the information would be advantageous to the educational sector to be used as a technical material. Moreover, traders and consumers of vegetable are considered as the secondary beneficiaries.

## Objectively Verifiable Indicators (OVIs)

**Output 1. Farmers organized in groups and improved vegetable cultivation practices promoted:**

- By the end of first quarter of first year, targeted farmers organized in 10-12 groups.
- By second quarter of first year participant farmers start commercial cultivation of vegetables in organized manner
- By the end of project, at least 60 ha of land brought under commercial vegetable production

**Output 2: Participant farmers' knowledge and skills on production and post harvest of vegetable improved**

- By the end of project, 300 farmers use recommended vegetable production practices,
- By the first quarter of second year at least 300 farmers aware and start post harvest handling of vegetables,

**Output 3: Farmers' linkages with district level vegetable traders established and project output disseminated**

- Vegetable collection and information centre established by second quarter of 2$^{nd}$ year,
- Trader link of farmers established with VDC and district level traders by the end of project,
- By the end of the project farmers sell vegetables collectively through the collection centre,
- By the end of the project single household earn at 30,000- 40,000 NRs additional net income and their level of poverty minimize to some extent.

## Upscaling Pathways

Following pathways will be adapted to upscale project;

The project has been helping to increase seasonal and off season fresh vegetable production through the introduction of recommended and known production technologies, improve the quality of vegetables through post harvest practices (shorting, grading, cleaning, packaging etc) and promote marketing through establishing market network. Booklets concerning to project outputs preparation and distribution to the farmers and other organizations. Moreover, the farmer groups and cooperatives will be encouraged and supported to spread and disseminate generated output collectively to other farmers, farmer groups and cooperative for wider diffusion of the outputs. The farmer groups and cooperative will be viable and effective local organizations for the up scaling of project output.

Furthermore, the information about the project outputs will be made available to government bodies, NGOs, CBOs, and other relevant stakeholders for dissemination through organizing workshops/meetings and other relevant mechanism.

## Synopsis of project Status

### 1. Targeted outputs

To increase income and livelihoods of poor and marginalized farmers through introducing commercial vegetable production, post harvest handling and strengthening market promoting infrastructures. In order to achieve this purpose, this project has envisaged to generate following outputs:

**Output 1. Farmers organized in groups and improved vegetable cultivation practices promoted:**

In the beginning potential farmers have organized in groups, farmers is supported for raising seedlings in the nurseries, giving care to the plant and management of crops in the field appropriately. Several skills and knowledge imparting trainings have been organized and conducted.

**Output 2: Participant farmers' knowledge and skills on production and post harvest of vegetable improved**

Farmers are trained for post harvest handling of vegetables especially of cleaning, grading, sort out and packaging appropriately to minimize losses during transportation and marketing of vegetables. Additionally, farmers are trained on small scale processing of vegetables such as drying, fermenting and canning so that in case of low market demand and excess amount of production, vegetables can be preserved.

**Output 3: Farmers' linkages with district level vegetable traders established and project output disseminated**

Collection centre will be established and equipped with all necessary machineries and equipments. Farmers will be trained and supported for developing networking with traders to have better marketability of the products. Farmers will be motivated to sell the vegetables collectively via cooperative.

### 2. Activities Proposed

| SN | Activity Detail | Activity Status | Remarks |
|---|---|---|---|
| 1.1 | Preliminary meeting with stakeholders and farmers | Completed | |
| 1.2 | Indentifying and organizing farmers in groups | Completed | |
| 1.3 | Baseline Survey | Completed | |
| 1.4 | Demonstration of organic manure preparation | Ongoing | |
| 1.5 | Bio-pesticides preparation training | Ongoing | |
| 1.6 | Support on technology and production inputs | Ongoing | |
| 1.7 | Publication and distribution of extension technical materials | Ongoing | |

| | | | |
|---|---|---|---|
| 2.1 | Training on management of vegetables in the field | Ongoing | |
| 2.2 | Promotion on post-harvest handling of vegetables | Ongoing | |
| 2.3 | Strengthening groups and cooperative | yet to begin | |
| 3.1 | Construction of collection, selling and information centre | yet to begin | |
| 3.2 | Participatory monitoring and evaluation | Ongoing | |
| 3.3 | Dissemination of project output via mass media | Ongoing | |
| 3.4 | Video documentary preparation | Ongoing | |
| 3.5 | District level project output dissemination workshop | yet to begin | |
| 3.6 | Public Hearing | yet to begin | |
| 3.7 | End line Survey | yet to begin | |
| 3.8 | Preparation of Technical reports | Ongoing | |

## Achievements

- 10 plastic houses one in each farmers group have build and off-season vegetable production started
- Farmers earn average 15 thousands additional income from vegetables
- Availability of fresh vegetables in villages and local market.

# PROJECT TITLE: CONSERVATION AND PROMOTION OF LOCAL SWEET POTATO (*IPOMOEA BATATAS L.*) PRODUCTION FOR LIVELIHOOD IMPROVEMENT OF SMALLHOLDER FARMERS.

**Project No.** PP-1024/2014

| | |
|---|---|
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| ***Collaboration/Partners*** | Srijansil Yuva Samaj |
| ***Duration of Project*** | 3 Years( April 2014 to March 2017 ) |
| ***Project Cost*** | Nrs. 2,945,577.00 |
| ***Location of Project*** | Budhhakhani VDC, Kavre |

## Project Summary

### Background

Budhakhani Village Development committee (VDC) of Kavre, is situated southern part of the district. The total population of this VDC is 4343 and among them 92% are Tamang and rest of are Brahamine and Chhetri, Dalit, Janajati etc. These people are poor and marginalized. Around 80% percent of land is based on rainfed agriculture and has been the basis of livelihood of majority of people. They are food insecure condition because they don't have other sources of income except rainfed based farming. There are inadequate development infrastructures and the available economic opportunities are very limited.

Government of Nepal has been emphasizing on crop diversification and conservation of such crops. Although, sweet potato is nutritious and culturally importance, it has been neglected for producing commercially and therefore local sweet potato are in condition of vanishing from these proposed areas. However, there is an enabling environment for promoting cultivation and conservation of nutritious and indigenous sweet potato, which has been growing traditionally in small pieces of land, mainly for consuming in special occasions like *Mageskranti* and *Shivaratri*. The proposed site has great scope for the promotion of local sweet potato due to having suitable soil condition, terraced land and that would enhance the livelihood condition of local poor and marginalized people.

### Purpose/Objectives

The project purpose is to reduce malnutrition and improve livelihood of marginalized smallholder farmers by introducing and promoting commercial cultivation of local sweet potato in Budhakhani VDC of Kavre.

The main aim of the proposed project is to improve the livelihood of the poor and marginalized Tamang communities through promotion and conservation of local sweet potato production.

In general, the purpose of the project is to promote and increase the production of sweet potato and to increase income of the farmers. The specific objectives however are as follows;

- Strengthen farmers' knowledge on production, pre and post harvest handling of sweet potato for food availability and to enhance income generation.
- Establish collection centre for adding value and establishing seed bank of sweet potato to conserve and to sustain commercial production.
- Establish farmer's cooperative for accessing information about prevailing price and demand of sweet potato in different potential markets and sustainability of the farming.

## Expected Beneficiaries

The *Tamang* community is the primary target groups of the proposed interventions and women have been given priority in the project activities. At least 400 farmer's household will be directly benefited by their direct participation in the program. Out of them 160 participants will be women. Following table shows the structure of beneficiaries.

| Beneficiary Community | Male | Female | Total |
|---|---|---|---|
| Tamang | 216 | 144 | 360 |
| Dalit | 12 | 8 | 20 |
| other (Brahmin and Chhetri ) | 12 | 8 | 20 |
| **Total** | **240** | **160** | **400** |

## Objectively Verifiable Indicators (OVIs)

After the completion of the project 60 hectare area will be covered by local sweet potato and farmers will produce 400 mt. Out of 400 mt. 200 mt will be consumed locally and remaining quantity will be sold local and distant market. The followings are the main objectively verifiable indicators.

- By the end of 2016, 400 HHs involved in the commercial cultivation of local sweet potato.
- By the end of the 2016, 400 HHs' income improved by Nrs 25,000.

## Up scaling Pathways

Following pathways will be adapted to upscale project;

**i. Participant farmers organized and institutional set up strengthened**

At the beginning of the project implementation, a baseline survey will be conducted. In project site, a pre-project launching meeting will be conducted and it will focus on objectives and modality of the project implementation in the field level. All the concerned stakeholders i.e. representative from DADO, local NGOs, VDCs, farmers groups will sit together in the meeting. Group approach will be the specific methodology to implement the project activities.

Women participation will be encouraged to make more inclusive and effective. Since cooperative is registered, it will take leading roles for promoting the local sweet potato.

**ii. Improved cultivation practices of local sweet potato promoted**

Seed will be collected locally for commercially production and locally conservation. Nurseries will be established in order to produce vines as planting materials. One demonstration plot will be established to demonstrate the recommended package of practices to compare with traditional method of practices. The project will organize an exposure visit of farmer to expose to production package and marketing channel at government farm and domestic agricultural market. Project will also facilitate to establish the community seed bank for the continuity of commercial cultivation of sweet potato. Farmers will be trained to select, clean, grade and store good quality seed after harvest.

**iii. Farmers technical know-how enhanced on Production of sweet potato and its use at household level increased**

On spot training on commercial sweet potato production, post harvest handling and its marketing development will be conducted. Technical booklet on sweet potato production will be published and distributed to the farmers. In order to provide information about nutritive value of sweet potato and to promote their consumption at the local level, food festival will be organized on the occasion of *Shivaratri*. In this program local leader, representatives of different organizations and farmers will be invited.

**iv. Produced sweet potato marketed and project output disseminated**

Sweet potato collection-cum storage structure will be established and handed over to farmers groups under the whole responsibility of Cooperative. Audio-Visual documentary based on planning, implementation of project activities will be prepared for the dissemination of project outputs. Public hearing will be organized to share the project intervention with the concerned stakeholders and to get their feedbacks and support for the further improvement in the project activities.

## Synopsis of project Status

### 1. Targeted outputs

The project's main objective is to reduce malnutrition and improve livelihood of marginalized smallholder farmers by introducing and promoting commercial cultivation of local sweet potato in Budhakhani VDC of Kavre. The followings are the intended outputs of the project.

**Output-1: Participant farmers organized and strengthened**

- 400 participant farmers household identified and baseline survey conducted.
- Participant farmers organized in 16 functional groups,
- Involvement of 40% women in groups ensured.
- One farmer cooperative formed and registered in Division Cooperative Office.

**Output-2: Improved cultivation practices of sweet potato promoted**

- Farmers establish 16 group based nursery for producing vines.
- 400 farmers start commercial cultivation of sweet potato in 60 hectare of agricultural land.
- 400 participants HHs change cropping system and start to produce sweet potato commercially.
- 200 farmers developed skill to cultivation practice.

**Output-3: Production of sweet potato increased and its' use at household level increased**

- 400 ton sweet potato produced by 400 household.
- All participant people especially women, children and adults start consuming sweet potato as a main meal.

**Output-4: Produced sweet potato marketed**

- One collection-cum storage structure established.
- Produced 200 ton sweet potato will be in the local & urban markets for consumers and generate income Nrs.25, 000 each household in 5 month from the sale of sweet potato.
- Farmer cooperative establish local and distant market network for selling the sweet potato.

## 2. Activities Proposed

| S.N. | Activities | Activity Status | Remarks |
|---|---|---|---|
| 1.1 | Baseline Survey | on going | |
| 1.2 | Pre- project launching meeting | on going | |
| 1.3 | Organization and mobilization of farmer groups | on going | |
| 1.4 | Farmers Cooperative formation and management | yet to begin | |
| 2.1 | Local seed collection | completed in april 2014 | |
| 2.2 | Provision of planting materials | on going | |
| 2.3 | Transplanting vines | on going | |
| 2.4 | Demonstration plot establishment | on going | |
| 2.5 | Exposure visit to production centre and agricultural market | yet to begin | |
| 2.6 | Growing plant in the field | on going | |
| 2.7 | Establishment of community seed bank | yet to begin | |
| 3.1 | Farmers' capacity building on cultivation and post harvest | yet to begin | |
| 3.2 | Technical booklet publication | yet to begin | |
| 4.1 | Establishment of collection-cum storage structures | yet to begin | |
| 4.2 | Celebrating Sweet Potato Festival | yet to begin | |
| 4.3 | Internal monitoring | on going | |
| 4.4 | Joint monitoring | yet to begin | |
| 4.5 | Public hearing | yet to begin | |
| 4.6 | Audio-visual documentary preparation | yet to begin | |
| 4.7 | Report preparation | on going | |
| 4.8 | Post project assessment | yet to begin | |
| 4.9 | Project terminating workshop | yet to begin | |

**Achievement**: Yet to achieve

# PROJECT TITLE : PROMOTION OF VALUE CHAIN APPROACH BASED TECHNOLOGY OF OILSEED CROP (*SARSON* AND *TORIA: BRASSICA CAMPESTRIS*) FOR INCOME GENERATION OF FARMERS IN MAHOTTARI DISTRICT

**Project No :** PP-1025/070/071

| | |
|---|---|
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| ***Collaboration/Partners*** | DADO |
| ***Duration of Project*** | Chaitra 2070 to Chaitra 2071 (2 year project) |
| ***Project Cost*** | Rs. 19,99,820 |
| ***Location of Project*** | Mahottari District |

## Project Summary

### Background

The area and production of oilseed has been declining for last few years in proposed area (Farmers discussion, DADO report, Mahottari, 2012) due to low productivity (700 kg per ha in Mahottari). Several major constraints has been identified to increase production, including lack of improved varieties, depletion in soil fertility status, micro-nutrients deficiency, many pests and diseases, lack of improved production technology and lack of effective marketing systems and storage. Consequently, Nepal has imported huge amount of oilseed to meet the domestic demand of oil with worth of NRs. 841.8 millions (MoAD, 2011).

Unavailability of quality seed, which is cheapest input in agriculture production, contributes 15-20% in seed yield. Around 97 percent of the seed requirement of oilseed is still being met by farmers themselves through own production saving, farmer-to-farmer exchange and informal purchase. Formal institutions (NARC, NSCL and organized private seed companies) have not met farmers' growing demand of improved seeds, which is evident from the very low seed replacement rate (SRR) which is only 4.8% (SQCC, seed balance sheet, 2069/70), cause low productivity.

Lack of linkage and coordination among the partners for value addition is another constraint. Farmers, private sector millers, traders, exporters and consumers are major actors for value chain. That cause big fluctuation in market price. As a result, the farmers are generally reluctant to invest in productivity improvement through adoption of innovative, costly techniques.

Considering the importance of oilseed, as edible oil at nation level, for food security and income generation, selection of high yielding, widely adapted cultivars (source seed) with appropriate agronomic package and seed multiplication with inspection and certification is of prime concern to extension workers and breeders. Value chain based production and market channelization with the local and outer traders for reasonable price of oilseed crop is a good opportunity for the farmer's groups/cooperatives to enhance food security/ income level and eventually poverty reduction.

## Main purpose/objectives

Sustainable increase in production and productivity of oilseed crop with availability of source seed, improved technology and proper marketing for food nutrition and income generation will be main purpose of the project.

The specific purposes can be summarized as follows.

- To increase oilseed production, productivity and consumption for food nutritional security and income generation of small poor farmers.
- To enhance extension services and improved inputs (quality seed/micro-nutrients/mechanization) for higher production of oilseed.
- To promote linkages with local as well as destination market for value addition.

## Expected beneficiaries

Beneficiaries will be selected based on their interest, need identification, representation in society and the direct target group will be,

- 200 small farmers, excluded group, poor, *dalits*, women and disadvantaged farmers from 8 groups/cooperatives will direct beneficiaries.
- At least 15 traders, 10 oil millers will be benefited.
- A total of 200 farmer households (200 farmers) living below poverty line will be benefited with technology and minikits.

Thus, 200 people from farmer households (poor, youth, women), dalits(40%), Janjati (20%), excluded groups, traders and oil millers (40%) will be benefited from seed production, training, minikits and market networking.

## Objectively Verifiable Indicators (OVIs)

The project is targeted to accomplish in two years. Eight groups (200 HHs) from poor, youth, women, dalits, madhesi and Janjati farmers will plant at least 83 ha of land in first year with acquired knowledge and increase in succeeding year.

By the end of the project, oilseed yield in target areas will be increased by 28%. This will ultimately affect oil consumption among people by 2.5 instead of 1.7 kg per year which will be helpful to reduce malnourishment among rural people.

By the end of 2 years, at least 15 traders, 10 oil millers will be empowered for value addition.

200 people will be benefitted with income generation activities.

1000 booklets on improved package of practices of oilseed will be prepared and disseminated.

A good functioning market network developed in the target VDCs by the end of the project.

75 mt oilseed will be produced with at least 0.9 mt per ha and 40mt will be utilized as source seed for area expansion in next year.

## Up scaling pathways

Participatory approach will be adopted for overall promotion pathways for uptake or up scaling of the project outputs which is based on the demand (demonstration, IPNS/micronutrients, training, minikits, improved technology, visits) of local people. Farmers to farmer's interaction will also encourage for up scaling of project outputs.

Demonstration, based on the principle of learning by doing, will help to confidence building among farmers for technology adoption. With development of locally adopted technology and varieties (Pragati, Unnati), farmers will be interested to expand the area of production under oilseed crop.

Since producers, traders, oil millers and consumers are target group, technology transfer, inputs support; market networking and information sharing will help to concentrate for commercialization of oilseed crops for sustainable income generation.

Institutional development, skill development, enterprise development, market networking, backward and forward linkages with government and other service providers, are precondition for sustainability of project.

Skill development training and feeling of group ownership rather than individual among the group members will secure program sustainability.

Project outputs and information will be disseminated with use of local FM, organizing workshop, training, booklet, leaflet and finally publication of reports.

## Synopsis of Project Status

### Targeted Outputs

Here, mention the main Outputs envisaged from the Project number-wise as stated in the Project Log frame of each respective individual project(s).

1. Capacity build up of farmers and adoption rate (60%) of improved technology (package of practices) of oilseed will be enhanced.
2. Upgrade socio-economic status of women, Madhesi, poor, *dalits* in target area at least by 25% of the baseline with improved oilseed productivity.
3. Post analysis of project with collection, analysis and interpretation using statistical tools and dissemination of project outputs.

By the end of the project, following outputs have been expected;

- Eight farmers groups (200 HHs), two from each VDC will be mobilized for capacity building and oilseed production.
- Socio-economic status of women, Madhesi, poor, dalits will be upgraded at least by 25% of the baseline with technology adoption and oilseed production.
- 75 mt oilseed (83 ha @ 0.9 mt per ha) will be produced and 40mt oilseed will be mobilized as source seed for next year (at least for 2660 ha).
- At least 5 oilseed varieties will be selected by participatory varietal selection (PVS).
- At least 15 traders, 10 oil millers will be empowered for value addition.
- 200 farmers from 4 VDCs will get benefited with minikits.
- 200 farmers will be trained with training, exposure visit, and farmers' day celebration.
- Well functioning market network will be established with value chain actors.
- 1000 booklets for improved agronomy package and impact study report of oilseed cultivation will be published.
- 5 copies of final project completion and compilation report (data collection, analysis and interpretation) will be prepared.

Thus, with this intervention, food security (2.5 kg per year) could be achieved. Plantation of oilseed crop would give higher production and helpful for livelihood security and income generation (25%).

## Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Project inception meeting-1no. | Completed in 2071 | |
| 1.2 Baseline survey-1no. | Completed in 2071 | |
| 1.3 Farmers group formation-8 nos | Completed in 2071 | |
| 1.4 IPNS/micronutrients training -8 nos. | | |
| 1.5 Skill development Trainings -4 nos. | | |
| 1.6 Field trip (Farmers' exposure visit)-2 nos. | | |
| 1.7 Farmers' day celebration- 16 nos. | Completed in 2071 and ongoing | |
| **Output 2** | | |
| 2.1 Resource seed and lab test. | Completed in 2071 and ongoing | |
| 2.2 Minikits-1000 sets. | | |
| 2.3 Participatory varietal selection (PVS) – 8 nos. | | |
| 2.4 Bee keeping program-16 nos. | | |
| 2.5 Sprayer support-8 nos. | | |

| Activities | Activity status | Remarks |
|---|---|---|
| **Output 3** | | |
| 3.1 Market networking meeting-4 nos. | | |
| 3.2 Agriculture tool & equipment-8 nos. | | |
| 3.3 Post survey-1no | | |
| 3.4 Public hearing-4nos. | | |
| 3.5 Revolving Fund support | | |
| 3.6 Video documentary- 1no. | | |
| 3.7 Extension material -1000 nos. | | |
| 3.8 Joint monitoring- 4 nos. | | |
| 3.9 Internal monitoring-4nos. | Completed in 2071 and ongoing | |
| 3.10 Trimester report – 8 nos. | Completed in 2071 and ongoing | |

## Achievements

According to the indicators, inception meeting is completed with 43 participants, baseline survey completed, 8 groups of 200 HHs are formed and under mobilization and registration with DADO Mahottari. Farmer day was also celebrated with greater involvement of farmers. R**esource seed** with 750 kg of oilseed have been stored for the use as source seed to plant in this year on season. All groups are formed and being mobilized. DADO is also supporting for technical support. The farmers are also very interested and taking part actively in the program activities. We are now trying to establish market network and the millers and traders are also helpful at the related places. So, the output will be achieved as planned in given duration.

Internal Monitoring of the project was done by MDJUS board and staffs to maintain better implementation process and ensure targeted results and outputs. It was done after commencement of the project in every VDC at field on the basis of reports of supporting staff. From this monitoring, the team gave feedbacks and suggestions on social mobilization to the concern staffs.

# PROJECT TITLE: DEVELOPMENT OF ORGANIC PEST MANAGEMENT IN PERI-URBAN AGRICULTURE IN NEPAL

**Project No:** 1026

| | |
|---|---|
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| ***Collaboration/ partners*** | DADO Kavre and Bhaktpur |
| ***Duration of Project*** | Three years |
| ***Project Cost*** | NRs 1,995,382.00 |
| ***Location of the project*** | Sarada Batase VDC and Banepa municipality Kavre and Katunje of Bhaktpur |

## Project Summary

### Background

Here, give a brief description about the project's background, main purpose/objectives, expected beneficiaries from the project, objectively verifiable indicators (OVIs) to measure Project Outputs and Up scaling pathways under separate paragraphs, in a clear, concise and descriptive language (Maximum limit 950 words).

The project **Development of Organic Pest Management in Peri-urban Agriculture in Bhaktapur and Kavre Development of Organic Pest Management in Peri-urban Agriculture in Bhaktapur and Kavre districts of Nepal** is being implemented with the research grant support from NARDF to improve the livelihood of farmers through the improved technology for organic vegetable production and enhanced ecological stability through the reduction of crop losses due to pest insects.

After the reconnaissance survey of the location, the major pests of vegetables are identified based on which the potential birationals (Botanicals and microbials) are identified.

The direct beneficiaries of the project will be producers (300 from two districts) and consumers (unlimited number) who involve production, consumption and trading of the vegetable crops. However, this number will be large as a result of the spill over effects of the outcome of the project beyond project command area. The composition of the beneficiaries will be from several ethnic groups and economic strata. During the course of project implementation beneficiaries will be selected in inclusive way. The summary of the beneficiaries will be as follows:

| SN | District | Number of Group | Membership | | | |
|---|---|---|---|---|---|---|
| | | | Dalit | Janajati | Others | Total |
| 1 | Bhaktapur | 4 | 15 | 35 | 50 | 100 |
| 2 | Kavre | 8 | 30 | 70 | 100 | 200 |
| **Total** | | **12** | **45** | **105** | **150** | **300** |

Similarly, the commercial, semi-commercial and subsistence producers will also be directly and indirectly benefited.

The indirect beneficiaries are the government line agencies such as DOA, NARC, academic institutions, students, researchers, non-governmental organisations involved in this area.

The beneficiary farmers will transfer the innovation to other farmers about the positive effect of bio-rational pesticides.

As the demand on such bio-rational pesticides increased, some of the beneficiaries will come forward with ideas of establishing the small scale enterprises for the production of much successful bio-rational pesticides. The beneficiaries themselves will be engaged in producing and popularizing the bio-rational pesticides. Other promotional pathways are the Government organisations through Plant Protection Directorate, District Agricultural Development Offices and numerous NGOs and INGOs.

The following are the expected outputs of the project.

- Possibilities for using novel pest control techniques using with biorational compounds explored.
- Efficacy of botanicals and insect pathogenic fungi for the control of insect pests verified.
- Risk assessment with non-target beneficial organisms developed.
- Farmers capacitated and developed technology disseminated.

The objectively verifiable Indicators of the programme are:

- In the beginning of 2014, the major vegetable pets identified and novel pest control technique with biorational compounds selected.
- 2. By the mid of 2014, effectiveness of biorational compounds tested and chemical pesticide uses reduced by 50%.
- 3. By the end of 2015, risks to non-target organisms (such as earthworm, silkworm larva and honey bees larvae) reduced by 50%.
- 4. By the end project, production techniques of biorational compounds started and pesticide reduced by 80% in command area.

To achieve the expected outputs different activities will be implemented during the course of project implementation (3 years). In order to implement the project activities, NARDF have agreed to provide the NRs 1,995,382.00

## Synopsis of Project Status

## Targeted Outputs

Here mention the main outputs envisaged from the project number-wise as stated in the project log frame of each individual project(s)

The following are the expected outputs of the project.

- Major pests of vegetables and time of their occurrence will be identified.
- Efficacy of botanicals and insect pathogenic fungi for the control of insect pests verified.
- Risk assessment with non-target beneficial organisms developed.
- Farmers capacitated and developed technology disseminated.

## Activities Proposed:

Here mention each project activity number wise and its status as shown below:

***Example***

| Activities | | Activity status | Remarks |
|---|---|---|---|
| Activity 1.1 | Site selections and base line information. | Ongoing | |
| Activity 1.2 | Assessment of farmers' knowledge, attitude and practices (KAP) about pest control and pesticide use pattern. | Yet to be started | |
| Activity 1.3 | Study on the on-farm loss assessment in vegetable crops due to insect pests. | Yet to be started | |
| Activity 1.4 | Investigate extraction techniques of botanical pesticides (titepati, bakaino, khirro and banmara), insect pathogenic fungus (*M. anisopliae* and *Trichoderma viridae*) as biorational materials. | Yet to be started | |
| Activity 1.5 | Study on the prevalence of the insect pests in project area. | Yet to be started | |
| Activity 2.1 | Develop production techniques of botanical pesticides and multiplication technique of insect pathogenic fungi in farming communities. | Yet to be started | |
| Activity 2.2 | Carry out field trials with botanicals and biopesticides to control in vegetable pests | Yet to be started | |
| Activity 3.1 | Monitor the impact of biological control to silkworms, honey bees and earthworms in the experimental area. | Yet to be started | |
| Activity 3.2 | Assessment on residual effect of bio-rational pesticides | Yet to be started | |
| Activity 4.1 | Establishment of the micro plot demonstration | Yet to be started | |
| Activity 4.2 | Tailor made training to the farmers and technicians | Yet to be started | |

| | | | |
|---|---|---|---|
| Activity 4.3 | Internal monitoring | Yet to be started | |
| Activity 4.4 | Joint monitoring | Yet to be started | |
| Activity 4.5 | Publication | Yet to be started | |
| Activity 4.6 | Video preparation | Yet to be started | |
| Activity 4.7 | Public Hearing | Yet to be started | |
| Activity 4.8 | End line Survey | Yet to be started | |
| Activity 4.9 | Reporting | Yet to be started | |
| Activity 4.10 | Final output dissemination workshop | Yet to be started | |

## Achievements:

Here mention the main achievements so far achieved from the project (point wise) (maximum limit 200 words

The project has been signed and the preparatory activities have been started.

# PROJECT TITLE: GOAT FATTENING TECHNOLOGY BY INTRODUCING LEGUME FODDER SHRUBS TEPHROSIA CANDIDA AND FLEMINGIA MACROPHYLLA COUPLED WITH BOER GOATS

**Project No:** 1027

| | |
|---|---|
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| ***Collaboration/partners*** | DLSO Dolakha, HILARK Dolakha |
| ***Duration of Project*** | Two years |
| ***Project Cost*** | NRs 1,997,332.00 |
| ***Location of the project*** | Japhe VDC Dolakha |

## Project Summary

### Background

The project Goat Fattening Technology by Introducing Legume Fodder Shrubs *Tephrosia candida* and *Flemingia macrophylla* coupled with Boer Goats is awarded by NARDF for its implementation to address the problems of shortage of quality feed during the dry season, especially among the peri urban community who have very limited land and devoid of forest access for grazing and have lower finishing weight goats at marketing stage. This problem is addressed with appropriate legume shrubs technology coupled with fast growing goat breed (Boer goat) using a sustainable development approach. Biomass production, forage potentiality and agronomical performances of the introduced species of legume fodder will be measured. Similarly, large size meat goat breed will be introduced to upgrade the local goat for generation of additional income.

Japhe VDC of Dolakha is the location of the project. Small land holding farmers' community within the proposed VDC with 250 households including at least 50% women will be directly benefited from the project. Similarly meat and live animal traders, and fodder seed entrepreneurs, agro-vet shops and other goat keeping farmers are the secondary beneficiaries. From the spill over effect in the project areas more than 1000 households will be indirectly benefited from the impact of the project by the end of proposed period. The direct beneficiaries are poor, dis-advantaged, marginal and ethnic minorities (Dalit and Janajatis).

The project is participatory and demand based on-farm action research and development type. The process and methodology consists mainly two parts, i) Social Part and ii) Biological part. In part first the interested farmers in the project area will be organized into groups and further involved in to the capacity building process to become a self-sustained registered institution by the end of the project period. The collaboration with DLSO during implementation and the permanent linkage with DLSO, entrepreneurs, with other farmer groups by demonstrating activities will help to uptake the outputs. In the next part performance evaluation of crossbred goats focusing on meat production capacity will be evaluated. The least squares analysis techniques will be used to compare the means

with the local breed and between F1 of the crossbreds. The proposed parameters are birth weight, weaning weight, litter size and weights (at birth and weaning), twinning percentage, weights at different ages (6, 9 and 12 months of age), yearling weight, mortality rate, body measurements and dressing percentage. Different means of communication along with annual reports will be prepared and presented in appropriate forums like workshops.

The following are the expected outputs of the project.

- The goat production system in peri urban area determined
- A package of practice on legume shrub technology for on farm forage production for small land holders targeting dry period of the year developed
- Growth rate and body weights of off springs of local goats bred with Boer bucks under stall feeding system increased
- Sustainable institution of goat keeping farmers developed

The objectively verifiable Indicators of the programme are:

- By end of project a critical relationship among the components of goat production system in selected villages established
- By end of the project period there will be regular availability of green legumes forage at least 10 kg per day per farm even for dry season
- By end of the project period at least 100 farm families adopt the forage shrub technology in their field riser and bunds
- By end of the project period one year weight and marketing weight of crossbred goats increased at least by 25% as compare to local goats
- A coordination committee as a group registered in DLSO

To achieve the expected outputs different activities will be implemented during the course of project implementation (2 years). In order to implement the project activities, NARDF have agreed to provide the NRs 1,997,332.00.

The proposed project is participatory and demand based on -farm action research and development type. The process and methodology consists mainly two parts, i) Social Part and ii) Biological part. In part first the interested farmers in the project area will be organized into groups and further involved in to the capacity building process to become a self-sustained registered CBO/Cooperative by the end of the project period. The collaboration with DLSO during implementation and the permanent linkage with DLSO, entrepreneurs, with other farmer groups by demonstrating activities will help to uptake the outputs. In the next part performance evaluation of crossbred goats focusing on meat production capacity will be evaluated.

Different means of communication along with annual reports will be prepared and presented in appropriate forums like workshops. Several activities proposed for scaling up outputs are workshop, publication of booklets etc, media briefing, establishing links and group formation and registration groups.

### Synopsis of Project Status

## Targeted outputs

1. The goat production system in peri urban area determined
2. A package of practice on legume shrub technology for on farm forage production for small land holders targeting dry period of the year developed

3. Growth rate and body weights of off springs of local goats bred with Boer bucks under stall feeding system increased
4. Sustainable institution of goat keeping farmers developed

## Activities Proposed

| Activities | | Activity status | Remarks |
|---|---|---|---|
| 1.1 | Consultation meeting with stakeholders | Ongoing | |
| 1.2 | PRA works and household survey covering gender role and system analysis | Yet to be started | |
| 1.3 | A report on goat production system in the study area | Yet to be started | |
| 1.4 | Group formation and mobilization | Yet to be started | |
| 2.1 | Production and management of forage nursery at the farm | Yet to be started | |
| 2.2 | Distribution of forage seed and saplings to goat keeper farmers | Yet to be started | |
| 2.3 | Training and orientation to the goat keeper farmers | Yet to be started | |
| 2.4 | Record keeping and monitoring on the performance of forage | Yet to be started | |
| 3.1 | Procurement of Goats (Boer goats) and maintenance at the farm | Yet to be started | |
| 3.2 | Design and study initiation | Yet to be started | |
| 3.3 | Evaluation of goats (crossbred vs local) based on forage feeding diet | Yet to be started | |
| 3.4 | Health management practices | Yet to be started | |
| 3.5 | Bucks distribution to goat keepers from the farm | Yet to be started | |
| 3.6 | Monitoring of buck performance at the farmers condition | Yet to be started | |
| 3.7 | Establishment of goat insurance fund | Yet to be started | |
| 3.8 | Internal Monitoring | Yet to be started | |
| 3.9 | Joint Monitoring | Yet to be started | |
| 3.10 | Publication | Yet to be started | |
| 3.11 | Awareness training | Yet to be started | |
| 3.12 | Public hearing | Yet to be started | |
| 3.13 | Preparation of Video | Yet to be started | |
| 3.14 | Reporting | Yet to be started | |
| 3.15 | Final Output Dissemination Workshop | Yet to be started | |
| 4.1 | Establishing links and coordination committee/group formation | Yet to be started | |
| 4.2 | Registration of committee/group at DLSO | Yet to be started | |

## Achievements:

The project has been signed in April 2014 and an orientation workshop was accomplished on 2nd May 2104. Accordingly the preparatory activities have been started.

# PROJECT TITLE: EXPLORATION FOR VALUE-ADDED FISH PRODUCTS AND ITS SMALL SCALE APPLICATION IN MALAHI VDC OF RAUTAHAT DISTRICT FOR DOMESTIC CONSUMPTION AND MARKETING.

**NARDF-1028 NARDF-1028**

| | |
|---|---|
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| ***Collaboration/Partners*** | District Agriculture Development Office, Rautahat |
| ***Duration of Project*** | 18 months (April 2014 –September, 2015) |
| ***Project Cost*** | NRs. 9, 98,308.00 |
| ***Location of Project*** | Malahi VDC of Rautahat District |

## Project Summary

Fish is a highly perishable product and offers little choice for fisherfolk farmers because they need to sell it as soon as possible after harvest or else their fish stocks gets spoiled and will earn no economic return. Since post harvest loss of resources is an area of major concern in this fishery sector and one of the solutions is production of value added products, which could offer a high promise to the improvement of the economic status of the people engaged in fish farming occupation. The increasing affluence and the consequent changes reflecting in the eating habits of urban consumers these days has resulted in the demand for diversely processed value added convenience fish based products. Most of the value-added fish-based products available in departmental stores and markets in Nepal are imported processed sea-foods from South-east Asia and other countries. Processed value added fish products from inland fisheries (ponds, lakes, reservoirs and rivers) within Nepal could offer a high scope for import substitution as well as export promotion, because it could offer different taste and flavour to consumers. There exist immense potential for exploration of value-added fishery products especially in the Terai region of Nepal where fish farming is widely practiced for income and livelihood. Since such intervention has not yet been tried elsewhere within the country so far based on literature review, therefore, this novel approach in Malahi VDC of Rautahat could be a pilot-based starting point of fish value addition for up scaling to other potential regions within the country.

There is no doubt that value addition involves optimal investment in infrastructure and equipment in the beginning. However, the long term benefits are immense, because it definitely helps in job creation and promote higher economic activity apart from utilization of perishable fish stocks for income generation.

To achieve the objective of this project, technological package of post-harvest value addition of fishery products will be delivered through trainings, to the fisherfolk communities, interested farmers/entrepreneurs and women. For sustainability of the project, a small scale low cost fish processing plant will also be established in the locality. Side by side, potential buyers/consumers will be identified in nearby and distant markets by establishing effective marketing channels thereby ensuring regular supply and assurance of additional household income to the intended beneficiaries.

The generated technology and project results will be disseminated through distribution of publication materials (leaflets, factsheets) and video documentaries.

## Synopsis of project status

### Targated Outputs

**Output 1. The entrepreneurship of the fish producer farmers groups strengthened**

The major problems of fisherfolk communities with respect to quality production facilities, credit and loan availability, market access and opportunities for processing for value-addition will be documented and analysed.

**Output 2. Value-added fishery products diversified**

Since necessary infrastructure and equipments are indispensable for value addition of fish products, therefore a low cost fish processing plant will be set up in the locality. For product diversification, fisherfolk farmers and local entrepreneurs including women will be trained in different aspects of product processing. Apart from quality assurance, grading, labelling and packaging activities will be done under this output.

**Output 3. Marketing linkage of fish and fish products established**

The scattered farmers group will be upgraded into a cooperative for institutionalization and long term sustainability. This will ensure that the project achievements will last even after the project funding stops after its termination. The individual farmers group and cooperative federation will lobby with local credit institutions, Agriculture and commercial banks as well as other local level institutions (DDC, VDC,) potential donors agencies and entrepreneur cum businessmen for financial support. They will also setup linkage with traders, wholesalers and retailers for marketing their produce.

**Output 4: Project output disseminated**

Diffusion of technology through leader farmers, resource persons from DADO/ASC, NGO and collaborative partners such as DADO will be carried out. Alongside, publications of dissemination materials (leaflets), public hearing, hoarding board and district level workshop will be optimally used for desired scaling up effect.

### Activities Proposed:

| SN | Activities | Activities status | Remarks |
|---|---|---|---|
| 1.1 | VDC level orientation workshop | Completed | |
| 1.2 | Groups formation and mobilization | Completed | |
| 1.3 | Baseline survey | Completed | |
| 1.4 | Cooperative formation and mobilization | Is in process | |
| 1.5 | Trainings on group management, record keeping and business plan preparation | Completed | |

| | | | |
|---|---|---|---|
| 2.1. | Training related to value-addition of fish production seed production techniques | Completed | |
| 2.2 | Support for procurement of basic needed equipment and supplies | Completed | |
| 2.3 | Establishment of a Low cost Fish Processing Plant | Completed | |
| 3.1 | Interaction workshop with market stakeholders in the value chain network | Completed | |
| 4.1 | Publication of dissemination materials for knowledge sharing & market promotion | Preparing | |
| 4.2 | Video Documentary Preparation | Running | |
| 4.3.1 | Internal monitoring | Carried on | |
| 4.3.2 | Joint monitoring | Completed | |
| 4.4 | Installation of Hoarding board | Completed | |
| 4.5 | Public hearing | In last trimester | |
| 4.6 | District level dissemination workshop | In last trimester | |
| 4.7 | Post completion/ evaluation survey | In last trimester | |
| 4.8 | Report Preparation | Continued | |

## Achievements:

The project envisages the following objectively verifiable indicators (OVI) upon completion of the project.

- More than 40% of the harvested fish started for value addition
- Due to post harvest handling (fish processing, grading and packaging) profit level is increased (value addition imparted).
- Setting up of a low cost fish processing plant in the locality.
- Consolidation of 4 fish growing farmers group into a cooperative federation for long term sustainability and institutional strengthening.
- Sustainable marketing network with value chain stakeholders – Traders, wholesalers and retailers and end consumers established.
- Household Income of involved fisherfolk farmers has been raised.

Photos of Training related to value-addition of fish production

# PROJECT TITLE: AGRICULTURAL MECHANIZATION IN MID-HILLS (HALO SUDHAR KARYAKRAM)

**Project No. :** 1031/2014

| | |
|---|---|
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| ***Duration of Project*** | 3 years |
| ***Project Cost*** | **1991483.75** |
| ***Location of Project*** | Somadi, Siddheswor, Mujhung VDCs of Palpa district |

## Project Summary

In Nepal, most of the populations are dependent on agriculture The majority of agriculture farming practices is based on traditional system thus increasing the unit cost of production. Access to agricultural mechanization among small land holdings in rural area has not reached due to poor technical knowhow and other constrains like availability of fuel, repair and maintenance of equipment and tools etc. Due to these constrains farmers are using traditional means for farming like plough and digging the land. All the means are manuals, it take more time and labor for farming. To reduce the cost of production and simplify the agricultural operation, agricultural mechanization is of high importance. It will support to increase the national per capita income. This project focuses on the agriculture mechanization through introduction of mini power tiller and sudhariyako halo (Ranighat halo) instead of kathe halo for ploughing land. It will support to save the time and labors. As the proposed work is directly related to the NARDF mission and goal, it will give positive impact on social, environmental and economical sector. This project based on demand -driven by the needy farmers. Its result will be highly useful to users for all farming, scientist and the all other relevant public and private sectors. This project will cover the Mujhung, Somadi, Siddheswor VDCs of Palpa district. . The project will cover 90 HH of three VDCs,including Dalit Janajati and deprived group of the community. This project coins these activities in project area to get the output in the end of project period. Activities are as follows:District level inception workshop, Orientation to the VDC level, primary survey, demonstration of mini-tiller, distribution of mini-tiller to the community. Improve the kathe halo. Training for improvement of this Halo. Training about maintaining the mini-tiller, awareness about jatropha, cultivation and production and expelling. Demonstration to conduct the mini- tiller by using jatropha oil. Exposure visit, monitoring, publication, documentary, public hearing, post survey, and project completion workshop with beneficiaries.

## Objective

Major objective of the project is to make significant contributions on crop production and food security through reducing production cost and maximizing profit from agriculture through the scaling-up of appropriate farm machinery.

**The specific objectives are as below:**

1. Promotion and strengthening of appropriate farm machineries (6-9 hp Mini-tillers, various models and promoted Mini-tillers, reaper of mini-tiller) through extensive training, testing and demonstration.
2. To improve the kathe halo in the Ranighat model through human resource development.
3. Enhance and promote Jatropha cultivation, seed collection and oil extraction which conserve soil and in other hand oil from the Jatropha is used for the operation of many small diesel operated machines (which women also can operate).

## Expected beneficiaries

Project has targeted those people who are disadvantage groups in following VDC of Palpa district. Among these three VDC, project will cover 90 HH among these 90, are mostly dalit, janajati and deprived groups. It can support to those people who are involving agriculture farming throughout the district. The project will carry out baseline survey for targeted VDC for selection of the HH. Through end line survey the impact of project will be assed. The detail are in the below table:

| VDC | Dalit(HH) | | Janjati (HH) | | others(HH) | | Total |
|---|---|---|---|---|---|---|---|
| | Female | Male | Female | Male | Female | Male | |
| Mujhung | 0 | 0 | 10 | 18 | 1 | 1 | 30 |
| Somadi | 0 | 0 | 1 | 0 | 10 | 19 | 30 |
| Siddheswor | 7 | 12 | 5 | 6 | 0 | 0 | 30 |
| Total | 7 | 12 | 16 | 24 | 11 | 20 | 90 |

Agriculture mechanization saves time of land preparation and it will minimize the time frame and labour cost. It can insure timeliness of farm operations leading to higher productivity and cropping intensity; reduces cost of production and increases agricultural income; reduces drudgery and improves safety in operation of farm machinery; and helps in conserving natural resources, e.g., wood and others. Agriculture mechanization could have some short-term and long-term disadvantages as well like farm mechanization requires 'minimum scale of operation', small and marginal land holdings affects economies of scale, poor financial strength of the small and medium farmer excludes the individual ownership of the machine, i.e., high cost of ownership, and no subsidy and bank linkages. However, all the disadvantages could surpass by the above and below mentioned enormous advantages through the adoption of agriculture mechanization. While implementing agriculture mechanization, gender issue most be taken into account as women can not to plough because of the traditional culture. Despite women are the major workforce in agriculture; our culture has prohibited women for plough the land by ox. The proposed machines are meant to

focus to reduce women workload and to increase women labor productivity. All the proposed machines are handled by the women in the elsewhere tested sites of Nepal. Improved Halo will help to reduce the extra man power for seeding and put the fertilizer with seed.

## Objectively Verifiable Indicators (OVIs)

- 90 HH will regularly operate the mini tiller in their farm for preparation of their land.Targeted household will regularly operate this mini tiller for plough the land by using jatropha oil in mini tiller. They will able to maintain this machine by providing the training.
- Farmers will increase their extra income per HH Rs.10000 to Rs.15000 per year.
- Each mini-tiller owing farmer will earn extra Rs. 20,000 per year through service providing.
- 10 mistri will capacitate to make sudhariyako halo and they will prepare sudhariyako halo.
- There will be 60 hectors of jatropha farm in 3 VDC. From farm it will be available to produce seeds according to jatropha product plan. All the mini tillers will be conducted by jatropha oil.

## Project Outputs

The implementing organization has already demonstrated all these farm machineries in all proposed VDCs and a huge number of farmers already had participated in all these demonstrations and are quite confident. These machines can be operated in all terraces and strips of Palpa including all the slop bari-lands. Sole or combined use of these machines can perfectly replace the conventional method of tillage and field preparation for seeding maize, soybean, pea and other beans. Further, in another study conducted by CIMMYT International in collaboration with the implementing organization has reported that the hand held Chinese jab planter as quite effective tool for seeding maize in all Sloppy barilands of Palpa. Seed-cum-fertilizer drill for diesel operated mini-tiller currently being manufactured by CIMMYT and AED, Khumaltar can perfectly replace the conventional method of field preparation for seeding maize. Mini-tiller has weight of 80-90 kg, operates 2-3 ropani land in 1 hour and consumes around 850 ml diesels in an hour. Combined or individual implementation of these farm machineries would reduce the cost of cultivation, reduce soil tillage, i.e., low or no soil erosion, eliminate the drudgery to keep bullock throughout the year, attract youth in agriculture business making it more remunerative and attractive, and ultimately reduce the extensive use of scarce labour in farming. Further, as the project is extensively evaluating Jatropha and collecting seed and producing and using Jatropha oil in all the diesel operated machines, the project output should be highly sustainable.

## Upscaling pathways

To reach the output to the end users "Agri- mechanization" farmers group will be formed. As project undertakes a demand-driven, participatory and bottom-up approach, with the basic unit of activity being within the group, it will consider economic, technical and social factors into account. To enhance the role of women in agriculture and livelihood improvements, the project employs a whole family approach in technology testing and dissemination, training and capacity building, and

also in developing partnerships and linkages with local actors including NGOs, private sectors and market forces. The project promotes an inter-disciplinary and multi-institutional approach to promote adaptive research, local innovation, capacity building, and appropriate technology transfer for integrated agriculture practices to achieve the goal and objectives of the project.

The implementing organization already has substantial number of experienced staffs on farm mechanization, policy influence and institutionalization, Jathropha cultivation and promotion etc activities. Further, it already has implemented such activities in the proposed VDCs ; In this time people have been cultivating jatropha on their fencing and degraded land. Nowadays their Jatropha seed is not being sold in market. Jatropha seed waist now. Project will collect that seed per kg Rs 25. In this area Jatrpha is around the jungle and it also waist. We will use the seed in this project and more than 20 hector of community land we will cultivate the jatropha plant. It is most likely that the proposed objectives will be accomplished with great confident and success. Also, in 3rd year, the finding of this project can be piloted in other VDC of Palpa. As all the proposed machineries will be compared with the farmers 'local practices'.

For the wider scale dissemination wide range of stakeholders meetings and farm visit, feature articles, news and feature articles in the local and national newsletter will be adopted.

## Synopsis of Project Status

### Targeted Outputs:

1. Targeted households will successfully adopt new technologies.This will give spillover effects in the community.
2. Sustainably increase in agricultural productivity, income, nutrition and livelihoods through new various mechanization technologies and market linkages.
3. Creating Wider scale of awareness in Jatropha cultivation and they will understand the value chain of jatropha.
4. Sustainable use of Jatropha oil in mini-tiller and other diesel machinery.

### Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 District level inception workshop | completed in June 2014 | This is the new issues so most of the participants did not believed so we face that challenge to convince them. irregularity of the meeting, |
| 1.2 VDC level workshop with different VDC level stakeholder | completed in June 2014 | |
| 1.3 Baseline survey and analysis | completed in July 2014 | |
| 1.4 Group formation and mobilization | completed in August 2014 | |
| 1.5 Training | | |
| 1.6 End line survey and analysis | Completed in November 2014 | |
| 2.1 General exposure and mini tiller support | completed in December 2014 | we are facing to deliver the jatropha oil to them. |

| Activities | Activity status | Remarks |
|---|---|---|
| 2.2 Mini-tiller repair and maintenance training. | Completed in March 2015 | |
| 2.3 Hoarding board. | Ongoing | |
| 2.4 Video documentary | Ongoing | |
| 2.5 Internal monitoring | Begin not yet | |
| 2.6 Public hearing | | |
| 2.7 Sudhariyako halo making training (Ranight model) | | |
| 3.1. One demonstration in each VDC to 90 farmers in each VDC | completed in January 2015 | |
| 3.2 One day training on Jatropha cultivation, oil extraction and use- to 90 farmers. 30 farmers from one VDC | completed in October 2014 | |
| 3.3 Nursery establish in somadi for production of Jatropha plant. | completed in June 2014 | |
| 3.4 Distribution of 60,000 Jatropha plant. | Begin not yet | |
| 4.1. Demonstration | Begin not yet | |
| 4.2 Demonstration | Begin not yet | |
| 4.3 Media mobilization | Ongoing | |
| 4.4 Publication | Begin not yet | |
| 4.5 Joint Monitoring | Begin not yet | |
| 4.6 Post completion workshop | Begin not yet | |


Treasurer Mrs Anita Raut Hand over the mini tiller to the chairperson of Sajeewon groups of Mujhungs.

# PROJECT TITLE: IMPROVEMENT OF RANGE LAND IN MUGU FOR INCREASING LIVESTOCK PRODUCTION

**Project No. :** 1032

| | |
|---|---|
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| **Collaboration/Partners** | Environmental and Cultural Protection Center, Mugu. |
| **Duration of Project** | 2 years |
| **Project Cost** | 29,99,246 |
| **Location of Project** | Rowa, Ruga and Magri V.D.C. of Mugu District. |

## Project Summary

One of the main problems being faced by the people of Mugu is the shortage of fodder and forage especially during the winter season. However, previous research suggests that the forage production of high altitude grazing is comparatively higher including their carrying capacity. This research project has been working on to develop sustainable management of forage system in Mugu to increase livestock productivity. Some of the methods to be used are: forming farmers group, use of appropriate pasture species with high rates of adaptation (oat, white clover and kikuyu grass). Oat is cultivated as an alternative/ supplementary means for the sustainable management of rangeland with an aim of less encroachment of livestock in the pastureland. In addition conservation of forages in the form of hay during the rainy-season, providing trainings and technical services and monitoring on regular basis, etc. Increase Production of forages, technologies for preservation of forage crops (in the form of hay), promotion of stall feeding are the major output of the project. The publication of extension materials in the form of booklet will be done and this will be distributed to the farmers and concerned stakeholders for the up-scaling of the project activities. Trainings were conducted during the project to disseminate the already proven technologies among farmers. This project is being implemented in three selected V.D.C's of Mugu district namely, Rowa, Ruga and Mangri. All together 150 farmers' households are the direct beneficiaries of the project. These farmers are consolidated in to 6 groups, each V.D.C consists of two groups and each group consists of 25 farmers households.

All the project activities are being implemented in these groups. The objectively verifiable indicators are like list of key problems for low productivity of rangeland identified during the 1st trimester. Oat and kikuyu grass will be promoted during the project period. At least 75 farmers has adopted hay making practices and feed their animal with hay during the winter period.

The project aims to increase the productivity of rangeland with effective management practices. This project will help to establish appropriate forages crops to address the shortage of fodder in the winter, develop appropriate technologies for forage development by integration of

proper legume forages, technologies for preservation of forage crops (promote hay making technology), promotion of stall feeding and production of fodder/forages for all seasons of the year will be the major output of the project.

The project aims for achieving following outputs.

i. Rangeland management problem for livestock production in high altitude identified.
ii. Promotion of legume and winter period forages.
iii. Remedial measures for rangeland improvement and feed supply in the lean period assured
iv. Cultivation practices for the forage will be disseminated.

The participatory and holistic approaches have been followed to scale up the project findings. Prior to intervention of the project selected farmers have been organized in a group and their knowledge and skill have been increased through different trainings. Scaling up the project outcome have been done through organization of farmer's group meeting, workshop for stakeholders working in livestock and fodder improvement sectors will be conducted. Related materials in the form of booklet about the cultivation of the different species of forages in the locally adaptive condition will be done. The promotional pathways for the uptake of project outputs:

1. **Farmers Training:** All the targeted farmers group were trained in terms of range land resources management, rangeland improvement, cultivation of forage species including legumes, conservation of excessive forage in the form of hay which could be used during the lean period And their capacity have been increased for increasing the productivity of the livestock.
2. **Regular technical support to the farmers during the project:** The farmers participating in the project and the nearby area have been made aware on the importance of feed and livestock production. In addition to this increase in rangeland productivity and proper utilization of the resources will result into establishment of sound environment.
3. **Publication:** During the project cultivation practices of different forage and Pasture species will be done and distributed to the farmers and the local stakeholders.

## Synopsis of Project Status

## Targeted Outputs:

Output 1 Rangeland management problem for livestock production in high altitude identified.

Output 2 Promotion of legume and winter period forages

Output 3 Remedial measures for rangeland improvement and feed supply in the lean period assured

Output 4 Cultivation practices for the forage will be disseminated

## Activities Proposed

(Here, mention each project activity number wise and its status as shown below)

**Example:**

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Baseline survey<br>1.2 Group Formation and mobilization<br>1.3 Inception workshop<br>Rangeland Inventory Preparation | Completed in April, May, 2014<br>Completed in April, 2014<br>Completed in April,214<br>Ongoing | As project location is located in remote, difficulty in transportation of planting materials of forages, language problem in communication, adverse climatic condition were the major problems faced during the project implementation. |
| 2.1 Support seed of forages<br>2.2 Demonstration of forages<br>2.3 Demonstration on hay making | Ongoing<br>Ongoing<br>Ongoing | |
| 3.1 Improvement of rangeland by removing unwanted (weed/ poisonous) plant species<br>3.2 Farmers Training | Completed in May 2015<br>Completed in March 2015 | |
| 4.1 Publication of extension materials<br>4.2 Internal Monitoring<br>4.3 Joint Monitoring<br>4.4 Final Workshop<br>4.5 Public Auditing<br>4.6 Video documentary Preparation<br>4.7 End line Survey<br>4.8 Report Preparation and submission | Ongoing<br>Ongoing<br>Completed in March 2015<br>Yet to begin<br>Yet to begin<br>Ongoing<br>Ongoing<br>Yet to begin | |

## Achievements (also include Findings in case of Research Projects)

1. Farmers know about the cultivation of Kikuyu grass. This highly nutritious grass was first time introduced in Mugu by this project. This forage species can be successfully propagated in Mugu**.**
2. Hay making, storage and feeding during the lean period is one of the best alternative method to address feed shortage in mugu.

Project coordinator providing propagating materials of swiss grass (Kikuyu grass)

Storage of hay by one of the farmers of project area

# PROJECT TITLE: ACTION RESEARCH ON SMALL WATERSHED DEVELOPMENT FOR CLIMATE ADAPTATION IN GULMI DISTRICT

**Project No. :** 1033

| | |
|---|---|
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| ***Duration of Project*** | 2071/01/01 to 2073/12/30 |
| ***Project Cost*** | 25, 11, 803.55 |
| ***Location of Project*** | Hardineta VDC,Gulmi |

## Project Summary

Nawa Prabhat Yuwa Sangh ( NPYS) is implementing a research project " Action Research on Small Watershed Development for Climate Adaptation in Gulmi district" in the Hardineta VDC of Gulmi district. The project is funded by National Agriculture Research and Development Fund Nepal (NARDF). The main purpose of the project is to improve agricultural livelihoods against climate induced vulnerabilities of the poor communities. The project which began since Baishak 2071 has a total period of 3 years.

The project intends to improve agricultural livelihoods against climate induced vulnerabilities of the poor communities in Hardineta VDC of Gulmi district through improved water availability through provision of water storage tanks and development of small pipe water system along with protection of springs. Use of efficient irrigation technique like drip irrigation for high value crop cultivation is another key feature of the project. It intends to demonstrate soil-water conservation techniques like check dam, terracing and plantations. The project has 24 activities which will result into 4 outputs.

Climate change has impacted the agriculture production in the project area due to unreliable rainfall and other factors such as dry spells and more events of hailstorm, Farmers have experienced phenomena of more frequent erratic rainfall causing uncertainty of water availability. Flow in water sources are declining. As most of the agriculture is dependent on the rainfall, the change in rainfall pattern has created uncertainty of agriculture production. Mostly poor households are greatly affected by the climate change impacts. They have few alternatives of adaptation. In this context there is a need of enhancement of adaptation capacity among poor to cope with the negative impacts of climate change in agricultural sector.

## Synopsis of Project Status

## Targeted Outputs

Output 1: Small scale water source developed

Output 2: Soil and water conservation techniques applied

Output 3: Agro-forestry introduced

Output 4: Result dissemination materials developed

## Activities Proposed

| Activity No. | Activities Name | Activity Status | Remarks |
|---|---|---|---|
| 1.1 | Conduct Field Assessment | Completed | |
| 1.2 | Conduct Project Launch Workshop | Completed | |
| 1.3 | Conduct Group Formation Meetings | Completed | |
| 1.4 | Construct Piped water system | Intake, Main Pipeline and Reservoir completed. Distribution pipeline and taps under construction. | |
| 1.5 | Demonstrate innovative tank/pond | 4 Completed / 2 Ongoing | |
| 1.6 | Introduce micro-irrigation | 10 Completed / 20 Ongoing | |
| 1.7 | Improve and protect springs | 1 Completed / 5 Ongoing | |
| 2.1 | Construct small bio-check dams | Ongoing | |
| 2.2 | Plant appropriate Trees /bamboo | Ongoing | |
| 2.3 | Introduce contour catch drains | Ongoing | |
| 2.4 | Apply terracing/hedgerows | Ongoing | |
| 3.1 | Conduct Training on Agro-forestry | 2 Completed | |
| 3.2 | Plant fodder trees | Ongoing | |
| 3.3 | Demonstrate appropriate NTFP | 6 Ongoing | |
| 3.4 | Promote high value vegetables | Ongoing | |
| 3.5 | Introduce forage/grass cultivation | Ongoing | |
| 3.6 | Establ.ish nurseries for NTFP/ Tree | 1 Completed | |
| 3.7 | Organize Joint Monitoring Visit | Planned for next trimester. | |
| 4.1 | Prepare pictorial leaflets | Ongoing | |
| 4.2 | Prepare Video | Partly complete. Footage/clips taken . | |
| 4.3 | Present paper | Will be done in in Year 3 | |
| 4.4 | Develop other awareness materials | Ongoing | |
| 4.5 | Prepare Evaluation Report | Will be done in in Year 3 | |
| 4.6 | Conduct public hearing program | Will be done in in Year 3 | |

## Achievements (also include Findings in case of Research Projects)

- A Project Launch Workshop was organized with the relevant stakeholders at the district level.
- Field Assessment was carried out to collect Baseline information of the community.
- A total of 22 Farmers groups were formed comprising 355 households.
- One Piped water system was build tapping a small spring source in the Milan danda village. Till date, construction is complete up to Main Water tank which includes Intake, Tank and transmission pipeline.
- Two water tanks have been built for demonstration purpose.
- 10 sets of Simple drip irrigation system of small size has been distributed to the farmers of Chand Parbati Women Group
- Bio check dams has been built in the landslide area near Lumchha bazaar of Hardineta -5 which are made of with bamboo and earth filled bags.
- 1434 plants of Bamboo, Amala, Khari, Calci have been distributed to the farmers.
- Training on agro forestry was conducted where farmers from Ward No 5, 6, 7, 8, 9 participated.
- Vegetable seeds cauliflower and cabbage were distributed to all 15 farmers groups
- VIDEO clips have been taken at different stages of the project. Similarly, awareness material on adaptation is being prepared.

| | |
|---|---|
|  |  |
| Demonstrate innovative tank/pond | Beneficiary Farmer using Drip irrigation for Tomato: Chanda parbati Women group |

# PROJECT TITLE: PROMOTION OF THE UNDERUTILIZED SWEET POTATO CROP IN SARLAHI DISTRICT

**Project No. :** 1034/2014/015

| | |
|---|---|
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| ***Collaboration/Partners*** | District Agriculture Development Office and ASCs Sarlahi, Research Program/NARC, Lalitpur |
| ***Duration of Project*** | Three Years (April 2014 to March 2017) |
| ***Project Cost*** | **NARDF Contribution: NPR. 2962,860**<br>Collaborator Contribution: Total: NPR. **2962,860** |
| ***Location of Project*** | 3 VDCs (Balara, Mainathpur and Sisaut) of Sarlahi District |

## Project Summary

Sweet potatoes are often neglected crop due to unaware of its nutrition values. Though the production is high for this crop dependency on traditional food habit make less consumption of this crop with less production. Sweet potato crop fetches good market and has fair price in the local hat bazaar. The demand for this crop is high due to its nutritive value beside the religious importance. The demand for this crop is not fulfilling by the national production, So this is one of the crop imported from India. Because of high post harvest value this crop will be of high importance to the marginal and poor farmers.

This project intended to cultivate sweet potato crop on commercial scale mainly in three VDCs of Sarlahi district. Farmers will orient into group consisting of women and marginal farmers for conducting sweet potato cultivation. Twenty five farmers form one VDC will be farmers as one group and will be registered in DADO as per their norms. The group consists at least 40% female and majority of indigenous and marginalized farmers having low power of purchasing capacity. Training will be provided by subject matter specialist on cultivation practices, harvesting, post harvesting and marketing aspects and training is focused on practically basis. To conduct the training subject matter specialist will available from NARC as well as DADO Sarlahi.

Mass media will be used to aware local farmers to grow sweet potato in their marginal lands, for this FM program in local radio will conducted. The main objective of this FM program is to engender interest among farmers for cultivation of sweet potato. One hoarding board will established in each VDC where farmers group is located.

Technical back stopping will be provided from DADO for adaptive scientific cultivation of the sweet potato and demonstration plot will be develop. For the purpose of verification of collected

genotypes, all the collected genotypes will be planted during 1st year in farmer's field; the same produced sweet potato will be selected for further production in subsequent season. The verified genotypes will play essential role for higher income generation and technology produced will disseminated into 3 other VSCs of same district. Field management refers to all activities such as manure and fertilization, weeding, irrigations etc. Harvesting of all the produced potato will be done by the farmers and sent to nearby market as well as the demand markets. All the produced commodity will marketed through group as making collection point to local retailer and wholesaler. Sweet potato day will be organized after first year for two consecutive year during month of Magh.

Monitoring and evaluation of the activities will be conducted by the project team and collaborators at least once in the trimester. Public hearing activity will be conducted year. Project activities will be monitored jointly consisting of farmers, staffs from DCC, VDC, DADO, NGOs, civil society and project team members.

By the end of the project local cultivation practice will be developed in scientific basis for sweet potato production which will enhance the livelihood of the marginalized, women and poor people. There will be 12 groups 4 in each VDC and total direct beneficiaries will be 300 farmers. At least two improved and one indigenous cultivar demonstrated in 300 farmer's field. Area and production of sweet potato increased by two fold and 500 brochure/booklet prepared, published and distributed to farmers and stakeholders. One video documentary on sweet potato cultivation prepared and distributed to farmers and stakeholders. The production technologies as a booklets, leaflets, and video documentary will be scaled up to the farmers, stakeholders and DADOs of other Terai districts. The secondary beneficiaries will be the farmers, local traders, input suppliers and workers of other communities, technician and traders who will use the finding of the technology.

## Synopsis of Project Status

### Targeted Outputs:

1. Gender-balanced and inclusive farmer groups formed and sweet potato resource center developed
2. Improved cultivation practice of sweet potato demonstrated scaled-up
3. Project output disseminated

### Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Inception workshop | Completed | |
| 1.2 Baseline survey | Completed | |
| 1.3 Formation of farmers group and establishment of resource center | Completed | |
| 1.4 Distribution of project brochure | Completed | |
| 1.5 Talk program in local FM radio | Running | |

| Activities | Activity status | Remarks |
|---|---|---|
| 2.1 Collection of Sweet potato genotypes | Completed | Improved cultivar not found in NARC |
| 2.2 Sweet potato cultivation practical training | Running | |
| 2.3 Demonstration and verification of genotypes | Running | |
| 2.4 Field management | Running | |
| 2.5 Harvesting and post-harvest handlings | Running | |
| 2.6 Marketing support | Running | |
| 3.1 Hoarding board display | running | |
| 3.2 Organized sweet potato day | Next year | |
| 3.3 Monitoring and Evaluation | Running | |
| 3.4 Video documentary reparation | On going | |
| 3.5 Publication of sweet potato booklet | Next year | |
| 3.6 Public hearing program | Next year | |
| 3.7 Output dissemination workshop | Last year | |
| 3.8 Post project impact study | Last year | |

Note: Running means the activities are completed in trimester but also in next trimester.

## आयोजना शिर्षक : 'नदी कटान क्षेत्रको संरक्षण र उपयोग मार्फत दिगो आयआर्जन तथा कृषि व्यवसायिकरण परियोजना'

**आयोजना नं.: ११०२**

| | |
|---|---|
| ***आयोजना संयोजक*** | राम बिलास ठाकुर |
| ***ठेगाना*** | बाल संरक्षण सामुदायिक अध्ययन केन्द्र, जनकपुर-४, धनुषा |
| ***टेलिफोन*** | ०४१-५२८१०७, ९७४२००९८१० |
| ***फ्याक्स*** | ०४१-५२८१०७ |
| ***इमेल*** | rmblthakur@gmail.com |
| ***साझेदार संस्था*** | बाल संरक्षण सामुदायिक अध्ययन केन्द्र, जनकपुर-४, धनुषा |
| ***आयोजना अबधि*** | २०७१ मघ २ देखि २०७३ पौष |
| ***आयोजनाको लागत*** | रु. १९,९९,९३० |
| ***आयोजना स्थल*** | महोत्तरी जिल्लाको महोत्तरी र डाम्ही गा.वि.स. |

## आयोजनाको सारांश

### आयोजना पृष्ठभुमि

राष्ट्रिय कृषि अनुसंधान तथा बिकास कोष नेपालको आर्थिक सहयोगमा यस सस्था वाल संरक्षण सामुदायिक अध्ययन केन्द जनकपुर ४ धनुषा, द्वारा महोत्तरी जिल्लामा नयां आधुनिक प्रविधिवाट तरकारीका गर्मिको मौसममा तरबुजा, खरबुजा, घिरौला, लौका, काका, फर्सि र हिउदमा काउली, वन्दा, गोलभेडा, भिण्डी, भण्टा जस्ता वालीहरु साथै सुडान, वर्सिम, मखन, किम्बु, नेपिएर र स्टाईलो जस्ता घांसे बालिहरु रोपेर स्थानियहरुको आर्थिक अवस्थामा सुधार गर्ने तथा उपयोगमा नआएको जमिनको प्रयोग गरी त्यसको अलावा भुक्षयवाट समेत जोगाउने र समाजमा पछाडी परेका समुदयाहरुको आर्थिक तथा समाजिक स्तर सुधारने उदेश्य राखि परियोजना कार्यान्वयन गरिएको छ ।

जिल्ला कृषि कार्यालय महोत्तरीका अनुसार यस महोत्तरी जिल्लाका छ लाख सत्ताईसहजार जनसंख्यामध्ये ७१.५२ प्रतिशत जनसंख्या कृषि पेशामा संलग्न भई आफ्नो जिविकोपार्जन गरिरहेका छन् । यस जिल्लाको सम्पूर्ण भु-भाग तराई क्षेत्रमा रहेकोले यहाँको जलवायु उष्ण किसिमको रहेको छ । महोत्तरी जिल्लाको कुल क्षेत्रफलको ४७.७६ प्रतिशत जमिन खेतियोग्य रहेको छ । ८३००० हे. खेतियोग्य जमिन मध्ये ८८.२४ प्रतिशतमा मात्र खेति भईरहेको छ । खेती गर्न अयोग्य भू-भागको अधिकाशं क्षेत्र नदि छेउछाउ तथा बगर तथा अन्य क्षेत्र पर्दछन् । प्रस्तावित यी दुई गा.वि.स.मा जिल्लाका दुई ठुला नदिहरु रातो र ओक्सी पर्दछन् । गा.वि.स.को दुवैतिर बगेका यीनै नदिहरुले बर्षेनी कृषकका सयौं हेक्टर जमिन कटान तथा बालुवा थुपारेर खेति गर्न नमिल्ने बनाई दिएका छन् । यिनै विषम् परिस्थितीका कारण कृषि उत्पादन तथा उत्पादकत्वमा बर्षेनि ह्रास आउदै गईरहेको छ । तर जनचेतना तथा स्थानियको कम जुझारुकताका कारण नदि कटान रोक्ने तथा कृषि उत्पादन र उत्पादकत्व बढाउन सकिएको छैन। जिल्लाको कुल जनसंख्याको लागी बार्षिक रुपमा ६३९३३.७७ मे.टन तरकारीको आवश्यकता पर्दछ भने यस जिल्लामा ५२८०० मे.टन मात्र तरकारीको उत्पादन हुने गरेको छ । यो समग्र जिल्लाको आवश्यकताको तुलनामा

१७.४२ प्रतिशत न्युन परिमाण हो । यस्तो परिस्थितीमा तरकारीको उत्पादन उक्त खेर गएको जमिनको उपयोगबाट गर्न सकेमा जिल्लाको मुहारनै बेग्लै हुने छ । अझ त्यसमा पनि भू-क्षय नियन्त्रण गर्ने गरि लगाईएका घांसको उत्पादनबाट पशुको उत्पादनमा बृद्धि भई कृषकको जिवनस्तरमा समेत आयोजनाले सकारात्मक परिवर्तन ल्याउनेछ । गरिव, सिमान्त कृषकहरुको उक्त प्रयासलाई थप टेवा दिदै घांस रोपणद्धारा नदिको थप कटान रोकथाम गर्दै, बालुवा थुपारेको जमिनमा समेत तरकारी खेती प्रर्वद्धनमा जोड दिई साना किसानहरुको कृषि उत्पादनबाट प्रतिस्पर्धात्पक क्षमता र आय आर्जनमा सुधार ल्याउने उद्धेश्य सहित यो आयोजनाको कार्यान्वयन गरिएको हो ।

**आयोजनाको उदेश्यहरु :**

**प्रमुख उदेश्यहरु :**

- यस आयोजनाको प्रमुख उदेश्य भनेको खाली तथा बाँझो जग्गाको उपयोग गरि तरकारी उत्पादन मार्फत दिगो रुपमा कृषकहरुको आय आर्जन बृद्धि गरि आर्थिकरुपमा सबल र सक्षम समाजको स्थापना गर्नु हो ।
- साना किसानहरुको नदि किटान क्षेत्रको उत्पादनबाट प्रतिस्पर्धात्मक क्षमता र आय आर्जनमा सुधार ल्याउने उदेश्य रहेको छ ।

**खास उदेश्यहरु :**

- नदि कटान न्यूनीकरण गरी बाझो तथा खाली जमिनहरुमा ह्रास बालिको प्रवर्द्धन तथा उत्पादनमा बृद्धि गर्ने साथै उक्त जमिनको उपयोग मार्फत तरकारिको व्यवसायिक उत्पादनद्वारा जीवनस्तर सुधार गर्ने,
- तरकारी र शेसहरुको विकासको लागि कृषकहरुलाई आवश्यक ज्ञान, शीप दिई सशक्त बनाउने,
- महिला सहभागिता मार्फत सशक्तिकरण विकास र स्वरोजगारमा बृद्धि गर्ने,

**अपेक्षित प्रतिफल :**

- यस आयोजनले महोत्तरी जिल्लाको यस आयोजना क्षेत्रमा श्रोत साधन नभएका, अन्य सरकारी तथा गैर सरकारी संस्थाहरुबाट सुबिधा नपाएका र कृषि पेशामा निर्भर रहेका कृषकहरुलाई लाभान्वित समुदायका रुपमा लिएको छ ।
- यो आयोजनबाट प्रत्यक्ष रुपमा २०० घरधुरी लाभान्वित हुनेछन ।
- यसको साथै बिरुवा उत्पादनमा सहभागि नर्सरी, ताजा तरकारी तथा बिउ, कृषि उपकरणहरुको बिक्रि वितरणमा संलग्न ५० व्यापारीहरु समेत अप्रत्यक्ष रुपमा आभान्वित हुनेछन । यसका अतिरिक्त ताजा तरकारीको सुलभ र सस्तो रुपमा प्रयोग गर्ने लगभग अप्रत्यक्ष रुपमा २५० घरधुरी लाभान्वित हुनेछन ।

| | महोत्तरी | | | डाम्ही | | | |
|---|---|---|---|---|---|---|---|
| लाभान्वित घरधुरी संख्या | जनजाती | दलित | मधेशी | जनजाती | दलित | मधेशी | कुल जम्मा |
| महिला | १० | ७ | ३२ | १० | ८ | ३३ | १०० (५०%) |
| पुरुष | १३ | १३ | २५ | १२ | १२ | २५ | १०० (५०%) |
| जम्मा | २३ | २० | ५७ | २० | २२ | ८५ | २०० (१००%) |

**प्रतिफल प्राप्त भएको भनि प्रमाणित गर्ने सुचक (OVI)**

- स्थलगत निरिक्षण, श्रव्य दृश्य प्रतिवेदन
- प्रगति प्रतिवेदन (प्रारम्भिक तथा चौमासिक)
- आर्थिक प्रतिवेदन
- तरकारी उत्पादन भएको (कृषकको आय स्तरमा बृद्धि भएको)

## Synopsis of Project Status

**अपेक्षित उपलब्धिहरु : (Log frame अनुसार)**

प्रतिफल १ : नदिले कटान गरेको बालुवा थुपारेको अनुपयोगी जमिनको संरक्षण भएको छ ।

प्रतिफल २ : खेर गएको जमिनको प्रयोगबाट तरकारी उत्पादन भई आय आर्जन भएको छ ।

प्रतिफल ३ : महिला सशक्तिकरण भई महिलाहरुको जीवनस्तर माथि उस्किएको छ ।

**आयोजनाको प्रस्तावित क्रियाकलापहरु** :

| क्र.सं. | क्रियाकलापहरु | क्रियाकलापको अवस्था | कैफियत |
|---|---|---|---|
| १.१ | समुहहरुको गठन | माघमा सम्पन्न भएको | |
| १.२ | आधारभुत सर्भेक्षण | मा सम्पन्न | |
| १.३ | अभिमुखिकरण गोष्ठि | चैत्रमा सम्पन्न | |
| १.४ | कृषक तालिम, घासबाली | बैशाखमा सम्पन्न (लक्ष अनुसार) | |
| १.५ | घाँस नर्सरी स्थापना, बेर्ना वितरण | प्रक्रियामा रहेको | |
| १.६ | घाँस उत्पादन | भइरहेको | |
| २.१ | तरकारी नर्सरीको स्थापना, बेर्ना वितरण | फाल्गुणमा सम्पन्न (लक्ष अनुसार) | |
| २.२ | तरकारी उत्पादन | फाल्गुणमा सम्पन्न (लक्ष अनुसार) | |
| २.३ | कृषि उपकरण वितरण | गर्न बाँकी | |
| २.४ | कृषक अवलोकन भ्रमण | गर्न बाँकी | |
| २.५ | मैसमी, बेमौसमी कृषक तालिम, तरकारीबाली एवं बजार | बैशाखमा लक्ष अनुसार भएको | |
| ३.१ | अर्न्तक्रिया गोष्ठि | गर्न बाँकी | |
| ३.२ | होडिङ बोर्ड | गर्न बाँकी | |
| ३.३ | एफ.एम.द्वारा प्रसारण | फाल्गुन देखि भइरहेको | |
| ३.४ | प्रबधि विस्तार गोष्ठि | गर्न बाँकी | |
| ३.५ | आन्तरिक र बाह्य अनुगमन तथा मुल्यांकन | भइरहेको | |
| ३.६ | बुकलेट तथा प्रकाशन | गर्न बाँकी | |
| ३.७ | सार्वजनिक सुनवाई | गर्न बाँकी | |
| ३.८ | आयोजना पश्चात सर्भेक्षण | गर्न बाँकी | |
| ३.९ | सहकारीकरण र संस्थागत विकास | गर्न बाँकी | |

**मुख्य उपलब्धिहरु :**

यस आयोजना संचालन भए पश्चात निम्न उपलब्धिहरु हासिल भएका छन :

- समुह गठन किसानहरु तरकारी उत्पादनमा जोड दिएको,
- आधारभुत सर्भेक्षण भई कृषकहरुको Base Line Survey भएको,
- अभिमुखिकरण गोष्ठि भई कृषक तथा नागरिक समाजमा कार्यक्रम बारे प्रचार प्रसार भएको,
- घाँस उत्पादन भई परालको खपतमा कमि आएको,
- तरकारी उत्पादन भई कृषकहरुले बिक्रि गरि आय आर्जन गर्न थालेको,
- होडिङ बोर्ड प्रत्येक समुहमा झुन्डाई परियोजनाको पारदर्शिता बढाइएको,
- प्राङगारिक खेति बाट प्रचार प्रसार भई मानव स्वास्थ्यलाई दिर्घायु बनाउन एफ.एम.द्वारा सुचना प्रवाह गरिएको,

# PROJECT TITLE : COMMERCIAL VEGETABLE PRODUCTION AND MARKETING FOR INCOME GENERATION.

**Project No:** 1103/2015

| | |
|---|---|
| ***Project Co-ordinator*** | Sundar Gurung (009779842782855) |
| ***Mailing Address*** | Hamro Krishi Sahakari Sanstha Ltd.<br>Luyata – 2, Bajhang<br>092-421204; 9848406589<br>(President-9848481622)<br>hacobajhang@gmail.com |
| ***Telephone*** | |
| ***Fax*** | |
| ***e-mail*** | |
| ***Collaboration/Partners*** | District Agriculture Development Office, Bajhang. |
| ***Duration of project*** | 2 Years and 4 months |
| ***Project cost*** | Total cost Rs.34,23,246 |
| ***Location of project*** | Luyata, Hemantawada and Chainpur VDCs of Bajhang district. |

## Project Summary

## Background

Bajhang district has been lagging behind in the national development process, the average socio-economic indicators show that the District is far below the national average and needs specific efforts to bring up to the national level.

The majority of the households in the project area are not been able to make their subsistence living with conventional cereal based traditional farming. Due to the lack of commercial vegetable farming practices, the average productivity of the District is very poor.Besides government, some non-governmental organizations have also been implementing various community development programs and income generation activities are the major focus of these programs. Therefore, the project aims at improving the household income of the farmers in the project area through the intervention of commercial vegetable production technology including plastic houses, established marketing network and selection of high yielding varieties of major vegetable crop suitable for the area for more secure and sustainable rural livelihoods.

## Purpose of the Project

The geographical variation and diverse ecology of Bajhang district made it one of the most resourceful and leading districts of Far-western Nepal. Furthermore, there is a high potentiality for seasonal and off season vegetable cultivation, vegetable seed production. In the past some commodities have been proved commercial opportunities to scale up production. So, the poverty level of poor and socially disadvantaged farm families of the project area could be reduced by increasing the opportunities for income generation. Therefore, the main purpose of the project is to increase income of the farmers through seasonal and off-season commercial vegetable production, technology development and dissemination and proper market network development.

## What are the expected beneficiaries?

The marginal farmers including *dalits* and women of the project locations (3 VDCs) are the primary target groups of the proposed interventions. Altogether, 150 member farmers of the cooperatives from the three VDCs including 90 women and 32 *dalits* will be directly benefited from the project while involved in the project activities. Other members of the cooperatives and neighbouring farmers in the project area will be further benefited directly from the activities like irrigation channel construction, collection centre establishment and participatory varietal trials. Consumers can fetch fresh seasonal and off-seasonal vegetable at cheaper price.

## Objective Verifiable Indicators:

Increased seasonal and off-seasonal vegetable production in the project area with 150 members farmer of the co-operatives in the 3 VDCs. farmers will start growing off-season vegetable production from the first year of the project. Areas under vegetable production will be increased by 1.5 ropani/farmer as well cropping intensity will to increased by 100% till the end of the project May, 2017.

Varietal trails on 3 tomato and 3 spotato varieties will be evaluated and the best one will recommended for the three VDCs by the first year of the project implementation, October 2015.

A collection center will be establishment in each of the VDCs,training to one hundred fifty participants and distribution of plastic crates for all the members of the three VDCs. Value chain establishment between farmers, collection center, trader and consumer in the first phase of the second year of the project, 2016.

## Synopsis of Project Status:

| **Outputs:** | | | |
|---|---|---|---|
| 1. Increased seasonal and off-seasonal vegetable production | • By the end of the project, seasonal vegetable production by the beneficiary farmers will be increased by 3 Q/ Ropani/ season of the baseline situation to 5 Q/Ropani<br>• By the first year of the project, the beneficiary farmers will start growing off-season vegetables<br>• By the end of the project, area under vegetable cultivation by the beneficiary farmers will be increased by 1.5 Ropani/farmer of the baseline situation (0.5 ropani).<br>• By the end of the project, cropping pattern of the project area will be sustainable. | • Baseline survey<br>• Inception report<br>• Project completion report<br>• Dated photo<br>• End-line survey<br>• Trimester progress reports<br>• Annual report (including audio visuals)<br>• DADO report<br>• Field observation | • No insects and diseases outbreak |

| | | | |
|---|---|---|---|
| | • By the end of the project, each farmer will be benefitted by Rs 70000 from 1 ropani of vegetable production | | |
| 2. Tomato and potato varieties evaluated and the best varieties promoted | • By the end of the first year of the project, the best tomato and potato cultivars for the project area will be identified.<br>• By the second year of the project implementation, 150 beneficiary farmers will start cultivating the recommended potato and tomato cultivars. | • Baseline survey<br>• Project completion report<br>• End-line survey<br>• Trimester progress reports<br>• Annual report (including audio visuals)<br>• DADO report<br>• Field observation | -Climatic conditions remain favourable and no disease pests outbreak |
| 3. Value Chain Established | • Value chain actors identified by the end of the first year of the project period<br>• Linkage between value chain actors established by the end of the first 2015.<br>• Value chain maps of three (3) vegetables developed by the end of the 2016, i.e. second year of the project period<br>• By the end of May 2015, one collection centre will be constructed and marketing equipments including 150 plastic crates, one digital weighing balance will be distributed and market management training to 150 farmers will be provided.<br>• Seed and Planting materials will be distributed by HACO, Bajhang.<br>• Produce will be collected to the collection centre by farmers and collection centre to main market (Chainpur and Dhangadhi) by HACO. | • Baseline survey<br>• Inception report<br>• Dated photos<br>• Project completion report<br>• End-line survey<br>• Trimester progress reports<br>• Annual report (including audio visuals)<br>• DADO report<br>• Field observation | Climatic conditions remain favourable and no disease pests outbreak |

## Activities Proposed:

| S.No. | Activities | Status |
|---|---|---|
| 1.1 | Group formation and baseline survey | Completed |
| 1.2 | Project inception Workshop | Completed |
| 1.3 | Trainings on seasonal and off-season vegetable production and record keeping | Completed |
| 1.4 | Distribution of improved seeds, plastic sheets, record books | Completed |
| 1.5 | Cattle shed improvement | Ongoing |
| 1.6 | Irrigation channel improvement and micro-irrigation support | Ongoing |
| 1.7 | Project monitoring- Internal and Joint | Yet to begain |
| 1.8 | Manual publication on Vegetable production technology | Yet to begain |
| 1.9 | End line survey | Yet to begain |
| 2.1 | Participatory varietal trials | Yet to begain |
| 2.2 | Output sharing workshop | Yet to begain |
| 2.3 | Report preparation & submission | Yet to begain |
| 3.1 | Identification of value chain actors | Yet to begain |
| 3.2 | Establishment of linkage between value chain actors | Yet to begain |
| 3.3 | Development of value chain maps | Yet to begain |
| 3.4 | Collection centre establishment | Yet to begain |
| 3.5 | Training on market management | Yet to begain |
| 3.6 | Distribution of plastic crates and pulling carts | Yet to begain |
| 3.7 | Exploratory visit | Yet to begain |
| 3.8 | Training on cooperative education and group management | Yet to begain |
| 3.9 | Public hearing | Yet to begain |
| 3.10 | Hoarding board | Completed |
| 3.11 | Video documentary preparation | Yet to begain |

# PROJECT TITLE: ENHANCING CAPACITY OF SMALL FARMERS FOR COMMERCIAL PRODUCTION OF SAFE AND HEALTHY ONION DURING OFF-SEASON

**Project No: 1104**

| | |
|---|---|
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| ***Collaboration/Partners*** | District Agriculture Development Office, Dhanusha<br>District IPM Farmers Committee, Dhanusha |
| ***Duration of Project*** | January 2015 to December 2016 |
| ***Project Cost*** | NRs. 29,99,506 |
| ***Location of Project*** | Central Development Region, Dhanusha District<br>Pocket 1: Suga Nikas, Mithleshwor Nikas<br>Pocket 2: Satokhar, Thilla Bhathiyan<br>Pocket 3: Bhuichakkarpur, Bateshwar |

## Project Summary

Onion is an important cash crop for small farmers of Nepal. It provides one of the key sources of cash income and serves as an important counterforce to rural-urban and foreign migration by providing income generation opportunities within the targeted villages. This project aims at attracting women, youth and disadvantaged group's farmers for production of safe and healthy onion during off-season by organizing them in groups and enhancing their capacity through Farmers' Field School (FFS). Local Production will reduce dependency for onion supplied by external sources. It is expected from the project that the smallholders (≤ 0.1 ha) farmers of the target VDCs will earn more than NRs 10 million from offseason onion production and this enterprise will generate more than 30,000 man-days employment. Technically competent farmer level cadres will be developed for promoting good agriculture practices (GAP) in production of off-season onion through FFS. FFS participants will be enabled to fill the farmer's record book on good agriculture practice to ensure the food safety and quality of their product. Community Resource Nursery Centers for Onion will be established to enhance access of smallholder to good quality healthy seedlings. Participants of FFS will be supported with production inputs and post- harvest handling materials to adapt the technology learnt at FFS and side by side in their own farm. FFS will be followed up during next off-season and group strengthening activities will be facilitated to increase economy of scale by aggregating smallholders produce, establishing cooperative and linking with market actors for sustainability. The project interventions are targeting the adaptation of good agriculture practices of off-season onion production by at least 150 off-season onion growers of the target villages.

The objectively verifiable indicators to measure project outputs are as follows:

By the end of the project

- Six off-season onion GAP FFS conducted.
- 150 farmers educated for GAP in production of offseason onion and it's value chain.
- 15 farmer facilitators for facilitating GAP prepared.
- Off-season bulb produced in 450 katha (15 ha)
- Green onion produced in additional 150 katha (5 ha)
- Productivity of off-season onion bulb will increase by 40%
- one cooperative of onion growers mobilized
- one association of producers and traders established
- 450 farmers from periphery informed and exposed to off-season onion GAP friendly technologies tested and verified at FFS and resource centers.
- 160 copies of GAP record book for farmers, two types of technical booklet (500 copy each) and two types leaflets (500 copies each) related to Onion GAP published and distributed
- 50 technicians, scientists and policy makers made familiar with the process and results of this project.

This project has taken group based approach for the uptake and scaling up of the vegetable production and marketing technologies. It collaborates with all stakeholders such as DADO, and all other concerned stakeholders for implementing project activities which are related to the uptake and scaling up and thereby promotion of the offseason commercial onion production in the project area.

In nutshell, this is a demand driven project of two years duration and having multiple collaborators from GO and CBO. This project will contribute in reducing trade deficit of Nepal through import substitution.

## Synopsis of the project status

### Targeted Outputs

Output 1: Technically competent farmer level cadres developed for promoting good agriculture practices (GAP) in production of off-season onion

Output 2: Scale of cultivation of off-season onion expanded and it's productivity increased.

Output 3: Farmers' cooperative mobilized and marketing of onion started

Output 4: Off-season onion GAP friendly technologies disseminated and advocated to stakeholders involved in onion value chain.

# PROJECT TITLE: COMMERCIAL VEGETABLE PRODUCTION PROGRAM IN SAPTARI DISTRICT

**Project No. :** 1105/2015/16

| | |
|---|---|
| ***Project Coordinator*** | Raj kant Jha |
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| ***Fax*** | ------- |
| ***Email*** | kant_xtl@yahoo.com |
| ***Collaboration/Partners*** | District Agriculture Development Office, Saptari |
| ***Duration of Project*** | 28 months |
| ***Project Cost*** | NRs. 3116954.71 (NARDF's contribution NRs. 2999999.71 + Proponent organization's contribution NRs. 116955.00) |
| ***Location of Project*** | Maleth and Boriya VDCs of Saptari district |

## Project Summary

According to DADO, Saptari, the total agricultural area is 81,667.89 ha, out of which vegetable is cultivated in 9375 ha , from which 1,12,572.5 MT of fresh vegetables is produced with the productivity 12.015 MT/ha in 2069/070. From agro- climatic point of view, Saptari district has high potential for commercial vegetable production throughout the year. Its land qualities and available irrigation facilities are also favourable for further improving production, productivity and income from vegetable production.

The proposed VDC Maleth has a total population of 6696 and more than 60% are extremely poor and illiterate. Socio-economically disadvantaged groups such as Dalit and traditional ethnic castes are suffering from malnutrition. The total cultivated land in this VDC is about 695.71 ha and around 15.38% of land is under vegetable cultivation. Similarly, Boriya VDC has 4849 population of which 50% are poor, illiterate and socio-economically disadvantaged groups and has 778.13 ha cultivated land and around 10.30% land is under vegetable cultivation. The soil and climatic condition of the project area is suitable for vegetable production throughout the year. Average productivity of vegetables in proposed location is around 10 MT/ha (Annual Report of DADO, Saptari, 2069/70). Most farmers follow rice and wheat based cropping system. Vegetables are grown here only in small areas for home consumption and some surplus amount only goes to the market mainly because of lack of information on commercial vegetable production technology, knowledge and skill among the farmers. These locations have well developed black topped road facilities for

transporting of surplus fresh vegetables from farm to the market. Studies done elsewhere show that commercial vegetable production both seasonal and off season directly support to increase the income of the farmers which, in turn, supports food security of the poor and marginal farmers and also provide additional employment opportunity to farm families.

### Main purpose/objectives

Overall purpose of this project is to increase income and improve livelihoods of poor and disadvantaged women and youth of ethnic communities by expanding area and increasing the production and productivity of fresh vegetables and enhancing competitiveness with regard to business capacity through intervention of recommended post harvest technologies and strengthening market linkage and networks.

## The specific purposes of the project are:

- To increase production, productivity and marketable volume of vegetables promoting the use of recommended improved vegetable cultivation practices,
- To develop knowledge and skill on post-harvest handling practices and improve the quality and marketability of products,
- To develop linkages and networks between production groups, marketing cooperative, micro-credit and exporting agencies, i.e. establish the linkages between value chain actors.

Within the project period of 28 months, it is expected that there will be at least 50 hectares of the land covered by the commercial vegetable production program and productivity of vegetables will be increased from present level of 10 MT to 20 MT /ha by the end of project period. Similarly, at least 1000 MT vegetables will be produced commercially in each season by the intended project beneficiaries. The present project objectives and activities are in line to the national agri-business policy enhancing agro-enterprises in suitable agro-ecological zone targeting to increase the exports commodities. In the long run, a strong commercial vegetable production group will be functional and the potentiality of these VDCs will be fully explored.

## Expected beneficiaries

The direct beneficiaries of this project will be 300 marginal, small and medium size farmers of the selected VDCs. However, the project will also indirectly benefit the non-participating farmers of the proposed project and adjoining VDCs through spill over effect and output dissemination activities. They will not only get knowledge and skills concerning the production and post-harvest handling of vegetables but also get support for marketing of produced vegetables.

This project will give top priority to women farmers and include them in all project activities assuring 50% of their participation. The targeted farmers will be empowered through the

transformation of farmers' groups into cooperative. At the same time, linkage will be established with micro-finance agencies, e.g. Gramin Bikash Bank, so that they will get loan support easily.

Other beneficiaries of the project will be traders who will get vegetables in large volume from the producers and help them to scale up their business leading to business enterprises development. Equally, local consumers will get good quality fresh vegetables at reasonable price produced in their own locality.

Successful implementation of the project and lessons learnt from it would benefit district, regional and national level planners as well as various levels of rural development agencies. The participation of direct beneficiaries of different ethnic groups from proposed two VDCs will be as follows. About 2000 non-participating farmers will be the indirect beneficiaries through the spill over effect of the project activities.

| VDCs | No. of Farmer groups | No. of farmers | Dalit (Mushar and Khatbe) | | Mahato (Koiri) and Das | | Others | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Male | Female | Male | Female | Male | Female | Male | Female |
| Maleth | 6 | 150 | 25 | 25 | 25 | 25 | 25 | 25 | 75 | 75 |
| Boriya | 6 | 150 | 25 | 25 | 25 | 25 | 25 | 25 | 75 | 75 |
| Total | 12 | 300 | 50 | 50 | 50 | 50 | 50 | 50 | 150 | 150 |

## Objectively Verifiable Indicators (OVIs) to measure Project Outputs

### Objectively Verifiable Indicators (OVIs)

The objectively verifiable indicators of project's intended outputs are listed below.

**Output 1: Improved vegetable production technologies practised**

1.1 12 farmer groups organized by the end of first trimester of the first year,

1.2 12 Farmer Field Schools conducted by the end of first trimester of the first year

1.3 By second trimester of the first year, farmers start commercial cultivation of vegetables in larger area, i.e. *at least 5 katha of land by each household*,

1.4 By the end of the first year, 300 farmers adopt recommended vegetable production practices,

1.5 By the end of the project period, 50 ha of land brought under commercial vegetable production,

**Output 2: Post-harvest handling practices of fresh vegetables adopted**

2.1. By the third trimester of the first year, knowledge and skill of 300 farmers improved about post harvest handling practices of fresh vegetables.

2.2. By the second trimester of the first year, quality of fresh vegetables improved through scientific grading, storage and packaging

**Output 3. Value chain established and income generation initiated**

3.1 Value chain actors identified by the end of first year of the project period

3.2 Linkage between value chain actors established by the end of first year

3.3 Value chain maps of six vegetables developed by the end of the project period

3.4 One cooperative for marketing of vegetable produce and sustainability formed

3.5 By the end of the project, 300 farmers sell vegetables collectively through marketing cooperative in the local as well as outside market

3.6 By the end of the project, income of the farmers increased by 100%

## Project Up scaling pathways

To achieve the above mentioned outputs and thereby the project purpose, the following up scalling pathways has been intended to be carried out during the project period.

Output-1: Improved vegetable production technologies practised

Output-2: Post harvest handling practices of fresh vegetables adopted

Output-3: Value chain established and income generation initiated

## Synopsis of Project Status

### Targeted Outputs

Here, mention the main Outputs envisaged from the Project number-wise as stated in the Project Log frame of each respective individual project (s).

**Output 1: Improved vegetable production technologies practised**

1.1 12 farmer groups organized by the end of first trimester of the first year,

1.2 12 Farmer Field Schools conducted by the end of first trimester of the first year

1.3 By second trimester of the first year, farmers start commercial cultivation of vegetables in larger area, i.e. at least 5 katha of land by each household,

1.4 By the end of the first year, 300 farmers adopt recommended vegetable production practices,

1.5 By the end of the project period, 50 ha of land brought under commercial vegetable production,

**Output 2: Post-harvest handling practices of fresh vegetables adopted**

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3.3 Value chain maps of six vegetables developed by the end of the project period

3.4 One cooperative for marketing of vegetable produce and sustainability formed

3.5 By the end of the project, 300 farmers sell vegetables collectively through marketing cooperative in the local as well as outside market

3.6 By the end of the project, income of the farmers increased by 100%

## Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Project initiation workshop | Completed in February 2015 | No problems |
| 1.2 Formation and mobilization of groups | Completed in February 2015 | No problems |
| 1.3 Baseline survey | Completed in February 2015 | No problems |
| 1.4 Hoarding board preparation and display | Completed in March 2015 | No problems |
| 1.6 Farmer Field School conduction | Completed in May 2015 | Two weeks late because of Earth quake victims |
| 2.1 Support on tunnel construction and packaging materials | Completed in June 2015 | |
| 2.2 Video documentary preparation | Ongoing | |
| 3.1 Identification of value chain actors | Completed in June 2015 | |
| 3.2 Support in vegetable crop insurance | Completed in June 2015 | |
| 3.3 Internal and Joint monitoring and evaluation | Ongoing | |
| 3.4 Preparation and distribution of reports | Ongoing | |

# PROJECT TITLE: PRODUCTION OF HIGH QUALITY SEED POTATO BY USING PRE-BASIC SEED (PBS) AND TRUE POTATO SEED (TPS) IN DOLAKHA DISTRICT

**Project No. :** 1108/2015-017

| | |
|---|---|
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| ***Collaboration/Partners*** | 1. Temperate Fruit Rootstock Development Centre, Boach, Dolakha<br>2. District Agriculture Development Office Dolakha<br>3. Nucleus Seed Potato Center, Nigale, Sindhupalchowk<br>4. Seed Quality Control Centre (SQCC), Harihar Bhawan |
| ***Duration of Project*** | 2 Yrs. (Feb 2015 to Jan 2017) |
| ***Project Cost*** | NRS 1999931.00 |
| ***Location of Project*** | Boach-2, Shailugeshwar-4, Lakuridanda 9 and Magapauwa 2 Dolakha |

## Project Summary

### Background

The productivity of potato is low as compared to its attainable yield in our country. Traditional growing practices of farmers have to be changed into improved practice together with the use of quality seed to increase productivity of potato. The health status of seed potato is very important factor which determines the productivity of potato crop. Because potato is an asexually propagated crop and seed tuber being vegetative units are more prone to pest and diseases which are carried out through seed tubers to succeeding generations. In the past, several approaches have been tried to improve the quality of seed tubers by National Potato Development Program (NPDP). Now, seed producing groups (SPGs) are multiplying seed potato using pre-basic seed (PBS) as a source planting material. To maintain optimum seed quality, a system of internal quality control was developed with the involvement of various stakeholders and was endorsed by the Ministry of Agriculture Development. Producing quality seed by utilizing True Potato Seed (TPS) is another technology. Farmers have been adopting both technologies for good quality seed production. Many advantages of TPS over conventional system of seed production have been observed and several farmer groups are involved in seedling tubers production by using TPS.

Dolakha is a high mountain district where potato is one of the major crops and contributing high share in food security of the district. Potato is a staple food in most of the areas of the districts and it is observed that farmers have been replacing other cereal crops by potato due to its higher

productivity. But the productivity of potato is far low as compare to its attainable yield; hence there is strong possibility of considerable increment of productivity by improving package and practices with good quality seed.

## Purpose of the Project

The purpose of the project is "to increase production and productivity of seed potato by using basic seed". Pre-basic seeds (PBS) are produced as a source seed by tissue culture lab. At the same time seedling tubers from TPS will be used as a source material for seed quality improvement. PBS and TPS are made available to SPGs as a source seed for further multiplication.

## Project Location

The project has been launching to the selected VDCs of Dolakha district namely Boach-2, Shailugeshwar-4, Lakuridada-9 and Maghapouwa-2.

## Project Beneficiaries

The project begins to enforce quality control system for the production of high quality seed through seed producer groups (SPGs), thus direct beneficiaries will be the 100 seed growers of four SPGs. Multiplier effect goes to 300 leader farmers of surrounding districts mainly Dolakha, Sindhupalchowk & Ramechhap. Potato growers who buy high quality seed will be the final beneficiaries because the productivity of potato will be increase considerably. Thus potato growers of the district will be ultimate beneficiaries of the project. Hence, participating 100 farmers are the direct beneficiaries, 300 farmers of 3 districts will be secondary beneficiaries and large number of farmers of periphery of the sites & adjoining districts will be indirect beneficiaries of the project.

| Outputs and Objectively Verifiable Indicators: Outputs: | Objectively Verifiable Indicators |
|---|---|
| 1. Seed producing technology through PBS and TPS adopted by SPGs | 1. 100 farmers of four sites will be the transformed into local resource persons, in basic/improved seed potato production by 2016. |
| 2. Internal quality control system enforced in SPGs for seed potato production | 2. 100 farmers of 4 groups enforce the quality control system for high quality seed production by 2016. |
| 3. Basic seed potato produced, technology disseminated & livelihood enhanced | 3.1 4.5 MT of basic seed, 7.8 MT of seedling tubers and 300 kg of foundation seed will be produced and distributed by 2015 in 4 sites. 45 MT of quality seed & 7.8 MT seedling tubers will be produced by 2016. |
| | 3.2 300 farmers will followed the seed production techniques by 2016. |

## Upscaling pathways

Group orientation meeting and workshop conducted in the beginning made clear concept on project, objective, working modality and benefit to the target beneficiaries. However, technical trainings conducted in each site for the group member enhanced their knowledge and skills for quality seed production. Besides, participation of each group member on demonstration program in their field helped to gain practical knowledge based on principle learning by doing. A technical manual published and distributed to each member is acting as guideline for quality basic seed production.

## Synopsis of Project Status

**Targeted Outputs:**

Output 1: Seed producing technology through PBS and TPS adopted by SPGs.

Output 2: Internal quality control system enforced in SPGs for seed potato production.

Output 3: Basic seed potato produced, technology disseminated & livelihood enhanced.

**Activities Proposed**

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Baseline Survey<br>1.2 Group orientation meeting<br>1.3 Orientation workshop<br>1.4 Local resource person training | 1.1 Completed in March 015<br>1.2 Completed in March 015<br>1.3 Completed in March 015<br>1.4 Completed in April 015 | |
| 2.1.1 Method demonstration<br>2.1.2. TPS demonstration<br>2.2. Field Training<br>2.3. Preparation of technical guidelines/ manuals | 2.1.1 Ongoing<br>2.1.2 Ongoing<br>2.2 Ongoing<br>2.3 Completed in March | |
| 3.1 Farmer's field-day<br>3.2 Preparation of reports and publication | 3.1 Not yet to begin<br>3.2 Not yet begin | |
| 1. Hoarding board: 4<br>2. Internal monitoring & supervision<br>3. External monitoring & supervision<br>4. Video preparation<br>5. Post project survey<br>6. Public hearing<br>7. Reporting | 1. Completed on March 015<br>2. Not yet to begin<br>3. Not yet to begin<br>4. Continuous process<br>5. Not yet to begin<br>6. Not yet to begin<br>7. Continuous process | |

## Achievements:

Ongoing project, first year activities reached almost at the end**.** Crop is badly affected due to earthquake on 25 April and 12 May, 2015. Because of several vibrations, the root and stolen of potato crop became detached with soil contact that resulted into yellowing and burning of the crop.

Seed selection for planting by group members in Magaspauwa-2

Local resource person training in Shailungeshwori-4

# PROJECT TITLE: SEED PRODUCTION OF STRESS TOLERANT RICE CROP IN CONTEXT OF CLIMATE CHANGE TO ENHANCE FOOD SECURITY OF DEPRIVED COMMUNITY

**Project No.:** 1109/2015

| | |
|---|---|
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| ***Project Co-ordinator:*** | Prabesh Joshi |
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| ***Duration Of the Project:*** | 2 Years (February 1st 2015 to January 31st 2017) |
| ***Project Cost:*** | Total NRs:-21,18,542. (NARDF NRs.19,99,801. & EDS NRS.1,18,742.) |
| ***Location of the Project:*** | Mehelkuna, Maintada, Dahachaur and Ghumkhahare VDCs of the Surkhet district. |
| ***Collaborators/Partners*** | District Agriculture Development Office, Surkhet, Agriculture Research Station, Dashrathpur- Surkhet,<br>Regional Seed Testing Lab, Khajura-Banke, Pavitra Janakalyan Krishak Cooperative Limited, Surkhet |

## Project Summary

The proposed NARDF project is planned for Mehelkuna, Maintada, Dahachaur, Ghumkhahare VDCs of Surkhet district. Given the lack of irrigation facilities and prevalence of low yielding rice seeds, there exists considerable demand among farmers for rice production systems which can thrive in conditions of water stress. Mass production of improved seeds of drought tolerant rice is expected to relieve the production system by increasing rice yield in places with limited irrigation facilities. 4 farmer groups of 25 members will be formed in each of the VDCs by selecting the members such that women and disadvantaged farmers constitute more than 60% of the group members. A total of 400 farmers will be selected as group members and their selection will be based on landholding of at least 4 ropanis of contagious land fit for seed production, innovativeness and willingness in the farmer. Seeds produced from these groups will be sold to local market,

cooperatives and farmer service centers and will be circulated among other seed growers. About 50 mt of C-1 seeds will be produced in the first year which will generate income of Rs. 2,500,000. The project personnel will be assisting the farmers during production, post-harvest, processing and marketing through trainings and support programs with the help from Agriculture Research Station, Dashrathpur and DADO, Surkhet. This project will help in making drought tolerant varieties available in the western region. The dissemination of the information regarding availability and suitability of the Sukkha Dhan by this project is expected to make these varieties more common among farmers of Surkhet district. Furthermore, this project will also help to upscale the programs related to stress tolerance seed production.

The main objective of the project is to make the given VDCs self-sufficient in stress tolerant rice seeds (Sukkha Dhan-1 and Sukkha Dhan-3) while increasing the income of disadvantaged farmers by enabling them to produce drought tolerant seeds. Altogether 350 tons of stress tolerant seeds (including 300 t of commercial seeds and 50 t of C1 seeds) will be produced by the seed producing farmer groups.

Total members involving in the project will be 400 and the total area used for production will be 100ha. Especially women will be involved as participants. Besides, social inclusion of Dalits, and disadvantaged persons will be taken into consideration while implementing the project cycle.

The objectively verifiable indicators of the project are registration of 16 farmer groups in 4 of the proposed VDCs, production of 50 t drought tolerant C1 seeds on 20 ha and 250 t drought tolerant commercial seeds on 100 ha in the first year, production of 50 t of commercial seeds in the second year of the project, increase of annual income of the 400 farmers by Rs. 25,000, publication and distribution of 1000 handbooks and 1000 leaflets and conducting 4 trainings.

## Synopsis of Project Status

### 1.1 Targeted Outputs

**Output 1:** Establishment of commercial drought tolerant rice seed producing farmer groups and quality enhancement.

**Output 2:**Household's income will be improved through farmer's capacity development.

**Output 3:**Information disseminated in wider areas

### 1.2 Activities Proposed

| Activity Number | Activity | Expected Accomplishment Dates |
|---|---|---|
| 1.1 | Baseline survey | 31 May 2015 |
| 1.2 | Drought tolerant rice seed producing farmers group formation | 31 May 2015 |
| 1.3 | Group registration under DADO & linkage with Cooperative | 31 May 2015 |
| 1.4 | Hoarding board | 31 May 2015 |
| 1.5 | Orientation on seed production of drought tolerant rice varieties | 31 May 2015 |

| | | |
|---|---|---|
| 1.6 | Distribution of foundation seeds of drought tolerant rice varieties | 31 May 2015 |
| 1.7 | Crop insurance | 30 September 2015, 30 September 2016 |
| 1.8 | Inspection by RSTL,ARS | 31 January 2016, 31 January 2017 |
| 1.9 | joint inspection visit | 31 January 2016, 31 January 2017 |
| 1.10 | Internal Joint monitoring | 31 January 2017 |
| 1.11 | Bagging, tagging, labeling | 31 January 2016, 31 January 2017 |
| 1.12 | Lab test | 31 January 2016, 31 January 2017 |
| 2.1 | Nursery management & transplanting training to Lead farmers and field staff | 31 May 2015 |
| 2.2 | Insect/ pest mgt & fertilizer mgmt training | 30 September 2015 |
| 2.3 | Training for Quality seed selection | 31 January 2016 |
| 2.4 | Post-Harvest handling, processing and storage training | 31 January 2016 |
| 2.5 | Seed bin/winnowing machine distribution | 31 January 2016 |
| 2.6 | Seed market study and survey | 31 January 2016 |
| 2.7 | marketing workshop of seed stakeholders | 31 May 2016 |
| 3.1 | Demonstration plot for drought tolerant rice seed production | 31 January 2016 |
| 3.2 | Farmers field day | 30 September 2015 |
| 3.3 | Stakeholder's meeting | 31 May 2015, 31 January 2016, 30 September 2016 |
| 3.4 | Project completion workshop | 31 January 2017 |
| 3.5 | Publication and distribution of handbook and leaflets | 31 May 2016 |
| 3.6 | Public hearing | 31 January 2017 |
| 3.7 | End line survey | 31 January 2017 |
| 3.8 | Video documentary | 31 January 2017 |

# PROJECT TITLE: PROMOTION OF MODERN IRRIGATION TECHNOLOGY FOR COMMERCIAL VEGETABLE PRODUCTION AND INCOME GENERATION

**Project No:** 1110

| | |
|---|---|
| ***Name of organization*** | Bidhya laxmi trade Enterprises |
| ***Address***<br>***Telephone /mobile no:***<br>***Fax***<br>***Email*** | Baneshwor-10, Khatmandu<br>9843368629 |
| ***Project coordinator*** | Hari Prasad Subedi |
| ***Address***<br>***Mobile no:***<br>***Email:*** | Jarbuta-1, Surkhet<br>9848030007<br>hrsubedi68@gmail.com |
| ***Duration of Project*** | Feb2015 to may 2017 |
| ***Project cost*** | NRs.3449246 (NARDF Contribution NRs. 2999246 and Collaborators contribution NRs. 450000 |
| ***Location of Project*** | Jarbuta, Satakhani and Lekhpharsa VDCs of of Surkhet District |
| ***Collaborators/partners*** | Social Mobilization center(SMC) Surkhet, DADO Surkhet |

## Project Summary

Surkhet is one of the potential district for commercial vegetable production in terms of both demand of fresh vegetable and potentiality for its production. The price of fresh vegetables is high in Surkhet especially during early summer, rainy seasons and during Dasain and Tihar. Tons and tons of fresh vegetables are being imported from India to meet some part of its demand. Though the people living in Birendranagar have purchasing capacity, they do not get vegetables in the market. And, on the other side farmers cannot supply the demanded products due to lack of appropriate production technology. This project is the extrapolation of work and findings done in other communities of Nepal in similar climatic condition. Farmers of many districts have made substantial improvement in the household income through different enterprises like commercial vegetable farming, off seasonal vegetable production, goat farming, bee keeping, etc. But the marginalized and resource poor people of the proposed project area are not aware about such packages and are poor though their land has potential for commercial vegetable production. In this context the project is designed to promote commercial off seasonal and seasonal year round vegetable farming so that the economic condition of the farmers will be increased. Through the implementation of the project, it is expected that farmer's income will be increased by 35% as compared with the baseline period with

production of more than 200 mt. of different vegetables by the end of the project. To achieve these objectives, series of the institutional development activities such as organizing farmer's group's, support with quality seed and training would be implemented. To address the major production constraint for vegetables in the proposed V.D.C. demonstration and support on collection of household kitchen waste water is promoted and for rational utilization of the scare irrigation water drip irrigation technology will be promoted in the project area. Other Promotional activities include providing training on commercial vegetable farming, demonstration on compost making, use of bio-pesticides, demonstration on off seasonal vegetable production technology, etc. Thus, with these interventions of the project activities it is expected that farmer's group will be organized and their capacities build up, modern vegetable farming technology demonstrated and disseminated and linkage with local service providers developed.

## Synopsis of Project Status

### 1.1 Targeted Outputs:

- **Area under commercial vegetable production expanded**: By the project activities the farmers of the project area will increase their vegetable cultivation area by 20 ha. And the farmers will have produce more than 200mt. of fresh vegetables and marketed.
- **Area under irrigation will be increased in the project area:** In the project area 100 households will have made water collection pond in their kitchen garden. This earthen based plastic lined tank will be used to collect the kitchen waste water and rain water which will be used to irrigate their field. Other 100 farmer's household will have instilled drip irrigation system in their farm and have used scarce water for irrigation wisely.
- **Farmer's capacity enhancement:** The direct beneficiaries will be provided with different training. They are encouraged to work in a group. They will be linked with the agro-vets and stakeholders like DADO, other NGO's, traders etc. which will help to increase their accessibility to market and different service providers.
- **Project output disseminated:** The project output will be disseminated through Booklet, video-documentary, hoarding board, workshop, joint monitoring and public hearing etc.

### 1.2 Activities Proposed:

| Activities | Expected accomplish date |
|---|---|
| 1.1 Conduct Baseline Survey in the Project site: | Ist trimester( feb, march , april and may of 2015) |
| 1.2 Group formation and mobilization | Ist trimester( feb, march , april and may of 2015 |
| 1.3 Vegetable seed and equipment support: | Ist , 2nd , 3rd trimester of 2015 and ist trimester of 2016 |
| 1.4 Demonstration of offseason vegetable production technology | 2nd trimester of 2015 |

| | | |
|---|---|---|
| 2.1 | Supports on construction of kitchen pond: | 1st trimester of 2015 and 1 trimester of 2016 |
| 2.2 | Support on instillation of Drip irrigation: | 2nd trimester of 2015 and 2nd trimester of 2016 |
| 2.3 | Demonstration on drip irrigation technology: | 2nd and 3rd trimester of 2015 |
| 3.1 | On the spot training to farmers regarding off vegetable production: | 1st , 2nd and 3rd trimester of 2015 |
| 3.2 | Demonstration on preparation of Organic manure/ composting: | 2nd trimester of 2015 |
| 3.3 | Demonstration on preparation of Botanical pesticides: | 3rd trimester of 2015 and 2nd trimester of 2016 |
| 4.1 | Publication and Publicity | 2nd trimester of 2016 |
| 4.2 | Regular monitoring (External and Internal): | 3rd trimester of 2015 and 3rd trimester of 2016 |
| 4.3 | Public Hearing: | Ist trimester of 2017 |
| 4.4 | Video making District level workshop: | During entire period of project duration. |
| 4.5 | District level workshop: | Ist trimester of 2017 |
| 5. | Post project Survey and data analysis: | Ist trimester of 2017 |
| 6. | Report Preparation and submission: | At the end of each trimester and final report will be submitted on 1 trimester of 2017 |

# PROJECT TITLE: PRODUCTION OF POTATO FOR FOOD SECURITY AND INCOME GENERATION THROUGH TRUE POTATO SEED FOR MARGINAL FARMERS OF KALIKOT DISTRICT

**Project No:** 1112

| | |
|---|---|
| ***Name of Organization*** | Modal Agriculture Co-operative limited, |
| ***Address*** | Sukatiya-1, Kalikot |
| ***Telephone/Mobile no.*** | 087-665156<br>Chairperson cell: 9848307171<br>Coordinator : 9855063052 |
| ***Fax*** | 087-440210 |
| ***e-mail*** | Me_isd@yahoo.com |
| ***Duration of Project*** | 2 Years |
| ***Project Cost*** | Rs.22, 49,913, NARDF Contribution 1999931 (Nineteen lakhs ninety nine thousand nine hundred Thirty One rupees only) collaborator Contribution Nrs 250000 |
| ***Location of Project*** | Bharta and Sukatiya VDCs of Kalikot district. |
| ***Collaboration/Partners*** | District Agriculture Development Office, Kalikot |

## Project Summary

Potato is the major staple food for the farmers of mid and high hill region. Farmers of the hilly areas are cultivating local varieties of potato from several years. The incidence of disease like late blight and low productivity due to varietal degeneration is the major problem in the areas like Kalikot district where the average productivity is only 11.2 Mt/ha as compared to national average 14.1 Mt/ha (VDD,2070). Kalikot district is one among the food insecure district in mid western region. The climate of the district is suitable for the production of potato and farmers are producing potato conventionally from several years. The productivity of potato is below the national average which is due to the varietal degeneration. Though farmers want to replace variety but they have to invest huge money for tuber and transportation and lack of quality tuber for planting material is also major problem. Potato production through the use of true potato seed is simple, productivity is higher, can tolerate late blight disease and farmers can cover 20 *ropani* of land from 100 gram seed. Thus the problem of shortage of quality potato tuber for plantation and transportation cost both can be minimised and production can be maximised. The seriesHPS7/67 and HPS 1/13 are identified as high yielders and tastier than other varieties and are easily available in the market (Dhakal, 2008). The production technology; using TPS is already adopted by the farmers of some terai districts like chitwan, sunsari, jhapa but due lack of awareness among the hilly farmers rate of adoption is at slow pace in the hilly district like Kalikot. Through the adoption of this technology yield of potato will be increased which helps to increase food security situation of the district. It has positive role in the income and employment of farmers of Kalikot district.

## Main Purpose/Objectives

The main purpose of this project is to increase food security situation of Kalikot district through increased potato production by the dissemination of TPS cultivation technology. The project aims to increase productivity of potato at least 20% by this technology than usual, thus at least 2 mt increases in average productivity of potato in respective sites can be observed after project intervention. Similarly it also aims to increase access for quality seed through the construction of Rustic storage for storing seedling tuber obtained from TPS, training and demonstration activities.

## Expected Beneficiaries

| No. of direct Beneficiaries | | | | | | | |
|---|---|---|---|---|---|---|---|
| **VDCs** | **Dalit** | | **Janajatis** | | **Others** | | **Total** |
| | **Male** | **Female** | **Male** | **Female** | **Male** | **Female** | |
| Bharta | 10 | 10 | 20 | 20 | 20 | 20 | 100 |
| Sukatia | 10 | 10 | | | 40 | 40 | 100 |
| Total | 20 | 20 | 20 | 20 | 60 | 60 | 200 |

| Objectively Verifiable Indicators (OVIs) | | | | | |
|---|---|---|---|---|---|
| **Output** | **Quality** | **Quantity** | **Time** | **Where** | **By Whom** |
| 1. Identified best technology will be replicated for increasing area and production | Low cost and profitable technology with IPM and IPNS practices suitable for marginal farmer | Four group comprising 25 members in each and one coordination committed will be formed | In the first and second year of project implementation (2015-2017) | At project sites (Bharta and Sukatiya VDCs) | The project team members and collaborators, and farmers |
| 2. Mechanism for supplying healthy tuber will be established | Durable and low cost structure with management committee | One rustic store of 5 Mt capacity will be constructed | In the second year of project implementation | At project sites (Bharta and Sukatiya VDCs) | The project team members, collaborators farmers, and entrepreneurs /traders |
| 3. Market linkage established and technology promoted | Functional and active management committee registered in DADO | Management committee comprising 11 members | By the end of the project (2016) | At project locations (Bharta and Sukatiya VDCs) | The project personnel, experts, collaborators, farmers, and other stakeholders. |

## Up- scaling pathways

This project has included effective methods of uptake pathways to scale up technologies. The approaches/methods of UP to be employed in this project will be (i) farmer to farmer extension approach, (ii) through social mobilisation, (iii) through government extension system, and (iv) and through NGOs/CBOs. For this, training, demonstrations, personal contacts, inputs supply mechanism development, meetings, stakeholders' workshops and technical publications will be adopted for which costs will be covered by this project.

The scale up (SU) will be performed in vertical and horizontal ways. The vertical SU can be initiated by involving concerned institutions leading to policy changes. Whereas, the horizontal SU is possible through the geographical spread from local through regional and national application. This project focuses more towards the horizontal SU with adaptation of approaches/methods like site selection, seeking help of extension offices, stakeholder workshops, training, monitoring, field visits, publications and market promotion.

## Synopsis of Project Status

### 2.1 Targeted Outputs :

**Output 1. Identified best technology will be replicated for increasing area and production**

For this technology evaluation using different seeds of true potato will be done in the respective VDCs during first year and based on the performance best one technology will be identified and promoted along with the establishment of seed distribution network, IPM and IPNS practices.

**Outputs 2. Mechanism for supplying healthy tuber will be established**

For the supply of tubers for the production of potato rustic store of 5 Mt capacity will be constructed.

**Outputs 3. Market linkage established and technology promoted**

Market planning committee responsible for market linkage will be formed and promotional activities will be done through FM radios, local television during the project period.

### 2.2 Activities Proposed

| Activities | Expected accomplishment date |
|---|---|
| 1.1. Baseline study | By March, 2015, |
| 1.2. Farmers meeting and group formation | By May, 2015, |
| 1.3. Stakeholder identification and meeting | By April, may, 2015 |
| 1.4. Training to the farmers | By May 2016 |
| 1. 5 Exposure visit | By April, may, 2015 |
| 1.6. Dissemination of production technology | By Jan 2017. |
| 1.7. Materials and plant protection equipment distribution | By Nov,2017 |
| 2.1. Construction of Rustic storage | By the august, 2015. |
| 3.1. Market and production management | By the Jan,2017 |
| 3.2. Promotional and Publication | By the Jan,2017 |

# PROJECT TITLE: OFF SEASON TOMATO PRODUCTION THROUGH PLASTIC HOUSE TECHNOLOGY IN ROAD CORRIDOR OF MYAGDI DISTRICT

**Project No. :** 1113

| | |
|---|---|
| ***Project Coordinator*** | Uttam Panday |
| ***Address*** | Mahadevstan-7, Kathmandu Nepal. |
| ***Telephone*** | 9860127595 |
| ***Fax*** | 076-420923 |
| ***Email*** | uttam0882@gmail.com |
| ***Collaboration/Partners*** | Sahamati, DADO Myagdi |
| ***Duration of Project*** | 28 Month |
| ***Project Cost*** | NRS 2999116 |
| ***Location of Project*** | Piple, Bhagawati and Ghatan VDCs of Myagdi District |

## Project Summary

## Project's Background

Tomato production by the use of plastic tunnel has been possible in rainy season that can sustainably yield up to 6 months. So the profit of farmers can be maximised through the adoption of this technology. Plastic house technology is suitable for farmers having small piece of land. Through this technology 40-50 thousand net profit in a year can be obtained from 100 $m^2$ of land.

Offseason tomato cultivation using plastic house could be the best option for reducing vulnerability of people from food and nutritional security perspective and could stop flux migration to Middle East nations in pursuit of employment especially in the mid hills of Nepal.

## Main Purpose

The main two-prongs of purpose of this project are to increase the productivity of tomato and increase the income of woman, dalit, janjati and ultra poor people which ultimately contribute to the poverty reduction through off-season tomato cultivation by using proper variety and management practices like use of cattle urine through drip, pinching and training practices; which will ultimately increase per capita income of economically and socially deprived classes of farmers living in Piple, Bhagwati, Ghatan VDCs of Myagdi district. Farmers can obtain income after the 3 month of transplantation of seedlings hence it promotes the ultra poor and marginal farmers income as quick IGA.

## Expected beneficiaries

From the following VDCs 100 farmers will be identified in each VDC and affiliated them in co-operative. Altogether 300 farmers of three villages will be focused by the production of 3 variety

of tomato. In which mainly economically deprived, socially excluded, scheduled tribes will be considered.

## Beneficiaries

**Caste and Gender wise distribution of VDC level**

| VDC | No of Group | Gender wise | | Caste wise distribution | | | Beneficiaries |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Dalit | Janjati | Other | |
| Piple | 4 | 40 | 60 | 40 | 30 | 30 | 635 |
| Bhagwati | 4 | 40 | 60 | 40 | 30 | 30 | 535 |
| Ghatan | 4 | 40 | 60 | 40 | 30 | 30 | 495 |
| Total | 12 | 120 | 180 | 120 | 90 | 90 | 1665 |

## Objectively/ Verifiable Indicators (OVIs)

Achievement of the program will be obtained by improvement of livelihood through increase in household income of target community. Achievement will be evaluated by the below enlisted indicators. By the end of the project, income of 300 farmers from proposed area will be increased by 50%. Indicators are as follows.

1.1 By the end of May 2017, 300 farmers identified and 3 pocket areas (3 VDCS) developed for the commercial production of off-season tomato.

1.2 By the end of the May 2017, 300 farmers produced minimum 30,000 tons of tomato and earned minimum Rs. 15,000,000.00

2.1 By the May 2017, 300 farmers skill and knowledge enhanced and 12 farmers groups formed for commercial production and marketing of off-season tomato.

2.2 By the end of the May 2017 , 300 farmers affiliated to three cooperatives and enhanced their capacity on production and marketing.

2.3 By the end of May 2017, at least three high yielding varieties of tomato (Srijana, Winsari, Manisha) introduced and best varieties selected by farmers.

3.1 By the end of May 2017, three collection centre established and market linkages developed in the district and external markets through cooperatives.

3.2 By the end of May 2017, coordination and linkages among producers groups, traders, service providers and other development actors for market linkages and development.

3.3 By the end of May 2017, the lessons and learning of the project documented and disseminated at local, district and national level.

## UPscaling Pathways

Base line survey and end line survey will be conducted to evaluate the program and improvement of beneficiaries. Program will be focused on women, communities of three VDCs in which 12 groups will be formed. Each group contains 50 members. Program tenure will be of 28 months . Each farmer will have single tunnel of tomato. Activities like to organize training related to vegetable cultivation, disease and pest control through the application of **jholmal** and other locally available bio rational materials and marketing will be carried out in 2 years duration so that farmers will be aware about farming practices. 30 women and 20 men will be included in each group in which they will sell their products in collection centre near by them which will be monitored by project.

There is condition of cultivation of tomato in VDCs as well as there is possibilities of extension of program in other area too as part of spill-over benefits. There will be collaboration with the District Agriculture Development office, other non-government offices, and agriculture community. The program will be done in collaboration with the DADO, Myagdi thus there is ample of possibilities of extension such program in other VDCs.

Program will be run in long term because of formation of cooperative and networking of agricultural group from Myagdi district as well as outside of district which promote program in institutional setup and continuity of program. For the sustainability of the output program networking will be done through cooperative.

## Synopsis of Project Status

### Targeted Outputs:

**Output 1** : Production and productivity of off-season tomato increased.

**Output 2 :** Organization setup and their capacity enhanced and best varieties evaluated and promoted.

**Output 3** : Market linkage developed and output disseminated at different level.

### Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 District level start up workshop<br>1.2 VDCs start up workshop<br>1.3 Base line survey<br>1.4 Group committee formation and mobilization<br>1.5 Support of hybrid seed of tomato, Plastic tunnel , drum, sprayer. | Yet not begin<br>completed in June 2015<br>completed in March 2015<br>completed in April 2015<br>On going | District level start up workshop is not completed because of unavailable of date of LDO, DADO and natural calamities. |
| 2.1 Three day basic training for the tunnel and compost pit construction and disease and pest control. | yet to begin | |

| Activities | Activity status | Remarks |
|---|---|---|
| 2.2 Formation of network and build up cooperative among farmers | Yet to begin | |
| 3.1 Video documentary | on going | |
| 2.2 Establish of Collection centre | Yet to begin | |
| 3.3 Joint monitoring | Yet to begin | |
| 3.4 Public hearing | Yet to begin | |
| 3.5 Farmers day | Yet to begin | |
| 3.6 Output sharing workshop | Yet to begin | |
| 3.7 Report preparation and submission | Yet to begin | |
| 3.8 End line survey | Yet to begin | |

Group Meeting

Baseline Survey

# PROJECT TITLE: DEVELOPMENT AND APPLICATION OF CLIMATE FIELD SCHOOL MODEL TO ENABLE FARMERS FOR CLIMATE RESILIENT AGRICULTURAL PRACTICES IN JHAPA DISTRICT

**Project No.:** 1114

| | |
|---|---|
| ***Name of organization*** | Rural Infrastructure and Management Consultancy Pvt. Ltd. |
| ***Address*** | Lokanthali – 16, Madhyapur Thimi Municipality, Bhaktapur |
| ***Telephone/mobile no:*** | Tel. 977-1-6631685, Mob. 9851077782 |
| ***Fax*** | 977-1-6631685 |
| ***Email*** | rimc.consultant@gmail.com |
| ***Project coordinator*** | Dr. Sabin Basi |
| ***Address*** | Lokanthali – 16, Madhyapur Thimi Municipality, Bhaktapur |
| ***Telephone/mobile no:*** | Tel. 977-1-6631685, 9813665202 |
| ***Email*** | sabinbasi@hotmail.com |
| ***Duration of Project:*** | 24 months (March 01, 2015 – Feb 28, 2017) |
| ***Project cost*** | NARDF - NRs. 1,999,491 |
| | Collaborator - NRs. 456,408 |
| | Total - NRs. 2,455,899 |
| ***Location of Project*** | Kumarkhod, Garamani, Shantinagar and Jalthal VDCs of Jhapa district |
| ***Collaborators/Partners*** | UNESCO, Jhapa; DADO, Jhapa; Bhadrapur airport, Gaida meteorological station, DHM, Jhapa; Kunchanjunga, FM Station, Jhapa; NARC, Tarahara and Rampur; Nepal Insurance Co. Ltd, Jhapa; District Cooperative Office, Jhapa. |

## Project Summary

Although Jhapa is an important pocket area for agricultural produce, and is vulnerable to ill effects of climate change especially flood and drought, no effort has yet been invested. Thus, this proposal proposes an application of innovative Climate Field School (CFS) model in the selected VDCs of Jhapa district, to empower the local farming community towards adaptation against climate change. The model comprises of training package. The main purpose of the project is to sensitize local farmers about climate, climatic components and their association with agriculture. The specific objectives are-

- To institutionalize and building capacity of farmer groups through training
- To enhance knowledge and hands-on skills to read, record, interpret/analyze weather information to minimize climate risks.
- To minimize the gap between farmers with government agencies.
- To disseminate climate adaptive crop and soil technology by distributing the inputs.

The direct beneficiaries (120) of the project are selected based on vulnerability (Table 1). In addition, dissemination through FM, leaflets, pamphlets, field observation etc, 600 other farmers will be benefited.

***Table 1. Selected direct beneficiaries in the project area of four VDCs in Jhapa district***

| **Target group** | **Men** | | | | **Woman** | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | Kumarkhod | Garamani | Shantinagar | Jalthal | Kumarkhod | Garamani | Shantinagar | Jalthal | |
| Dalit | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 16 |
| Marginalized | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 18 |
| Conflict victims | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 12 |
| Agricultural vulnerable | 3 | 3 | 3 | 3 | 10 | 10 | 10 | 10 | 52 |
| Janjati | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 22 |
| **Total** | **40** | | | | **80** | | | | **120** |

The **OVIs** under the individual **Project Outputs** are provided below:

**Output 1: Farmers and technical human resources capacity enhanced**

- 120 vulnerable and needy farmers (66 % woman) trained on climate smart agricultural practices by the end of the project
- 120 benefited farmer's knowledge and skills on climate smart agriculture is increased
- By the project end, 50% of benefited farmers (60) adopt CFS trained knowledge on their agricultural practices
- 2 local resource persons trained on climate smart agriculture by the project end.

**Activity wise breakdown of OVI**

1.1. 1 baseline survey conducted with 240 farmers i.e. 4 VDC*(30 direct beneficiaries+30 indirect beneficiaries) from project area in the 1st trimester of 1st year

1.2. 4 CFS training center with necessary training tools and demonstration plot established within 1st trimester of 1st year

1.3. 1 Orientation workshop together with DADO, DHM and farmers conducted in 2nd month of project start

1.4. 4 farmers group (of 30 farmers each) facilitated to form a group in 2nd and 3rd month and leader farmer selected

1.5. 2 local resource persons trained in 1st trimester of 1st and 2nd year

1.6. 8 leader farmer trained in the 1st trimester of 1st and 2nd year

1.7. A guideline to run the CFS will be constructed in the 2nd trimester of 1st year

1.8. Meteorological data procured for 6 times (once in each trimester)

1.9. 2 learning visit at Gaida meteorological station, beginning of 2nd trimester of Year1 and 2

1.10. 300 training manuals prepared and distributed in 1st trimester of year 1

1.11. 120 vulnerable and needy farmers (66 % woman) trained on climate smart agricultural practices by the end of the project

1.12. 4 internal workshop conducted in 2nd and 3rd trimester of year 1 and 2

1.13. Meteorological data analyzed and disseminated in CFS 4 times in 2nd and 3rd trimester of year 1 and 2

**Output 2: Institutional mechanism established for sustainability**

- 1 CFS and 4 farmers group established and institutionalized at each VDC within 1st trimester of 1st year
- Partnership tied with Kanchenjunga FM station, in the 3rd month of the program, for 20 sessions for 0.5 hour. Distribution of 1000 flyers and pamphlet prepared in collaboration with farmers group, in the beginning of 2nd and 3rd trimester of both years
- Networking increased between the 4 farmers cooperative with DADO and DHM with workshop at the 1st trimester of year 1

**Activity wise breakdown of OVI**

2.1. 1 CFS institutionalized in 1st trimester of 1st year with District Cooperative Office

2.2. 4 farmers cooperative institutionalized with District Cooperative Office at 1st trimester of 1st project year

2.3. Partnership tied with Kanchenjunga FM station, to disseminate the climate adaptation strategy by the end of 1st trimester of 1st year and 1000 flyers/pamphlet disseminated in the project VDC

2.4. Institutional map constructed at 3rd trimester of 1st year

2.5. 1 workshop to increase the networking between the 4 farmers cooperative with DADO and DHM at the 1st trimester of year 1

**Output 3 : CFS model adoption enhanced**

- 90 % benefited farmers (108) demonstrate a positive response in the end line report
- 100% of the benefited farmers utilize the distributed materials in their trail field in the second year of project
- 90% farmers (108) replicate and give continuity to climate adaptive agricultural practices
- 100% of the concerned farmers benefited with crop insurance.

**Activity wise breakdown of OVI**

3.1. Improved variety of rice (20 Kg)/maize (10 Kg) against flood and drought distributed to 120 concerned farmer at the mid of 1st and 2nd trimester of 2nd year

3.2. Compost (50 Kg), compost preparing materials (inoculators (EM) ( 1 bottle), activator (urea) ( 5 Kg, lime (1 Kg)), Urea (20 Kg, Soybean (5 Kg) / 120 CFS farmers distributed in the mid of 1st trimester of 2nd year

3.3. 80 soil samples 20/ of project VDC for total carbon content, moisture content, pH, soil type, and NPK content at beginning of 3rd trimester of 1st year and end of 3rd trimester of 2nd year

3.4. Crop insured with Nepal Insurance Co. Ltd, Jhapa for 120 concerned farmer at 2nd trimester of 1st year

## Other activities:

a. Dated photographs and videos taken at workshops and training sessions, twice in 1st trimester, once in 2nd and once in 3rd trimester of year 1 and twice in 1st trimester and once in 2nd and 3rd trimester of year 2.

b. 1 public hearing at the end of 2nd trimester of 2nd year; 2 Focus Group Discussion (FGD) conducted at the end of 2nd trimester of both years and 1 Key Informant Interview (KII) at beginning of 2nd trimester of 1st year.

c. 2 Joint monitoring report (80 copies) of NARDF, DADO, Jhapa, VDC and DDC at the end of both project year

d. 1 end line survey conducted with 240 same farmers as baseline survey and report (50 copies) prepared at the end of the project

### Report preparation and submission:

a. 6 Trimester progress report (totaling 120 copies) prepared at end of each trimester

b. 2 Annual report (195 copies) prepared at end of both project year

c. 1 Final report (150 copies) prepared at the end of project

The model is prepared to enhance the **Up-scaling** of the project outputs by the intended beneficiary farmers. The activities will explicitly involve "simple experiments", "regular field observations" and "group analysis". Institutionalization and well structured CFS and 4 farmers cooperative with DCO, will strengthen the group. Workshops, with DADO, DHM, VDC and DDC will enhance the network of local communities with the government agencies. Farmers learning visit at meteorological station for 2 times will increase the networking of farmers cooperative and the meteorological station. Likewise, dissemination of through FM broadcast, as well as flyers/leaflets will increase the coverage. In addition, application of distributed climate smart agricultural inputs will enhance the uptake scale of the CFS objective.

# 2. Synopsis of Project Status

## 2.1 Targeted Outputs:

**Output 1: Farmers and technical human resources capacity enhanced**

In close co-operation with local communities, VDCs, DADO and DHM, by the end of program, capacity of the 120 local farmers and technical human resources on- climatic factors, climatic effect on agriculture, and adverse effect of climate change, will be enhanced. In addition, interactive training modules, covering the concepts of

probabilistic forecasting and its implication in agriculture, will help local farmers in developing their cropping strategies to cope with the ill effects of climate change. Learning visit of farmers cooperative to nearby meteorological station for 2 times (once in each 2 project year) will help farmers to understand the technicalities of meteorological information and to relate it for use in their farming system.

**Output 2: Institutional mechanism established for sustainability**

With the establishment and institutionalization of CFS in the 1st month of the project period, interpretation, communication and dissemination of climate forecast information will function smoothly. Likewise, the formation of 4 farmer cooperative, 1 from each 4 VDCs will strengthen the CFS for its sustainability. The networking of CFS with FM broadcast; that shall broadcast the climate adaptation program, as well as preparation and dissemination of flyer, brochure, pamphlet, will help in strengthening the CFS model in the entire district. Later, the institutionalized farmers' network will be facilitated to coordinate with district/local government line agencies – DADO, DHM, Agriculture centre, and VDCs, that will help in strengthening the group and attaining the sustainability of the climate adaptive agricultural practices. Finally, at the end of the project cycle, the farmers group will have enough expertise and structure to continue the program on their own, in cooperation with DADO, the project functions will be hand over to the group.

**Output 3:** CFS model adoption enhancedAlthough, farmers gain knowledge on climate adaptive agricultural practices, and are institutionalized, distribution of climate adaptive agricultural inputs in relation to improving crop and soil, will enhance the adoption rate of CFS module among local farmers. As the targeted farmers can apply and scrutinize the principle in their own field, the adoptability CFS model will be enhanced. In addition, the demonstration of distributed climate adaptive materials by the targeted farmers in their own field practice, will ripple the practices to other farmers of adjoining areas. In addition, concerned farmers' crop will be insured at the premium of 25%, which will insure the farmers to be more flexible on their cropping system.

## 2.2 Activities Proposed

| Activities | | Expected accomplishment date | |
|---|---|---|---|
| | | Year 1 activities | Year 2 activities |
| **Output 1: Farmers and technical human resources capacity enhanced** | | | |
| 1.1. | Baseline survey | April 30, 2015 | |
| 1.2. | Establishment of CFS training centre/demonstration plot | May 31, 2015 | Mar 31, 2016 |
| 1.3. | Orientation workshop with line agencies / key stakeholders | May 31, 2015 | April 30, 2016 |
| 1.4. | Facilitate formation of farmers' group | May 31, 2015 | |
| 1.5. | Training local resource person | April 30, 2015 | Mar 31, 2016 |
| 1.6. | Training leader farmers | June 30, 2015 | April 30, 2016 |

| | | | |
|---|---|---|---|
| 1.7. | Prepare a guideline to run CFS | July 31, 2015 | |
| 1.8. | Procure and analyze meteorological data | June 30 / Oct 31 / Feb 28, 2015 | June 30 / Oct 31 / Feb 28, 2016 |
| 1.9. | Learning visits of farmers and facilitators to meteorological station | July 31, 2015 | July 31, 2016 |
| 1.10. | Develop a training manual and IEC materials | June 30, 2015 | |
| 1.11. | Organize farmers training | Jan 31, 2015 | Nov 30, 2016 |
| 1.12. | Publications and internal workshop | Aug 31/Dec 31, 2015 | July 31/Nov 30, 2016 |
| 1.13. | Disseminate climatic/agro-meteorological information in the CFS | Aug 31/Dec 31, 2015 | July 31/Nov 30, 2016 |
| **Output 2: Institutional mechanism established for sustainability** | | | |
| 2.1. | CFS registration in local government agencies | April 30, 2015 | |
| 2.2. | Farmers group facilitated to register in government agencies | June 30, 2015 | |
| 2.3. | Agreement with FM station and distribution of flyer and pamphlet | May 31/July 31/ Nov, 30, 2015 | July 31/ Nov 31, 2016 |
| 2.4. | Institutional mapping and assessment | Nov 31, 2015 | |
| 2.5. | Workshop with farmer group, DHM and DADO | June 30, 2015 | |
| **Output 3 : CFS model adoption enhanced** | | | |
| 3.1. | Distribution of resistant varieties | April 30/ Aug 31, 2015 | |
| 3.2. | Distribution of soil amendments | April 30, 2015 | |
| 3.3. | Soil testing | Nov 31, 2015 | Jan 31, 2016 |
| 3.4. | Crop insurance of CFS member farmers | July 31, 2015 | |
| **Other activities:** | | | |
| a. | Dated photo and video documentary preparation | April 30/ July 31/ Dec 31, 2015 | Mar 31/ July 31/Nov 31/ Feb 28, 2016 |
| b. | Ongoing feed-back collection | Feb 28, 2015 | Dec 31, 2016 |
| c. | Joint monitoring | Feb 28, 2015 | Jan 31, 2016 |
| d. | End line survey | | Feb 28, 2016 |
| **Report preparation and submission:** | | | |
| a. | Trimester progress report | Jun 30/ Oct 31/ Feb 28, 2015 | June 30/ Oct 31/ Feb 28, 2016 |
| b. | Annual report | Feb 28, 2015 | Feb 28, 2016 |
| c. | Final report and workshop | | Feb 28, 2016 |

# PROJECT TITLE: DEVELOPMENT AND APPLICATION OF CLIMATE FIELD SCHOOL MODEL TO ENABLE FARMERS FOR CLIMATE RESILIENT AGRICULTURAL PRACTICES IN JHAPA DISTRICT

**Project No.** : 1115

| | |
|---|---|
| ***Project Coordinator*** | Narayan Prasad Rimal |
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| ***Collaboration/Partners*** | DADO-Jhapa, UNESCO-Jhapa, Local metrological station (Bhadrapur and Gaida) |
| ***Duration of Project*** | 2 year |
| ***Project Cost*** | NRs. 2,455,899 |
| ***Location of Project*** | Garamani, Jalthal, Kumarkhod and Santinagar VDC of Jhapa |

## Project Summary

## Project Background

Nepal is a predominantly agricultural country engaging 65.6 % of the population and contributing 32.61% of the National GDP. Jhapa is one of the most important food producing district of Nepal. From the total, 102442.6 ha of agricultural area, 120538 families or HHs are directly sustaining their livelihood by involving in several agricultural activities, including the crops and livestock enterprises (CBS). Likewise, around 55% of usually active population of 10 years and above are directly involved in agricultural production (CBS, 2013).

The scenarios of climate change in Nepal have indicated the significant warming (average maximum annual temperature increase of 0.060C) leading to reduction in snow and ice coverage; an increase in frequency of climate induced disasters including flooding and droughts; and an uneven precipitation distribution over the regional scale is becoming predominant(Source??). Abnormalities such as delay in the outbreak of rains, untimely or excessive rains, droughts, or of too-high or too-low temperatures in the weather during the peak season of agriculture, , would adversely affect the growth and yield of the crops. Thus, small holder leading agricultural system, country's agrarian economy and dismal coping capacity towards climate induced effect increases vulnerability and thus requires effective and influencing plan of action to deal with such events.

Field school model which mainly believes on "learning by doing" methodology at the field level could be better and effective approach to enable farmer in understanding and deal with adverse effect of climate change. The Climate Field School (CFS) model in agriculture is a model concerned with climate change and its ill effect in agriculture, adaptation and resilient in agriculture practices with major aim to transform technical climate information into practical language for farmers and

thus improve access to and use of climate information services relevant risky agricultural practices. Back to history, CFS has been started from Indonesia in 2002 with the aim to disseminate climatic information to minimize the adverse impacts of flood and draught in the major agricultural regions.

CFS aim to improve farmers livelihood by building resilient agricultural system against climate change, sensitize local farmers about climate, climatic components and their association with agriculture, forecast mechanism and its usage in farming systems and ensure institutionalization and capacity building of local farmer groups through training, conducive environment creation, advocacy and so forth.

## Purpose and Objectives

The major goal of the project is to improve farmers' livelihood by building resilient agricultural system against ailing effects of climate change in Jhapa district. The CFS aims to enhance the capacity of local resource person and farmers to understand and apply climate information to reduce climatic risk in agriculture in their general practices. In general the planned project intends to educate local farmers as well as the extension workers on fundamental parameters of climate,climate change, and climate forecasting applications; enable them to understand the relation between the climatic factors and crop, and ultimately help in improving the crop productivity together with the effective preparednessagainst adverse effect of climate change.

The planned action will be accomplished through an innovative model of CFS, which aims to establish sustainable end-to-end institutional system for the generation and application of locally-tailored climate information tools, build capacity to apply these in real-time and field condition along with enhance farmers' capacity to adapt to and reduce the impacts of climate change.

## Specific objectives of the project:

- To sensitize local farmers about climate, climatic components,their association with agriculture, climate forecasting mechanism and their usage in farming systems.
- To ensure institutionalization and capacity building of local farmer groups through training, creation of conducive environment and advocacy.
- To develop a CFS operational guideline aiming to enhance the knowledge and hands-on skills of the focus groups to read, record, interpret/analyze weather information, forecast and provide farm management tips and advices in order to minimize possible climate risks.
- To minimize the gap between local farmers with immediate stakeholders including DHM and DWIDP regional office, DADO, DDC and so on.
- To disseminate climate adaptive crop and soil technology by distributing the inputs to the farmers.

### Expected Beneficiaries

The target group have been selected from Dalit, Marginalized, agricultural vulnerable and Janjaties through careful analysis of the comparative situations of the local farmers in terms of climate change impacts on livelihood and agricultural vulnerability. The project has incorporated special efforts to increase the access of the women.

## Objectively Verifiable Indicator

| Objectively Verifiable Indicator (OVI) | Remarks |
|---|---|
| • 120 vulnerable and needy farmers (66 % women) trained on climate smart agricultural practices by the end of the project<br>• 120 benefited farmer's knowledge and skills on climate smart agriculture is increased.<br>• By the project end, 50% of benefited farmers (60) adopt CFS trained knowledge on their agricultural practices<br>• 2 local resource persons trained on climate smart agriculture by the project end | |
| • 1 CFS and 4 farmers' cooperative institutionalized with District Cooperative Office in 1st trimester of 1st year<br>• Partnership tied with Kanchenjunga FM station, in the 3rd month of the program, for 20 sessions for 0.5 hour. Distribution of 1000 flyers and pamphlet prepared in collaboration with farmers group, in the beginning of 2nd and 3rd trimester of both years.<br>• Networking increased between the 4 farmers' cooperative with DADO and DHM with workshop at the 1st trimester of year 1. | |
| • 90 % benefited farmers (108) demonstrate a positive response<br>• 100% benefited farmers (120) utilize distributed materials in 2nd project year.<br>• 90% farmers (108) replicate and give continuity to climate adaptive agricultural practices<br>• 100% of the concerned farmers benefited with crop insurance | |

## Synopsis of Project Status

**Targeted Outputs:**

**Output 1:** Farmers and technical human resources capacity enhancements

**Output 2**: Institutional mechanism established for project sustainability

**Output 3:** CFS model adoption enhancement

## Activities Proposed

Farmers and technical human resources capacity enhanced

| S.N | Activities | Activity Status | Remarks |
|---|---|---|---|
| 1. | Baseline survey | Completed in June 2015 | |
| 2. | Establishment of CFS training centre/demonstration plot | Completed in June 2015 | |
| 3. | Orientation workshop with line agencies / key stakeholders | Ongoing | |

| | | | |
|---|---|---|---|
| 4. | Facilitate formation of farmers' group | Completed in June 2015 | |
| 5. | Training local resource person | Completed in June 2015 | |
| 6. | Training leader farmers | Ongoing | |
| 7. | Prepare a guideline to run CFS | Ongoing | |
| 8. | Procure and analyze meteorological data | Completed in June 2015 | |
| 9. | Learning visits of farmers and facilitators to meteorological station | Yet to be begin | |
| 10. | Develop a training manual and IEC materials for training. | Ongoing | |
| 11. | Organize farmers training | Yet to be begin | |
| 12. | Publications and internal workshop | Yet to be begin | |
| 13. | Disseminate climatic/ agro-meteorological information in the CFS | Yet to be begin | |
| **Institutional mechanism established for sustainability of project** | | | |
| 14. | CFS registration in local government agencies | Ongoing | |
| 15. | Farmers group facilitated to register in government agencies | Ongoing | |
| 16. | Agreement with FM station and distribution of flyer and pamphlet | Ongoing | |
| 17. | Institutional mapping and assessment | Yet to be begin | |
| 18 | Workshop with farmer group, DHM and DADO | Ongoing | |
| **CFS model adoption enhanced** | | | |
| 19. | Distribution of resistant varieties | Yet to begin | |
| 20. | Distribution of soil amendments | Yet to begin | |
| 21. | Soil testing | Yet to begin | |
| 22. | Crop insurance of CFS member farmers | Yet to begin | |
| **Other Activities** | | | |
| 23. | Dated photo and video documentary preparation | Ongoing | |
| 24. | Ongoing feed-back collection | Yet to begin | |
| 25. | Joint monitoring | Yet to begin | |
| 26. | End line survey | Yet to begin | |
| 27. | Trimester progress report | Ongoing | 1st trimester |
| 28. | Annual report | Yet to begin | |
| 29. | Final report and workshop | Yet to begin | |

## Achievements (also include Findings in case of Research Projects)

1. Farmer groups have been formed for CFS in each targeted VDC with inclusive and participatory approach. (It will be better to mention detail of Farmer groups as Annex)
2. Climate Field School (CFS) training center and demonstration plot along with farmer participatory plots have been established.(It will be justifiable with the attachment of Picture or detail of the site of established Plots as Annex)
3. Rice seed have been distributed for farmer participatory plots for summer season.
4. Two assigned local resource persons (LRP) has been trained on basic of climate Change and its impacts on agriculture.(Better if provided with the training picture or detail of program like venue, date, participants number etc)

| | |
|---|---|
|  |  |
| Photo 1: Focus Group Discussion and CFS group formation in Garamani | Photo 2: Respondents in Baseline survey in Jalthal |

# PROJECT TITLE: PRODUCTION, PROCESSING AND MARKETING OF VEGETABLE SEED

**Project No:** 1116

| | |
|---|---|
| ***Name of Organization:*** | Bidhya Laxmi Trade Enterprises |
| ***Address:*** | Baneshwor -10, Kathmandu |
| ***Telephone no/ Mobile no:*** | 9843368629 |
| ***Duration of Project:*** | 28 Months (February, 2015 to March 2017) |
| ***Project Cost:*** | NRs. 29,99,936 |
| ***Project Co-ordinator:*** | Bidya Gautam |
| ***Location of Project:*** | Pamka, Garpan and Ratu V.D.C of Surkhet |
| ***Collaborators/ Partners:*** | Community Development Program, Surkhet |

## Project Summary

## Project Background

Surkhet is one of the potential district for vegetable seed production in terms of both demand and potentiality for its production. Being a heterogeneous altitude and climate this district is one of the potential districts for vegetable seed production. The farmers still lacks suitable varieties and appropriate technology for vegetable production. The farmers of the proposed area are interested to produce the vegetable seed like, Rayo (Khumul broad leaf), Radish (Mino early), Bean (Chaumase), pea (Sikkim local) and ladies finger(Arkaanimaka), cucumber(Kusule), Pumpkin (local), commercially .The project aims to enhance the production and productivity of vegetable through introduction of feasible vegetable seed varieties among the farming communities. It will help to develop vegetable seed based market network for additional household income of the project households. Awareness to farmers about vegetable production in the project area and seed production and linkage with traders. The project results will support NARDF'S focus area of increasing agricultural productivity of farming systems and generating additional household income by increasing inclusion of small farmers and women farmers in research and development activities. The District Development Office, Surkhet and other NGO's and cooperatives are working to promote production of vegetable and cereal seeds however, the farmers of the proposed V.D.C's are still devoid of sufficient support in this purpose. In this project all together 225 households are the direct beneficiares. In total the project aims to use 25 ha. Of land for vegetable seed production with an aim to increase NRs. 30755 per year per household income. The project is proposed to implement in three VDCs of Surkhet district namely, Ratu, Garpan and Pamka. And 225 farmers households from these three V.D.C's are the direct project beneficiaries. This project is the extrapolation of work and findings done in other communities of Nepal in similar climatic condition. Farmers of many districts have made substantial improvement in the household income through different enterprises like commercial vegetable farming, seed production, goat farming, bee keeping, etc. But the marginalized and resource poor people of the proposed project area are not aware about such packages and are poor though their land has potential for commercial seed production. In this context the project is designed to promote commercial vegetable seed farming so that the economic

condition of the farmers will be increased. Through the implementation of the project, it is expected that farmer's income will be increased by 50% as compared with the baseline period by the end of the project. To achieve these objectives, series of the institutional development activities such as organizing farmer's group's support with quality improved seed and training would be implemented. To address the major production constraint for seeds in the proposed V.D.C. demonstration and support Other Promotional activities include providing training on commercial seed farming, etc. Thus, with the invention of the project it is expected that farmer's group will be organized and their capacities build up, modern seed farming technology demonstrated and disseminated and linkage with local service providers developed.

## Main Purpose/ Objectives

To materialize the improvement of food security and livelihood of farmer through commercial promotion and marketing of vegetable seed

## Expected Beneficiaries:

| Name of V.D.C | Total Population | No of group | Total No. | Male | Female | Janajati | Dalit | Bramin/ Chettri | Others |
|---|---|---|---|---|---|---|---|---|---|
| Ratu | 1639 | 3 | 75 | 40 | 35 | 15 | 10 | 43 | 7 |
| Garpan | 2063 | 3 | 75 | 40 | 35 | 10 | 10 | 50 | 5 |
| Pamka | 2286 | 3 | 75 | 35 | 40 | 20 | 10 | 37 | 8 |
| Total | | 9 | 225 | 115 | 110 | 45 | 30 | 130 | 20 |

## Objectively Verifiable Indicators:

- By the end of the project the income of the direct beneficiaries' household increased by NRs. 30755 per year as compared with the baseline period.
- 225 direct project beneficiaries will be benefited from the project.
- By the end of the first Trimester 225 farmer's household organized in 9 groups and their capacity will be enhanced on production of vegetable seed.
- 9 farmers groups will have been trained on vegetable seed production technology.
- Seed value chain actors identified
- Value chain of study of seed will be done by the end of the 2nd year.

### Synopsis of Project Status

## Targeted Output

**Output 1:** Awareness on commercial production of vegetable seeds initiated and farmer's capacity enhanced.

**Output 2:** Vegetable seed production technologies introduced and widely adopted in the project area.

**Output 3:** Value Chain established

**Output 4:** Project findings up-scaled

## Activities Proposed

| Activities | | Expected Accomplishment Date |
|---|---|---|
| 1.1 | Conduct Baseline Survey | |
| 1.2 | Group formation and mobilization | |
| 1.3 | Inception workshop | |
| 1.4 | Group orientation | |
| 1.5 | Training on Vegetable seed production (Summer Season) | |
| 1.6 | Training on Vegetable seed production (Winter Season) | |
| 1.7 | Crop Insurance | |
| **Output 2: Vegetable seed production technologies introduced and widely adopted in the project area.** | | |
| 2.1 | Vegetable seed and equipment support | |
| 2.2 | On the spot training on seed production | |
| 2.3 | Provide technical support on production and processing for quality seed | |
| 2.4 | Demonstration on preparation of organic manure | |
| 2.5 | Regular Field Inspection and certification | |
| **Output 3: Value Chain established** | | |
| 3.1 | Linking farmers with service providers | |
| 3.2 | Value Chain Study of Vegetable Seed | |
| 3.3 | Marketing workshop | |
| **4. Project findings up-scaled** | | |
| 4.1 | Publication and publicity | |
| 4.2 | Joint monitoring | |
| 4.3 | Internal Monitoring | |
| 4.4 | Public hearing | |
| 4.5 | Video- documentary preparation | |
| 4.6 | District level workshop | |
| 4.7 | Final Survey and data analysis | |
| 4.8 | Report preparation and submission | |

# PROJECT TITLE: GROUP MANAGED SEED PRODUCTION AND SUPPLY SYSTEM FOR RICE AND WHEAT TO ENHANCE FOOD AND LIVELIHOOD SECURITY IN SAPTARI DISTRICT

**Project No. :** 1117/2014/15

| | |
|---|---|
| ***Project Coordinator*** | Bidya Sagar Yadav |
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| ***Telephone*** | 9803424851 |
| ***Fax*** | |
| ***Email*** | yadavbidya@yahoo.com |
| ***Collaboration/Partners*** | DADO, Saptari, NARC, Tarahara and RSTL, Jhumka |
| ***Duration of Project*** | 3 yrs ( Feb, 2015 to May, 2017) |
| ***Project Cost*** | NRs. 23,22,955.98<br>( NARDF cost NRs. 19,98,955.88 and DFGA cost NRs. 3,24,000.00) |
| ***Location of Project*** | Kochabakhari, Raypur, Pansera, Haripur, Kanchanpur of Saptari district. |

## Project Summary

## Project's background

Saptari is the major food producing district in the Eastern region where total land under rice and wheat is 64,000 ha and 22,000 respectively. However, the productivity is far behind the actual potential. Although the area under improved seed is estimated to be 50% of the total cropped area, the seed replacement rate is lower. Farmers are using the same varieties over ten years. In addition, only few farmers are growing new varieties of rice such as Hardinath-1 and 2, Sawa Mansuli, Barkhe- 2014, Swarna Sub-1, Sukhkha-3, Lal Bashmati, Sabitri, Tarahara-1, Kanchhi Mansuli, Mansuli,and Radha-12 in the district. Similarly, majority of farmers are using older wheat varieties like RR21, UP262 and very few of them are familiar with newly released varieties of wheat in the country. Only few farmers are growing new varieties such as Aaditya, NL-297, Rohini, Gautam, Bhrikuti etc. Low varietal diversity for rice and wheat in the district is mainly due to unavailability of improved seed in the district. Majority of farmers don't have access to new released verities of rice and wheat in the region because RARS, Tarahara is the only source entre for foundation seed and it is producing only in little amount. Due to low seed replacement rate, the productivity and other important characteristics of verities have been lost over time. Farmers are using same variety for years because they have little choices for modern varieties and improved seeds.

Although, Saptari is the food self sufficient district, however the actual productivity of the cereal crops still far behind the actual potential. The situation of food self sufficiency will be lower in future due to very high population growth and stagnant crop productivity. Among various constraints for high production of rice and wheat, lack of suitable verities for specific zones, and varietal choice and lack of good quality source seed are major ones. Availability of good quality

source seed to farmers is very limited and uncertain and this is reflected by low adoption rate of improved seed by farmers and mainly concentrated in nearby areas of district head quarters. There are many districts in this region where use of improved varieties are almost zero and this situation is not improved till date in absence of any organization involved in seed production and marketing. The varietal contribution to total increased food output has been estimated to be more than 50% over the past 50 years and this should be exploited in the country like ours where majority of population (62%) are engaged in agriculture, which is subsistence in nature . As farmers cannot afford higher inputs in agriculture, the access of resource poor farmers to the cheapest inputs ie quality seed should be increased to assure food security which is the major objectives of Three Year Interim Plan and Agriculture Prospective Plan.

The formal sector has been able to fulfill only a small fraction of total demand for the improved seed. In the year 2011, the National Seed Company, Itahari branch supplies only a few quantities of rice and wheat seeds which account about 4% of total seed requirement in the district. An Indian variety, is the dominated one in the area and source seed is not available in Nepal. Farmers are forced to buy seeds every year from the agro-vets because there is no source seed available for such Indian variety. Recently, Indian seed companies have initiated marketing of hybrid rice and wheat verities. Indian hybrid verities of rice-Manisha and hybrid wheat such as PBW373 and 502 have entered in the local seed market. Due to low purchasing power, poor farmers in the district cannot afford for expensive Indian seeds.

## Main purpose/objectives

To develop of sustainable production; marketing and dissemination system through cooperative and farmers' capacity built up in quality seed production.

### Expected beneficiaries:

Primary target and beneficiary are :

| VDC | Dalit | | | Janajati | | | Others | | | Grand Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kochabakhari | 5 | 2 | 7 | 5 | 3 | 8 | 10 | 8 | 18 | 20 | 13 | 33 |
| Raypur | 2 | 1 | 3 | 2 | 2 | 4 | 6 | 4 | 10 | 10 | 7 | 17 |
| Pansera | 6 | 4 | 10 | 10 | 6 | 16 | 18 | 12 | 30 | 34 | 22 | 56 |
| Haripur | 5 | 3 | 8 | 5 | 3 | 8 | 8 | 4 | 12 | 18 | 10 | 28 |
| Kanchanpur | 1 | 1 | 2 | 2 | 2 | 4 | 5 | 5 | 10 | 8 | 8 | 16 |
| Total | 19 | 11 | 30 | 24 | 16 | 40 | 47 | 33 | 80 | 90 | 60 | 150 |

## Objectively Verifiable Indicators (OVIs):

2 new varieties (Sukha – 3 and Swarna Sub – 1 ) of rice and 2 new varieties (Aaditya and Vijay ) of wheat adopted in the project area by the year 2017.

- 75% HHs in the project area and adjoining VDCs adopted the improved seeds of rice and wheat by the year 2017.

- 2 new varieties of rice( Sukha – 3 and Swarna Sub – 1 )and 2 new varieties of Wheat (Aaditya and Vijay ) promoted in seed multiplication.
- Certified seed upto 150 mt of rice and 60 mt of wheat produced in the project area by the year 2017.
- Improved seed replaced 25% of the total cropped area in Saptari district by the year 2017.
- Over 100 farmers, local agro-vets, and seed entrepreneurs trained in GMSP by the year
- 5 SPGs directly involved in the seed production, processing and marketing.
- Local agro-vets and seed companies involved in contract farming.
- Seed marketing operated through agro vet farmers' channel occupied mare than 50% of the seed transaction in the project area 2017.
- Farmers improved varsities of rice and wheat grown by 50% of farming community in the project area and adjoining VDCs.
- Farmers in the project area and adjoining VDCs got access to improved seed. 20 LRPs got trained in various aspects of seed production and marketing.
- 150 farmers from different SPGs trained in seed production, group management and Account keeping.

## Upscaling pathways:

The technical skill development through on farm training on seed selection and maintenance will help not only to maintain the quality of seeds but also the wider and rapid dissemination of quality seed in the remote areas. The choices of varieties to farmers are available through GMSP.

The seed production program is carried out by farmers group and group empowerment through training regarding seed production, storage and marketing will make the group sustainable and strong enough to conduct the program after the completion of the project.

## Synopsis of Project Status

### Targeted Outputs:

Output 1. Productivity and locally adoptive varieties of rice and wheat introduced and varietal diversity enhanced.

Output 2. Farmers' preferred varieties of rice and wheat multiplied through GMSP.

Output 3. Efficient marketing network through functional SPGs and cooperatives established.

Output 4. Farmers' preferred varieties and project outputs widely disseminated.

Output 5. Technical capacity, managerial skills and entrepreneurship of the local community enhanced for marketing of improved seed.

Output 6. Crop productivity and food security enhanced.

Output 7. Dissemination of the technologies and project outputs.

**Activities Proposed**

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Village level baseline survey | Completed in Baishakh, 2072 | |
| 1.2 Village level orientation workshop | Completed in Chaitra, 2071 | |
| 3.1 Seed collection and distribution. | Completed | |
| 3.2 Field inspection and roughing. | Yet to begin | |
| 3.3 Seed sampling, testing and certification. | ,, | |
| 3.4 Orientation workshop for quality seed assurance and truthful labeling. | ,, | |
| 4.1 District level workshop for contract agreement. | Yet to begin | |
| 4.2 Interaction workshop for development of market network. | ,, | |
| 4.3 Stall of seed exhibition / fair | ,, | |
| 5.1.1 Distribution of Tripals | Yet to begin | |
| 5.1.2 Seed processing machine | ,, | |
| 5.1.3 Distribution of seed bins | ,, | |
| 5.1.4 Threshers machine | ,, | |
| 6.1 Distribution of kits. | Ongoing | |
| 6.2 Orientation on crop insurance | Yet to begin | |
| 7.1 Publication of the technologies and project outputs. | Completed | |
| 7.2 Preparation of documentaries and Video documentary | ,, | |
| 7.3 Hoarding board | ,, | |
| 7.4 Monitoring and Evaluation | Completed | |
| 7.5 Public hearing | ,, | |
| 7.6 Post project survey | Yet to begin | |
| 7.7 Preparation of project reports | ,, | |

- Basic seed of rice for both blooding as well as drought brought and distributed in project VDCs.
- Planed rice crop is under supervision of RSTL, Jhumka and NARC, Tarahara for further cultivation practices.

Participants of Village level orientation workshop at Raypur

Participants of formation and mobilization of SPG at Haripur

# PROJECT TITLE: PROMOTION OF BIO-FERTILIZER CUM BIO-PESTICIDES FOR ECO-FRIENDLY AGRICULTURE

**Project No. :** 1118

| | | |
|---|---|---|
| ***Project Coordinator*** | Ram Hari Timilsina | |
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| ***Email*** | rhtimilsina@gmail.com | |
| ***Collaboration/Partners*** | District Agriculture Development Office, Chitwan<br>b) District Agriculture Development Office, Makawanpur | |
| ***Duration of Project*** | Start: February 2015 | End: March 2018 |
| ***Project Cost*** | NRs. 1,999,648 | |
| ***Location of Project*** | Pithuwa of Chitwan and Daman Palung of Makwanpur | |

## Project Summary

Chemical pesticides and fertilizer invite health hazard and deplete the production potentialities of soil and environmental condition. Thus there is growing demand of biological fertilizer and biological pesticides. This project is envisioned to train farmers of Chitwan and Makwanpur for production of *Azotobacter sps, Trichoderma sps* and Bojo based biofertilzer and bio-pesticides. Production skill of bio-pesticides and bio-fertilizer will generate employment for youth and women and improve the environmental condition whereas reduce health hazards. Microorganisms enriched bio-fertilizer and pesticides' import is risky as they are fragile in nature, thus domestic production is the best option to meet the increasing demand and substitute import.

Chitwan and Makawanpur districts are the hubs for commercial agriculture. Quality organic fertilizer and pesticides demand is increasing as farmers are interested in organic agriculture. Bio-fertilizer will be prepared by inoculating *Tricoderma sps* and *Azotobacter sps* in vermi- compost. Biological pesticides will be prepared from *Acorus calamus* L (Bojo in Nepali) *Melia azedarach*, *Piper longum*, *Prunus persica*, and *Lindera neesiana.* But the major constituents will be Bojo. Production skill of bio-pesticides and bio-fertilizer will generate employment for youth and women and improve the environmental condition whereas reduce health hazards. Thus create the foundation for commercial production of bio-pesticides and fertilizer thereby helps import substitution.

## Project purpose

The purpose of this project is to replace the use of chemical fertilizer and chemical pesticides by biological fertilizer and pesticides without losing existing productivity. Unavailability in time and

loss of confidence among farmers regarding efficacy are the major constraints of adoption of bio-pesticides/fertilizer. Project will enable farmers' group to manufacture biological fertilizer and pesticides to replace the use of chemical fertilizer and pesticides by 15 and 7 percent respectively. Fifty one metric tons fortified verim compost will be prepared to minimize fungal disease in crops and productivity will be increased, particularly in eastern part of Chitwan. Six hundred kg 'Bojho' *Acorus calamus* based bio pesticides will be prepared to control pest. Upon completion of project, farmer will be able to run a small bio-fertilizer-cum-bio-pesticides unit for income generating activities. The ultimate purpose of the project is to timely avail the quality bio-fertilizer and pesticides to increase the organic crop production thereby generating women and youth employment.

## Expected Beneficiaries

The main beneficiaries of the proposed projects will be the banana, dairy, small scale poultry farmers of Pithuwa, Chitwan and vegetable and potato farmers of Palung, Makawanpur. This project offer training and exposure opportunities to improve the skill of 120 men and 80 women farmers and entrepreneur in the production of bio fertilizer cum pesticides. The total number of the households (HH) to be directly involved and benefited will be 450. Overall 55 percent of the beneficiaries will be women, dalit and indigenous people. The private sector industries and agro vets will be indirectly benefited.

## Objectively Verifiable Indicators (OVIs)

- The awareness campaign and training will increase organic product consumer by 15 percent.
- Similarly number of organic farmers will be increased by 10 % in the project districts due to availability of biological fertilizer and pesticides.
- By the end of 2016, 200 farmers will be trained about the production technique of bio-fertilizer and bio- pesticides.
- By March 2018, 51 metric tons of bio-fertilizer and 600 kg bio-pesticides will be produced.
- By June 2017, farmers will set two small bio-fertilizer and bio-pesticides production units one in Pithuwa and another in Palung VDC of Makawanpur.
- Major, soil nutrient contain and organic matter will be increased by 10 percent by the end of this project.

## Upscaling pathways

Initiating cultivation of Bojho in the project sites of Makwanpur and preparation of inoculation are the clearly observed findings of the project till date. The farmers to farmers' dissemination of technology, changing the attitude of farmers towards chemical pesticides, up-scaling through farmers group and cooperatives basis etc. are the potential up-scaling agents in the project sites.

After the completion of project, the facilities and technologies developed will be handed over to the farmers and technical back up support will be provided by DADOs/ASCs so the output reached to the end users' will be sustained. Besides, due to the physical proximity AFU/DOR will

further help to the farmers on laboratories and extension services. Cooperative marketing strategy will be implemented for surplus management.

## Synopsis of Project Status

### Targeted Outputs:

Output. 1 Farmers aware about biological fertilizer and pesticide

Output 2. Trained farmers to manufacture product

Output 3. Biological pesticide-cum- fertilizer produced

Output 4. Employment and farm income increased.

Output 5. Soil microbial activities conserved

Output 6. Technology disseminated

### Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1. Base line survey | Completed in March 2015 | Ninety five sample HHs were surveyed. |
| 1.2. Awareness for biological products | Ongoing | Farmers of visited AFU laboratories and program was organized to aware farmers' about harmful effect of chemical pesticides. |
| 1.3. Orientation program | Completed in March 2015 | Two orientation programs at Pithuwa and Palung were organized. |
| 2.1. Training production of bio-products | Ongoing | One training at Pithuwa for 40 farmers and another at Daman for 26 farmers. |
| 2.2. Training-Bojo cultivation | Completed in May 2015 | Thirty farmers of Daman Palung got bojo cultivation training. |
| 3.1. Bio-pesticides /ferti. production unit set up | Yet to be done | |
| 3.2. Preparation of raw materials | Just started | Farmers started to harvest bojo at Daman Palung |
| 3.3. Inoculation preparation | Completed in March 2015 | Inoculation have been prepared and preserved. |
| 3.4. Processing for bio-pest/fertilizer preparation<br>3.5. Comparative study<br>4.1. Bio-product promotion<br>4.2. Marketing of production<br>4.3. Product selling<br>5.1. Soil testing | Yet to be done | |

| Activities | Activity status | Remarks |
|---|---|---|
| 6.1. Booklets/video<br>6.2. Farmers to Framers extension | | |
| 7.2. Internal Monitoring | On going | Monitoring of Daman Palung field during last week of May. |
| 7.6. Public hearing<br>7.7. End line survey | Yet to be done | |

## Achievements

**Output. 1 Farmers aware about biological fertilizer and pesticide**

- Farmers at Damang Palung started to cultivate Bojho, farmers applied Bojo power in rustic store of potato.

**Output 2. Trained farmers to manufacture product**

- Out of forty participants in training at Pithuwa 22 were females, 3 were Dalit females and 1 was janajati female. Out of 18 male, 1 Dalit male and 3 Janjati male.
- Similarly in Daman Palung out of 26 participants, 4 were female, one was Dalit female; Remaining 22 were Male, one was Janajati male and two were Dalit male.

**Output 3. Biological pesticide-cum-fertilizer produced**

- Farmers haves started to harvest Bhojo applied in rustic storage.
- Ten farmers of Pithuwa Chitwan were provided 5 ml *Trichoderma viridae* inoculums.

**Output 4. Employment and farm income increased**

- Thus project activities engaged farmers in productive work like bojo cultivation.

**Output 5. Soil microbial activities conserved**

- Decrease in use of chemical fertilzer/pesticides indicates the consrvation of soil microbial activities.

**Output 6. Technology disseminated**

- FtF network, training and awareness have started new vibration to use bio-product.


Figure: Bio-pesticides/fertilizer training, Bojho cultivation field at Daman

# PROJECT TITLE: QUALITY SEED PRODUCTION OF MAIZE FOR INCREASED FOOD SECURITY IN DIFFERENT VILLAGE DEVELOPMENT COMMITTES OF LALITPUR DISTRICT

**NARDF Project Number:** 1119

| | |
|---|---|
| ***Project Coordinator*** | Krishna Kumar Shrestha |
| ***Address*** | Technical Training and Research Initiative, Khumaltar - 15, Lalitpur<br>Everest Postal Care P. Ltd., G.P.O. Box: 8975, E.P.C. No. 2048 |
| ***Email*** | ttri99@hotmail.com, kkshrej@hotmail.com |
| ***Collaboration/Partners*** | District Agriculture Development Office, Lalitpur<br>Regional Seed testing Laboratory, Hetauda / SQCC<br>NARC Botany Division, Khumaltar<br>Women Development Office, Lalitpur<br>Farmers' Groups<br>Agrovets |
| ***Duration of Project*** | February, 10, 2015 to December 2016 |
| ***Project Cost*** | 2,399,995 |
| ***Location of Project*** | Lalitpur District<br>- Bhardeu VDC ward no. 1<br>- Godavari Metropolis ward no. 3<br>- Nallu VDC ward no. 3, 4, 5 |

## Project Summary

Maize is the major food crop of the mid-hills. This crop is mostly grown in rain fed condition. Farmers are using their age old seed repeatedly year after year. Research has proved that the use of quality seed only can contribute 25 percent yield increase. Looking into this aspect project was proposed with the objective of replacing age old deteriorated seed. The programme will be implemented through groups. The participants will be comprised of 65 percent female farmers. There will be two groups in each Village Development Committees (VDCs) and each group will comprise of 25 farmers of different ethnicity with priority for Dalit, Janajati and Disadvantaged Groups (DAGs). Maize being a cross pollinated crop seed deteriorates rapidly. Therefore, this project is designed in such a way that in the first year two Participatory Varietal Selection (PVS) trials will be conducted in two different locations in each VDC with five recommended/ pipeline varieties; Manakamana 3, Manakamana 4, Manakamana 5, Deuti and Poshilo 1, including local check. Fifty baby trial sets and 50 Informal Research Development (IRD) sets will be provided to participating farmers based on their interest and demand in each VDC. At maturity participating farmers of PVS, baby trial and IRD sets will be asked to select the variety which suit in their farming environment.

During the second year farmer's selected variety (the outcome of PVS, baby trial/IRD sets) will be put in seed increase program in blocks. Altogether there will be 306 farming families as direct beneficiaries through PVS, baby trial and IRD sets. Participating farmers of PVS, baby trials and IRD sets will be involved in seed increase program which will cover 12 hectare land wherefrom 20 metric tons of quality maize seed will be produced. For seed increase program during the second year there will be 400 farming households as participants. After second year, about 2000 farming households will get improved maize seed to cover 800 ha land in the area. The produced seed from seed increase program will be distributed to adjoining farmers and surplus seed will be traded to other regions of similar agro-climatic situation through different seed marketing agencies such as agro vets, seed dealers, traders etc. With the selection of maize variety of farmers choice based on PVS, baby trial and IRD sets, and distribution of improved seed to 2000 farming households after second year the location will develop into maize seed resource center. This maize seed resource center will be supported with necessary tools and equipment needed for seed processing and promotion through marketing channels. The farmers groups organized during the trial and seed increase phase will be expected to give sustainability to seed production and marketing under the guidance of District Agriculture Development Office (DADO) of Lalitpur district. In order to achieve above project outputs, activities such as farmers group formation, mobilization, capacity building, development of resource material, monitoring and evaluation etc. will be conducted adequately.

## Synopsis of Project Status

### Targeted Outputs:

- Suitable maize variety selection for the locality through PVS, IRD and Baby Trials
- Capacity building of participant farmers
- Women empowerment, income generation and application of drudgery reduction measures
- Quality maize seed production
- Resource center establishment

# PROJECT TITLE: IMPROVEMENT IN GOAT KEEPING FOR PROMOTING RESOURCE CENTRE AND LIVELIHOOD OF DISADVANTAGED SMALL FARMERS IN LAMJUNG DISTRICT

**Project No.:** 1120

| | |
|---|---|
| ***Name of organization*** | Population Women and Environmental Development Organization (PWEDO) |
| ***Address*** | 398 Chetana Marga, Bafal, Tahachal, GPO Box 3713, Kathmandu, Nepal |
| ***Telephone/ mobile no:*** | 4271867 (off), Mob: 9851113620 |
| ***Fax*** | N/A |
| ***Email*** | pwedonepal@gmail.com |
| ***Project coordinator*** | Dr. Tara Nath Pande |
| ***Address*** | 398 Chetana Marga, Bafal, Tahachal, GPO Box 3713, Kathmandu, Nepal |
| ***Telephone/ mobile no:*** | Mob: 9851113650 |
| ***Email*** | tarahimal@gmail.com |
| ***Duration of project*** | Three Years |
| ***Project cost*** | Total Rs 32,19,246 (NARDF Rs. 29,99,246 & PWEDO Rs.2,20,000) |
| ***Location of project*** | Dhuseni VDC Ward No. 3, 4 & 5, and Neta VDC Ward No.4 & 9 |
| ***Collaborators/ Partners*** | District Livestock Services Office, Lamjung District,<br>Dhuseni and Neta VDCs, Lamjung District |

## Project Summary

In Nepal, goats are considered the pillar of country's agricultural systems. Goat production has proved good for income generation and livelihood improvement of disadvantaged and underserved or earlier excluded smallholder or landless farmers where they gained knowledge and enhanced skills and got access to breeding and treatment services. In many of the rural areas, smallholder farmers' capacity is still low for efficient production and effective market access, and the services are not reached. Small goat raisers in hill areas have limited access to market or outlets and opportunities compared to those in more developed eastern Terai districts.

The purpose of the project is to develop cooperative goat resource centre and market value chain suitable for improving livelihoods of smallholder farmers of rural pockets by adopting participatory and collaborative integrated approach. The project is designed for reducing poverty amongst smallholder farmers of rural area through sustainable increases in household income from improved goat keeping. The project will introduce improved breeds and develop a goat resource centre and value chain suitable for increasing productivity.

Mainly, the project will (i) conduct capacity development training to provide knowledge and skills and information on improved management practices (shed management, feeding, breeding and treatment) for profitable goat keeping (ii) Establish and implement a breeding plan by cross breeding improved breeds (Boer and Jamunapari bucks) with local selected Khari does (iii) Establish and promote a cooperative managed 'Goat Resource Centre' for the supply of quality breeding goats for distribution and information (iv) Strengthen market networks from villages, districts/regional to national markets

Project has proposed 250 beneficiaries (Table. 1) who are at state of low profile in the competitiveness will be organised in 10 groups, consisting of 25 farmers in each group, and capacitated in improved goat management and establishment and Strengthening of Cooperative Goat Resource Centre for Development of Markets for Sustainable Supply of High-Quality Breeding Goats.

**Table 1. Project proposed beneficiaries**

| Location | Household No. | Social Inclusion | Women participation |
|---|---|---|---|
| Dhuseni VDC Ward No. 4 | 100 (4 groups) | 48 Janajati, 28 Dalit, 24 Brahmin/ Chettri | 60% |
| Dhuseni VDC Ward No. 5 | 75 (3 groups) | 36 Janajati, 21 Dalit | 60% |
| Neta VDC Ward No. 9 | 75 (3 groups) | 36 Janajati, 21 Dalit | 60% |

**Objectively Verifiable Indicators to measure project outputs are:**

- 250 smallholder farmers' capacity built on improved goat management and reported increased productivity, and improved marketing channels created through improved value chain approach
- All 10 farmers groups registered at DADO
- Annual income of each 250 smallholder farmers increased by 20000
- At least four improved crossbred Buck and Doe available for sale in each of 250 HHs and connected to supply chain

**The envisaged promotional pathways for the uptake of the project outputs by the intended beneficiaries are:**

- The intended beneficiaries were included in framing project during the interaction workshop to assess the client demand and their active participation is assured in all the processes of implementation. The information gathered from the meetings with beneficiaries and other stakeholders, inception workshop and baseline survey, and sustainable development strategy prepared will shape the business plan; help reduce risk; and enable the farmers to make better/ informed decisions.
- The active collaboration of extension services,Strengthening technical capacities of farmers by incorporating both beneficiaries in implementation and non beneficiary .
- Handover of inputs Boer and Jamunapari Breeding goats, medicines and minerals, fodder tree saplings, forage crop seed/seedlings, subsidy on selected Khari does and construction on improved goat shed to the disadvantaged families and weighing balance

and computer to the cooperative provide opportunity to boost goat enterprise creating enabling environment of learning and sharing knowledge.

- As part of the value chain analysis, market study will be conducted to understand the market demand and linkages with private companies, NGOs thereby avoiding middlemen.
- Cooperative managed Goat Resource Centre and database keeping in e-version will serve as a point for providing improved cross breeds to farmers in the community and to surrounding areas. It will provide scientific information and database for research and development outcomes on improved goat management.
- Lessons emanating from project implementation will be evaluated, discussed, shared and scaled up. Lessons and case studies will be disseminated through workshops, project reports, VDC, DDC and, DLSO Reports, published articles.
- Publications (Training manuals, leaflets, reports etc) in simple languages understandable to the ordinary farmers will add values for wider scale dissemination of the project outputs.

# 1. Synopsis of Project Status

## 1.1 Targeted Outputs:

**Output 1 :** Smallholder farmers' capacity built and adaptation to climate change (greening the value chain) adopted for improved goat production

**Output 2 :** Inclusive and improved value chain developed for promoting profitable goat enterprises to smallholder farmers through improved and strengthened market linkages

**Output 3 :** Promotion of a cooperative managed Goat Resource Centre and profitable goat market with improved policy and business enabling environment

**Output 4 :** Mechanisms built through implementing organization, cooperative and DLSO for project sustainability, knowledge sharing and reporting)

## 1.2 Activities Proposed

| S.N. | Activities | Expected accomplishment date |
|---|---|---|
| 1.1 | Preliminary Activities: | |
| 1.1.1 | Consultative meetings | February, 2015 |
| 1.1.2 | Baseline survey | April, 2015 |
| 1.1.3 | Formation & strengthening of farmers groups | Sept., 2015 to till Sept 2017 |
| 1.1.4 | Project inception | March, 2015 |
| 1.1.5 | Hoarding Boards preparation and placement | March, 2015 |
| 1.2 | Capacity development training on improved goat production | May, 2015 |
| 1.3 | Farmers field visit to Agricultural Research Station (Goat) Bandipur | May, 2016 |

| | | |
|---|---|---|
| 1.4 | Input Supply: | |
| 1.4.1 | Support for establishment of a group managed fodder tree/forage nursery | May, 2015 |
| 1.4.2 | Distribution of breeding bucks and does | December, 2015 |
| 1.4.3 | Medical inputs (vaccinations, medicines & minerals) | June 2015 to till Sept., 2017 |
| 1.4.4 | Support material for goat sheds | December, 2015 |
| 1.4.5 | Distribution of fodder tree saplings and forage seeds/seedlings | September, 2015 |
| 1.5 | Hay and Silage making demonstration | June ,2015 to till Sept., 2016 |
| 2.1 | Value chain analysis | April, 2016 |
| 2.2 | Skills training on business literacy and financial record keeping | April, 2016 |
| 2.3 | Formation and strengthening of PMC for promoting production & market | June 2016 to till Sept., 2017 |
| 2.4 | Consultation meetings | June 2015 to till Sept., 2017 |
| 3.1 | Strengthening of local agriculture cooperative | June, 2016 to till Sept., 2017 |
| 3.2 | Resources leveraging | May, 2016 |
| 3.3 | Facilitation for goat insurance scheme | June, 2015 to till May 2017 |
| 4.1 | VDC level knowledge sharing workshop | June, 2017 |
| 4.2 | Publications (Inception report, Training Manuals, Trimester, Annual & Final reports; VCA & Monitoring reports & Leaflets) | February 2015 to till Sept.,2017 |
| 4.3 | Monitoring and evaluation | June 2015 to till Sept., 2017 |
| 4.4 | Report preparation (Inception, Trimester, Annual and Final Report) | June 2015 to till Sept., 2017 |
| 4.5 | Post Project Evaluation (End-line Survey, analysis & reporting) | December, 2017 |
| 4.6 | Information dissemination workshop | December, 2017 |
| 4.7 | Public hearing | January, 2018 |
| 4.8 | Video Preparation | June 2015 to till Sept., 2017 |

## 2. Activities Completed

### 2.1 Consultative Meeting

Consultative meetings with the farmers, local partners and civic society members was carried out on Wednesday, 2071/12/4 at Sahuthar Agriculture Hatbazar Agriculture Group's Bhawan, Upallo Koirala Phant in Ward No.4 of Dhuseni VDC and thoroughly discussed about the project objectives, expected outcomes and activities. In addition, the roles and responsibilities

of beneficiary farmers, Civic Society members, women groups, youth groups and other local partners including representatives of District Livestock Development office. A total of 63 participants were present in the meeting. Please see details of the participants and the decision made by the Meeting in Annex 1.

## 2.2 Meeting at District Level

District level Consultation Meeting with concern stakholder held at Besishahar Lampung where team shared project objectives, goal, expected outcomes/results, target area and proposed beneficiaries. In addition the team communicated of the upcoming project inception workshop which will highlight the details on the project activities and implementation modality.

Similarly the project team visited District Livestock Development Office (DLSO) and handed over the project letter to Dr. Dirgha Nath Dhungana. The team shared the information about the project, project objectives, implementation modality and expected outcomes. Similarly, the project team assured that the inception workshop will be organized soon, and the details on the project activities and implementation modality will be highlighted in the workshop. Both DDC and DLSO agreed to support the project to make it success and they shared that high level communication and coordination efforts need to be maintained by the project team.

**Photographs of the Consultative Meetings (Photo taken on 2071/12/4, 2071/12/5 & 2071/12/6):**

PWEDO Chairperson Dr. Narayani Tiwari briefing about the project Objectives & Activities at the meeting

# PROJECT TITLE: ENSURING SEED SECURITY OF RICE, WHEAT AND MAIZE THROUGH COMMUNITY BASED SEED PRODUCTION PROGRAM IN BAJURA DISTRICT

**Project No. :** 1121

| | |
|---|---|
| ***Project Coordinator*** | Dil Bahadur Bist |
| ***Address*** | Barhabis VDC of Bajura district |
| ***Telephone*** | 9848802399 |
| ***Fax*** | |
| ***Email*** | dilubista50@gmail.com |
| ***Collaboration/Partners*** | A: District Agriculture Development Office, Bajura<br>B: Regional Agriculture Research Station, Doti ;<br>D: Regional Seed lab, Sundarpur;<br>E: Village Development Committee. |
| ***Duration of Project*** | Three Years (February 2015 to September 2017) |
| ***Project Cost*** | NARDF Contribution: NPR 19,94,733<br>Collaborator Contribution: NPR 155940<br>Total: NPR 2150673 |
| ***Location of Project*** | Barhabis VDC of Bajura district |

## Project Summary

### Background

Bajura is mountainous and one of the remote areas of the country. Agriculture is the main source of livelihood of people of Bajura district. The agriculture farming of Bajura is subsistence and largely grown traditional varieties which results poor yield. The productivity of rice and maize both are 2.3 t/ha which lag far behind with national productivity of rice (3.17 t/ha) and maize (2.35 t/ha) (MoAD, 2013). Bajura is considered as high food deficit in far western development region (Pardhan et al. 2010). The reasons of low yield are drought, lack of timely availability of improved and quality seed, fertilizer and insecticide/pesticide etc. However, the availability of quality seed is base for food production and productivity and a precursor to crop and food diversification. The importance of good quality seed for agricultural development cannot be over emphasized, because the use of quality seed of the best variety can significantly increase 20-25% yield (Yadav et al. 2010). National Commodities and Agriculture Botany division, Khumaltar have worked together to develop new crops varieties which are well adopted in small farmers' conditions. But, majority of farmers in the Bajura has little or no access to improve seed of newly developed varieties and continued to use recycle seed that has been degenerated. Though, a formal seed system produces and provides only seeds of released varieties, The farmers' seed systems produce both local and improve varieties. The key issues in analyzing the contribution of seeds to agricultural output are availability, price and

quality. Seed has to be available, which means that there has to be physical access to the right seed at the right time, and it needs to be affordable. Throughout the world, the largest quantities of seeds of most crops are produced by farmers themselves. In spite of massive investment in seed research, the rate of improve 'seed replacement remains less due to the inefficiency of local seed production agencies. When the farmers do not get seeds possessing good qualities the yields they obtain may be as expected. The pace of process in production therefore, will largely depend upon the speed with which we are able to multiply and market good quality seeds of high yielding varieties at local level.

## Purpose of the Project

The purpose of the project is to ensure seed security, reduce the poverty of marginal and small rural households and improving income generating opportunities at the household and community levels through production, process and marketing of certified seed of rice, wheat and maize. It has also been seen that seed production and supply system provide an opportunity to employment for resource poor farmers with community based seed production. It will help timely available of desired quantities of seeds of improved varieties to farmers at local level where is, poor technological options or with poor access of modern varieties, because in marginal upland areas, farmers are still growing local / or degenerated varieties in their field. The capacity of farmers will be build up in seed production and seed supply. Moreover community based seed production approach will provide an avenue to producers, traders, processors and technical experts in the process of seeds production and its marketing. Seed network will be established in project sites. The key findings will be documented and published.

## Expected beneficiaries

There would be better prospects of ensuring food security and improving livelihood through sustainable seed production in rice wheat and maize crops. This project will basically target the marginalized farmers who are resided in vicious circle of poverty. The program will focused on the gender, socially and economically excluded people as Dalit, Janajati and poor people of the project area. We expect that this program will directly be supported 150 farmers, 10 agro-vets and traders, 400 agricultural labors, inclusively 30% dalit, and 70% others, This program will improve economic status of 40% poor farmers, 20% medium farmers and 30% marginalize farmers and 10 % rich. It will also create opportunity to women for employment of the project sites. Therefore, this program will support the people who involved in seed enterprises and marketing to improve their overall farm productivity in a sustainable manner, We expect that about 25 % of the project district will cover by improved seed produce by this project and 20% of yield will be increased in the project district. Training will be provided to farmers groups to update their knowledge and skill for the seed production. Similarly, extension workers, policy makers will also be benefitted from the technologies and approaches promoted by the project that can be promoted in similar domain

## Objectively Verifiable Indicators (OVIs)

The output wise objectively verifiable indicators have been identifies as mentioned in the logical framework. However, it is anticipated that at the end of 2015, one seed production farmers group with more than 150 households will formed in project. Therefore at the end of project at least 150 households will adopt commercial seed production technology and production will increased by

75% in respect of current production scenario. At the end of this project, household income will increase by 15% and 20% employment will increases by 2017. By 2016, 40 ton of rice, 30 ton of wheat and 30 ton of maize seed will produce. All the members of group will receive training on various aspects of seed production. In addition they will be capable for establishing market linkages with input suppliers, traders and concern stakeholders. By the end of this project, farmers will motivated towards seed production and the technology generated during whole project will disseminated through different means of extension services.

## Targeted Outputs: (first trimester)

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Incepetion meeting<br>1.2 Formation of CBSP Groups<br>1.3 Conduction of baseline survey.<br>2.1 Production demonstration and experiment of seed production.<br>2.2 Community based seed production and Crop Insurance.<br>2.3 Participatory training on seed production. | completed in 9 March 2015<br>completed in 20 march 2015<br>completed in 10 April 2015<br>completed in 14 May 2015<br>completed in 14 May 2015<br>completed in 19 May 2015 | 1.resource seed not available in the concerned resource center so we have replaced the variant of rice and maize like wise hardinath -1, sukkha-3,and maize -auran-2,are used / demonstrated. |
| 2.1 Rice and maize seed production programmed. | Ongoing | " " " |

## Up scaling pathways

Community based Seed production group will be formed in Barhabis VDC consisting 150 members interested in rice, wheat and maize seed production. This group will engage in commercial scale seed production in project location. The group will equipped with latest technology on harvesting grading and packaging.

Periodic visit, meeting, discussion and training organized in participation of concerned stakeholders during the project period will help to disseminate the information on various aspects of project activities and achievements made on rice, wheat and maize seed production. The coordination meeting organized with the market operators, traders and entrepreneurs will create awareness about the project and help to disseminate the outcome and establish linkage & harmonious relation to ensure the sustainable marketing of seeds.

The workshop and interaction program with concerned stakeholders will facilitate the efficient execution of planned activities and provide a platform for the dissemination of project findings. Similarly, stakeholder workshops organized at the end of project in the district headquarter will be key to disseminate project findings among the concerned stakeholders. Similarly, the Annual Review Workshop organized by NARDF during the project period will facilitate the dissemination of project findings among the national dignitaries.

The outputs of project activities will be documented and published in the form of leaflets, booklets, pamphlets, posters, brochures and also video documentary on seed production prepared during project period will be used for dissemination of outputs. In addition, the project completion report, technical papers and project compilation report prepared out of the project findings will favors the dissemination of project progress, activities, methodology adopted and outputs achieved during the project period.

Here, mention the main Outputs envisaged from the Project number-wise as stated in the Project Log frame of each respective individual project.

**Output 1 :** CBSP Group, Work plan identified and agreed.

**Output 2 :** Rice, Maize seed production technology Transferred.

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Incepetion meeting | completed in 9 March 2015 | 1.resource seed not available in the concerned resource center so we have replaced the varitaty of rice and maize like wise hardinath -1, sukkha-3,and maize -auran-2,are used / demonstrated. |
| 1.2 Formation of CBSP Groups | completed in 20 march 2015 | |
| 1.3 Conduction of baseline survey. | completed in 10 April 2015 | |
| 2.1 Production demonstration and experiment of seed production. | completed in 14 May 2015 | |
| 2.2 Community based seed production and Crop Insurance. | completed in 14 May 2015 | |
| 2.3 Participatory training on seed production. | completed in 19 May 2015 | |
| 2.1 Rice and maize seed production programmed | Ongoing | " " " |
| 3. Field preparation, meeting, monitoring and evaluation, technology transfer, video documentary. | Yet to begin | |

The following three outputs are intended have been achieved by the project thereby contributing in attainment of purpose and goal of the project.

**1. CBSP group formed, work plans identified and agreed**

Inception meeting with farmers, NGO member, DADO officers, stakeholder, Scientists, News reporters done and it helped the entire participant to know about project. Five community based seed production group formed consisting 30 members each, These groups covered all the 9 wards of Barabis VDC of Bajura, District..

**2. Rice and Maize seed production technology established**

Six demonstration plot established in each farmers group. The community based seed production technologies deployed to produce seeds of rice 40 tons and maize of 30 tons during project period to ensure seed security in Bajura district.

The quality seed supply system will be established by formation and implementation through community based seed production groups in the proposed seed growing area. The community based seed producers group will be empowered for developing their entrepreneurship for sustainable seed business.

**3. Conduction of baseline survey**

In consultation with farmers, DADO and Project Coordinator survey questionnaire finalized after pre testing in project VDC. All the household participating in seed production to be taken for baseline survey. Survey questionnaires developed and final survey conducted through close monitoring of project coordinator, The data collection included general socioeconomic and demographic features, cropping pattern, farm resource endowments, rice and maize production, consumption, market sales, input use, crop variety use, cost of production, general production constraints, shortage period, access to input and source of technological information including farmers' perception on productivity, resource use and food sufficiency status.

**4. Production Demonstration and experiment of seed production**

Production demonstration plots have been establish in project VDC. The demonstration plots show farmers the production system to aware on seed production based on participatory approaches. The large plot (225$m^2$) demonstration of rice and maize of 2 variety of each crop demonstrated to select the best variety with replication of each demonstration plots in 5 farmers groups. for the further seed multiplication. these are demonstrated in five farmer's field in each groups. in the pace of Sukkha 4, Sukkha-5 and Sukkha-6 replaced by sukkha-3 , hardinath-1 for rice and Mankaman-3, Manakamana-5 and rampur composite replaced by Auran -2 for maize in the condition of source seed availability . All these varieties brought from Regional Agricultural Research Station, Doti. The potential variety selected based on demonstration plot and experiment have been disseminated among farmers of project district. of same climatic conditions.

Hording boards are established in each group.


CBSP Barahbis, Bajura

# PROJECT TITLE: IMPROVEMENT OF SOIL HEALTH THROUGH PROVEN TECHNOLOGY OF RICE-WHEAT CROPPING SYSTEM IN RAUTAHAT DISTRICT

**Project No. :** PP-1122/2015

| | |
|---|---|
| ***Project Coordinator*** | Ramlachuman Yadav |
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| ***Collaboration/Partners*** | District Agriculture Development Office, Rautahat<br>District Development Committee, Rautahat<br>GraminBikaskoLagiJansahakarya Nepal, Gaur-8, Rautahat |
| ***Duration of Project*** | Three Years (March 2015 to February 2018) |
| ***Project Cost*** | NRs. 1999931.00 |
| ***Location of Project*** | Shitalpur Bairgania, Pathrabudharam VDCs and Gaur Municipality of Rautahat District |

## Project's Background

Rice wheat cropping system (RWCS) is one of the largest cropping systems adopted in South Asian region. According to Ministry of Agriculture Development(MOAD), 2013 rice, wheat covers about 65% of total cereal cultivated area in Nepal. However, during recent years, a significant slowdown in the yield growth rate of RWCS has been observed. Key issues associated with the sustainability of this system include decline in soil organic matter (SOM) due to reduced inputs of bio-resources and lack of an adequate rotation, negative macro and micronutrient balances leading to depletion of soil fertility and nutrient deficiencies. Present yield levels of rice, wheat and maize alone are estimated to be removing 700,000 tons of nutrients annually. Production of one ton cereal grains removes 20-25 kg N, 4 kg P and 5 Kg K (Soil Strategy Paper, 1997). Soil quality or soil health can be defined as the fitness of soil for use. In agricultural system, soil quality is monitored with the view to manage the system and to enhance the production without declining soils and the environments. Thus, soil quality is directly related to agricultural sustainability.

The soil's capacity to provide nitrogen to the plant declines with continuous flooded rice cultivation systems (Kataki, 2001). Declining of soil N supply results in declining factor productivity of chemical N since Soil is natural substitute for chemical N. The decline in partial factor production results in increasing costs because; farmers have to apply additional inputs of fertilizers to obtain the same yields. Non-judicious use of nutrients (Particularly N) has a negative environmental effect in terms of their losses in gaseous form and through leaching.Since arable land is limiting factor and theproductivity has to be improved to meet the region's future demand, thus, maintenance of soil

fertility is essential,therefore to improve soil health and sustain yields. Moreover, the inherent soil fertility of the proposed area is low and that should be improved by all possible means on a sustainable basis not just by mere seasonal application of chemical fertilizers.Among the various attributes, organic matter content is the most important determinant of soil quality including its fertility and productivity. Organic matter content serves as primary source and temporary sink for plant nutrients, minimizes degradation processes and aids in sustaining soil health.

Nepalese agriculture has to face very formidable tasks of achieving the targets of doubling food grain production by 2020 AD and accomplishing for 4% growth rate during the 12$^{th}$ interim three year plan without any detrimental effect to soil health. It also emphasized on producing more cereal grain per unit area and time through cost effective way with the aims to increase food sufficiency, reduce poverty (38 to 30%) and malnutrition (48 to 30 %), this is only possible by improving/maintaining the soil fertility. Therefore, some of the important strategies to achieve this objective and maintain soil resources in good health are

- Prevention of degradation and pollution of the soil resources through technically sound, eco-friendly and cost effective technologies.
- Judicious integrated nutrient management practices including the use of chemical fertilizers, organic manures, green manures, crop residues, organic wastes and bio-fertilizer.
- Proper selection of crops, cropping system with the inclusion of legumes and land uses in conformity with soil capability.
- Mass awareness among the farmers and other stakeholders about the value of soil health and also of the serious hazardous resulting from its misuse.

### Main Purpose/Objectives

To increase the production and productivity of rice wheat system through sustainable soil management is the main purpose of this project. The project will deliver the different technology like incorporation of green manure and leguminous crop, bio fertilizer, use of organic manure and proper use of fertilizer to farmers group in the proposed location. The farmers will be given technologies on package of practices for sustainable soil management through rice wheat cropping system. In addition training will be provided for improvement of the soil management through rice, wheat production system.

Green manures and legumes growing before and after rice have been found to be beneficial to the succeeding crop. The reduction in fertilizer (N) needed to be applied to rice depends on the age/volume of the green manure crop vary with soil condition. Adaptive research will help obtain such measurements under farmer's field condition. Mostly the soil used in rice-wheat cropping is low in organic matter content. Efforts have been made to improve organic matter content by incorporating the leguminous crop, FYM and zero budgets farming system. Besides these, cultivation of rice and wheat provides green environment and helps to minimize the environment pollution.

## Expected Beneficiaries

The main beneficiaries of the project are 360 participating farmers who are involved in the R-W cropping system for sustainable soil management. There will be formation of 2 groups in each VDC every year consisting each of 20 members. So, there will be all together 18 groups. During

project implementation, different ethnic group of society like Dalit, Janjati, socially disadvantage, marginalized and commercial farmers will be included. About 40% women will be involved in the group. Especially those who have difficulty to sustain their livelihood will be focused for upliftment.

The indirect or secondary beneficiaries will be the farmers, local traders, input suppliers and workers of other communities, technician and traders who will use the finding of the technology in same way. In this way more than 1000 farmers, 20 input suppliers and more than 10 technicians will benefitted by this project. In addition all DADOs of Terai district and more than 20 agricultural related stakeholders will also be benefitted by getting outputs through booklets, posters and video documentary.

## Objectively Verifiable Indicators (OVIs)

**Output 1** Status & economy of rice wheat growers at farm level and health of soil condition is identified

**Indicators**

- 2015 baseline survey of 360 households completed and analyzed using excel.
- 2015 initial soil health condition identified by testing the soil in lab.

**Output 2** Farmers know suitable technology for manure and fertilizer use in Rice-wheat system for increased production and productivity.

**Indicators**

- 360 farmers trained on sustainable soil management for increased production and productivity of agriculture commodities by the end of January 2018.
- 18 Resource persons Developed by the end of January 2018

**Output 3** Appropriate soil fertility management practices for rice –wheat system validated and disseminated

**Indicators**

- One improved package of practices for rice –wheat intensive cultivation will be developed through sustainable soil management by the end of February, 2018.
- One promising technology of soil health improvement for increased production and productivity of rice and wheat will be validated and disseminated in the farmer's field by the end of February, 2018.
- Onepromising technology of soil health improvement through proper combination of organic and inorganic source of fertilizer for increased production and productivity of rice and wheat will be validated and disseminated in the farmer's field by the end of February, 2018.

## Up scaling Pathways

Periodic visit, meeting, discussion and training organized in participation of concerned stakeholders during the project period will help to disseminate the information on various aspects of project activities and achievements made on the cropping system.

The workshop and interaction program with concerned stakeholders will facilitate the efficient execution of planned activities and provide a platform for the dissemination of project findings. Similarly, stakeholder workshops organized at the end of project in the district headquarter

will be key to disseminate project findings among the concerned stakeholders. Similarly, the Annual Review Workshop organized by NARDF during the project period will facilitate the dissemination of project findings among the national dignitaries.

In addition findings will be published in Local and National news, media (Radio & FMs) and also in the form of booklets and technical papers. The distribution of these materials to the related organization such as Directorate of Agronomy, Regional Agriculture Directorate, and District Agriculture Development Offices will disseminate the finding to the other stakeholders.

Similarly, 18 farmers group formed during the project period will continue the work and disseminate the information during their meeting. In addition the local resource person developed during the project period also motivates the farmers for sustainable soil management by adopting the R-W cropping system after completion of the project.

## Synopsis of Project Status

### Targeted Outputs:

**Output 1** Status & economy of rice wheat growers at farm level and health of soil condition is identified.

**Output 2** Farmers know suitable technology for manure and fertilizer use in Rice-wheat system for increased production and productivity.

**Output 3** Appropriate soil fertility management practices for rice –wheat system validated and disseminated

### Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Conduct baseline survey | Completed in May 2015 | Baseline survey and soil survey sampling are completed but analysis part is remained as it is, due to the concerning people engagement in relief fund distribution to the victims of the Earth Quake incidence in the country, which has diverted the mind of people towards the recovery of national consequences, which affected slow pace to other work. |
| 1.2 Conduct soil survey and test | Completed in May 2015 | |
| 1.3 Group formation | Yet to begin | |
| 1.4 Conduct orientation program with stakeholders | Yet to begin | |
| 2.1 Conduct farmers Training on sustainable soil management | Yet to begin | |
| 2.2 Demonstrate the effect of combined use of organic manure and inorganic fertilizers. | Yet to begin | |
| 2.3 Demonstrate the effect of green manuring before rice cultivation | Mung sowing done | |
| 2.4 Demonstrate the effect of azolla in R-W cropping system | Yet to begin | |
| 2.5 Demonstrate the effect of Zinc application in rice production and boron application in wheat production | Yet to begin | |

| Activities | Activity status | Remarks |
|---|---|---|
| 2.6 Zero budget farming system | Yet to begin | |
| 3.1 Organize the farmer's field day. | Yet to begin | |
| 3.2 Hoarding board establishment | Yet to begin | |
| 3.3 Carry-out joint supervision and monitoring. | On going | |
| 3.4 Carry out post and economical evaluation. | Yet to begin | |
| 3.5 Publish findings in the form of reports, papers, Booklets and posters | Yet to begin | |
| 3.6 Conduct the stakeholders' workshop for dissemination of the technologies. | Yet to begin | |
| 3.7 Carry out video documentary | Yet to begin | |
| 3.8 Conduct the public hearing | Yet to begin | |

## Achievements (also include Findings in case of Research Projects)

1.1 Baseline survey is carried out with well-developedquestionnaire to collect data of the participating villagers. The data tabulation, compilation and analysis is ongoing to find out the existing situation of project participant/households which is helpful to know about the social demography, economic situation, agricultural production situation of the project areas. The prepared questionnaire was pre tested and survey was carried out with 360 household samples in project implemented VDCs.

1.2 Soil survey sampling activities are completed. 40 soil sample are collected from each project implemented VDCs and from municipality for routine test of PH, N, P, K and OM. The collected soil samples have been sent to the soil testing laboratory for soil analysis which will indicate the initial nutrient condition of farmer's fields soil. Post survey and test of soil will be also done after completion of the project so that impact of the cropping system on soil property identification to conclude the result of the project's purposes.

3.7 Video documentary is continued.All the major events of project is being documented and a video documentary will be prepared from the initial stage to the final phase of the project.

2.3 Mung sowing is done for green manure purpose but the research activities are yet to begin.

A farmer is digging the field to collect the sample of soil.

Mung crop is being observed by participant farmers and NGO Member and Co-ordinator

# PROJECT TITLE: INTEGRATING INTERVENTIONS IN THE VALUE CHAIN OF VEGETABLES FOR SUSTAINABLE ECONOMIC GROWTH IN DHADING DISTRICT

**Project No:** 1123

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|---|---|
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| ***Duration of project*** | Three Years |
| ***Project cost*** | Total Rs 32,44, 896 (NARDF Rs. 29,99,246; PWEDO Rs. 2,45,000) |
| ***Location of project*** | Dhusa, Jogimara and Benighat VDCs of Dhading District |
| ***Collaborators/Partners*** | District Agricultural Development Office, Dhading District<br>Krishak Sudhar Falful Tatha Tarkari Utpadak Sahakari Sanstha, Charaudi, Dhading |

## Project Summary

A majority of the rural smallholder landowners practice subsistence farming. They lack the necessary knowledge, scientific techniques and the marketing capacity which would help increase the yield and quality of their produce and thus raise their income. Small socially disadvantaged and under-served farmers are discouraged from initiating commercialized farming by growing high value vegetables for income generation because their products sell for a very slim profit margin. One reasons for this is that the quality of the produce is sub-standard since much needed consideration is not given from the production level to the eventual transport of the products thus, the quality of the produce when it reaches the consumer is poor or of low standard.

It is important to build capacity among smallholder producers, traders and other workforce involved in implementing technologies, practices and other value added activities in order to promote sustainable high quality vegetable crops agribusiness to improve their livelihoods. This project is developed in a way to reconcile competitiveness with socially inclusive growth, and develop a learning place for thousands of farmers, researchers and stakeholders who are concerned

and have interest with sustainable vegetable production technologies and practices, and improvement in production and marketing services

The targeted beneficiaries are indigenous Chepang and other vegetable Production and Marketing Cooperative members of Dhusa, Jogimara and Benighat VDCs are often characterized by illiteracy, poverty, food insecurity, food self-insufficiency, and lack of resource ownerships with over 70% families relying on wages from labor work to feed the families.

It was found that the selected location is suitable and has potential scope for sustainable vegetable production and market promotion. The targeted beneficiaries shown interests, enthusiasm and demanded for the sustainable high quality vegetable production and marketing options and DADO Dhading put forward recommendation and interest for collaboration.

The main objective of the project is to contribute to national economy by improving farm production and cooperative marketing systems for the promotion of vegetable agribusiness sustainably. To achieve this, the project will:

i. Conduct capacity development training for the small farmers in sustainable vegetable production.
ii. Encourage and provide support services to farmers to adopt Micro-irrigation, polyhouses, fertilizer and pesticide management techniques
iii. Equip cooperative with necessary infrastructure and skills to market and deliver high quality vegetables
iv. Establish measures to insure sustainability of vegetable production and marketing activities after the end of the project

**Table 1: Project Proposed Direct Beneficiaries**

| VDC | Household No. | Gender distribution | | Remarks |
|---|---|---|---|---|
| Dhusa<br>Ward no. 1 to 9 | 152 | Male<br>Female | 98<br>54 | The direct beneficiaries are all members of the Chepang indigenous group of the selected project area |
| Benighat<br>Ward no. 4 to 8 | 62 | Male<br>Female | 35<br>27 | |
| Jogimara<br>Ward no. 1 | 22 | Male<br>Female | 7<br>15 | |
| **Total** | **236** | **Male**<br>**Female** | **140**<br>**96** | |

The project has 236 proposed direct beneficiaries comprising of the poorest indigenous Chepang households of Dhusa, Benighat and Jogimara VDCs. These beneficiaries are members of a cooperative with 1099 members in total. The other 863 members of this cooperative will also be provided the opportunity of learning sustainable vegetable production technologies/practices through demonstration and awareness program, and hence comprise the indirect beneficiaries of the project.

However, only the direct beneficiaries will receive the support services since they are disadvantaged, resource poor small farmers with low competitiveness; they will benefit most from this intervention.

**Table 2: Project Proposed Indirect Beneficiaries**

| Location | Household No. | Social inclusion | | Gender distribution | |
|---|---|---|---|---|---|
| Dhusa VDC Ward no. 1 - 9 | 532 | Janjati | 286 | Male | 356 |
| | | Dalit | 30 | Female | 176 |
| | | Brahman/Chettri | 216 | | |
| Benighat VDC Ward no. 4 - 8 | 264 | Janjati | 154 | Male | 172 |
| | | Dalit | 18 | Female | 92 |
| | | Brahman/Chettri | 92 | | |
| Jogimara VDC Ward no. 1 | 67 | Janjati | 47 | Male | 44 |
| | | Dalit | 6 | Female | 23 |
| | | Brahman/Chettri | 14 | | |
| Total | 863 | Janjati | 487 | Male | 572 |
| | | Dalit | 54 | Female | 291 |
| | | Brahman/Chettri | 322 | | |

## Objectively Verifiable Indicators to measure project outputs are:

- Indigenous Chepang households develop capability in innovative technologies and practices for sustainable vegetable production. By the end of second year, all 236 households engage in commercial vegetable production on their land and perform business planning and management increasing their annual household income by at least NPR. 20000 over the baseline value
- All 1099 Cooperative Members get education and develop capacity in human health conscious high quality vegetable production activities -MIT, Polyhouse, composting and use of organic fertilizer and Biopesticide
- By the end of first year, participatory demonstration of one drip irrigation and one polyhouse accomplished in each of 15 wards of 3 VDCs, educating & inspiring to all 1099 members for upscaling and replication of such activities
- By the end of second year one computer and printer handed to cooperative, & database management started and promoted. In addition one grading and two packaging machine installed in the collection centre, improving standardization of high quality fresh vegetables
- **The envisaged promotional pathways for the uptake of the project outputs by the intended beneficiaries are**:

Project is designed to develop collaborative approach and leadership, which possess knowledge, skills, and characters that enable project team, partner organizations and other actors along the value chain and beneficiaries to carry out leader actions such as leveraging resources, optimizing services, seeking new solutions, sustaining focus, promoting trust, or setting and

monitoring goals and progress. Effective collaboration practices develop ownership, integrity and inclination toward shared solutions, which play vital role for the upscaling of the project outputs.

Project developed innovation capability and/or entrepreneurship skill of the beneficiaries on vegetable agribusiness will bring transformation of their own farming system and their neighbours and especially youth farmers learn from demonstrations by promoting adopted technologies and practices for high quality vegetable production resulting to widespread commercial vegetable production.

Since the project area and cooperative office is along the road side, any one including government and nongovernment officials and farmers who come on the exposure visit can learn by observing developed linkage and strengthened cooperative services including grading, packaging, database management and produced quality vegetable and apply on their own group or cooperative members or at individual basis, thereby promoting project adopted production and marketing technologies/practices.

The production, collection, post-harvest and market management practises promoted by this project will be key innovative priorities for learning and practicing opportunity for others who visits and observe the area.

Any organization or individual can replicate the project developed processes such as organizing farmers, motivating them, empowering women and developing their capacity to use innovative tools and techniques and strengthening collection centre and market.

## Synopsis of Project Status

### 1.1 Targeted Outputs:

**Output 1:** Strengthened innovation capability of smallholder farmers in sustainable vegetable production

**Output 2:** Adopted innovative activities focusing on Micro-irrigation, polyhouses, fertilizer and pesticide management

**Output 3:** Improved production and marketing cooperative procedure and services for the delivery of high quality vegetables

**Output 4:** Built Mechanisms for project sustainability, knowledge sharing and reporting

### 1.2 Activities Proposed

| S.N. | Activities | Expected accomplishment date |
|---|---|---|
| 1.1 | Preliminary activities | |
| 1.1.1 | Consultative meetings | Feb 2015 |
| 1.1.2 | Project startup workshop | February to March 2015 |
| 1.1.3 | Formation of Project Advisory Committee (PAC) | February to March 2015 |
| 1.1.4 | Baseline survey and target group identification | March to April 2015 |
| 1.1.5 | Hoarding Boards preparation & placement | February to March 2015<br>December 2015 to January 2016 |

| | | |
|---|---|---|
| 1.2 | Capacity development training on Sustainable Vegetable Production | March to May 2015 |
| 1.3 | Farmers field visit | February to May 2016 |
| 2.1 | Micro-irrigation | |
| 2.1.1 | Demonstration of micro-irrigation technology | June to September 2015 |
| 2.1.2 | Support on micro-irrigation | June to September 2016 |
| 2.2 | Adoption of Polyhouses | Sep 2017 |
| 2.2.1 | Demonstration of low-cost polyhouses | June to September 2016 |
| 2.2.2 | Support on low-cost polyhouses | June to September 2016 |
| 2.3 | Demonstration of composting and Vermi-composting | February to May 2016 |
| 2.4 | Demonstration of botanical pesticides and organic fungicides | February to May 2016 |
| 3.1 | Value chain analysis | June to September 2016 |
| 3.2 | Business literacy training | June to September 2016 |
| 3.3 | Installation and use of Grading and packaging machines | February to May 2016<br>June to September 2017 |
| 3.4 | Quality test of the produced vegetables | June to September 2015<br>October to January (2016-2018) |
| 3.5 | Establishment and promotion of IT lab | June to September 2016 |
| 3.6 | Facilitation for vegetable insurance scheme | June to September 2015<br>February to May (2016-2017) |
| 4.1 | Publication | October to January (2015-2017)<br>June to September 2017 |
| 4.2 | Periodic monitoring | October 2015 to January 2016<br>June to September 2016-2017 |
| 4.3 | Report preparation | October to January, each year |
| 4.4 | Information dissemination workshop | February to May 2017 |
| 4.5 | Endline survey, analysis and reporting | September 2017 to January 2018 |
| 4.6 | Public hearing | December 2017 to January 2018 |
| 4.7 | Video production | February to May 2015<br>October 2016 to May 2017<br>September 2017 to January 2018 |

# PROJECT TITLE: DEVELOPMENT OF COMMERCIAL VEGETABLE PRODUCTION FOR IMPROVING LIVELIHOOD OF MARGINALIZED INDIGENOUS COMMUNITIES OF MANAHARI VDC, MAKWANPUR

**Project No.:** 1124

**District:** Makawanpur

| | |
|---|---|
| ***Name of organization*** | Population Women and Environmental Development Organization (PWEDO) |
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| ***Email*** | jaganadhikari@gmail.com |
| ***Duration of project*** | Three Years |
| ***Project cost*** | Total Rs. 32,39,246 (NARDF Rs. 29,99,246; PWEDO Rs. 2,40,000) |
| ***Location of project*** | Manahari VDC Ward No. 5&6, Makwanpur District |
| ***Collaborators/Partners*** | District Agricultural Development Office, Makwanpur District<br>Mahila Utthan Tatha Sip Bikas Kendra (Women Empowerment and Skill Development Centre), Manahari-5, Pratapur, Makwanpur |

## Project Summary

The Danuwars, Bote and Chepang from the Manahari VDC are economically deprived and are resource poor. Current farming practices and limited income opportunities are barely sufficient to improve their living standards. Recently, as a result of the policies enforced by the authorities concerning the Parsa Wildlife Reserve, they have been forced to relocate from their previous locations at Wards 5 and 6 of Manahari VDC to their current location at Godamdamar, located in between wards 2 and 3. This has caused them difficulty in adjusting to their new surroundings. Lack of off-farm income opportunity has meant many men migrate for work in urban areas or in India. They are smallholder farmers, who practice traditional subsistence farming, with limited access to modern inputs and technologies, resulting in low yields and poor quality crops, therefore not receiving optimum prices.

The project aims to enhance the livelihoods of 250 smallholding farmers from the indigenous community of Godamdamar, Manahari VDC by involving more than 75% women. The project will increase income opportunities by the transfer of knowledge and skills on improved environmentally friendly, commercialized vegetable farming and management; adoption of technologies on low-cost micro irrigation technologies and polyhouses; and strengthen market linkages between producers and traders. The currently practiced farming of the community will be transformed into an enterprise based, commercialized form of farming which will produce a variety of vegetables. In addition to enhancing livelihoods, the project will improve current nutritional status of locals through educational campaigns where they will be encouraged to consume their own vegetables. Thus the project outcomes will add value to the environment, household capital, nutrition, empowerment and employment.

Mainly, the project will improve food security and increase the income of the target household through the following:

i. Mobilize farmers' groups to build innovation capacity on knowledge and entrepreneurship skills required for adopting climate proofing techniques and practices including micro-irrigation, low cost polyhouse and organic fertilizer for year round vegetable production
ii. Increase consumption of locally produced vegetables to improve nutritional status of the community through educational campaigns
iii. Establish cooperative and collection center to strengthen market linkages, provide profitable rates for produce and create a direct, sustainable supply of produce to end users.
iv. Empower the disadvantaged community, especially the women, economically and socially; enable them to become self-reliant, take leadership positions to protect rights and get access to services

## Objectively Verifiable Indicators to measure project outputs are:

1. By the end of first year, 250 HHs started vegetable production commercially in their land, received education on business literacy and connected to the market by increased annual income. At least 20% annual growth rate of vegetable production increased with strong evidence of backward and forward linkages benefitting farmers.
2. All farmers' groups received input support on quality seeds, plastic for nursery, urine collection buckets and weighing machine. There is increased use of irrigation, urine collection and vermin-composting.
3. By the end of the second year, all 250 households actively involved in commercial vegetable production adopting climate smart technologies and practices such as sustainable soil management, micro-irrigation, composting and use of organic fertilizer. By this time the annual income of each beneficiary HH is expected to be increased by Rs. 27391 per ropani in the open land and Rs. 27391 per Polyhouse of 6m x 20m area.
4. By the end of second year, a cooperative consisting with at least 75% women formed and registered, and Collection Centre established and Value Chain of all produced vegetables

carried out. Cooperative managed fully functional collection centre promoted and equipped with weighing scales and other necessary equipments. All produce collectively marketed through the collection centre. Collection centre serve as a resource and information centre to the farmers. The cooperative and Collection center operated in close synergy with the District Agriculture Development Office for sustainability.

The envisaged promotional pathways for the uptake of the project outputs by the intended beneficiaries are:

i. The major outputs will be the development of vegetables based enterprise implementing good agricultural practices, establishment of market linkages, and adoption of modern water resource management techniques.

ii. This project will play a key role in promoting use of organic fertilizers in local farms. The project will connect farmers' group leaders with Jagatpur-based Unique Biotech Organic Fertilizer Industry of Chitwan district which is preparing to start production in the near future. It has the capacity to produce 10 tons of organic fertilizer every day.

iii. More functional, participatory and practical (on site) skill based trainings followed by field visit and demonstration actions to develop technical capacity of the beneficiaries.

iv. Social Mobilization, organizing farmers into groups, capacity building training (onsite), coordination, high level communication and reporting, close monitoring and development and implementation of sustainable strategy are the keys that inspires and builds the leadership capabilities of beneficiaries who undertake the promotion pathways.

v. As part of the value chain analysis, a market study will be conducted to understand the market demand. Market linkages will be established with middlemen, traders and wholesalers. The collection centre and Marketing and Planning Committee will facilitate the marketing process and will serve non-target farmers as well.

vi. The lead farmers will serve as local resource persons who are more knowledgeable on innovative technologies implemented by project. Lessons emanating from project implementation will be evaluated, discussed, shared and scaled up. Lessons and case studies will be disseminated through workshops, technical booklets, brochures, posters, and broadcast through media. A video documentary will be produced. Communities in similar conditions in nearby locations can uptake lessons from the project.

vii. The project area is very close (700 meter) to the East West highway and near to Chitwan district. So the farmers from Makwanpur district, Chitwan district and farmers who are travelling to other areas on field visit mission can easily visit the project area and learn lessons. Non-farmers like government officials, researchers, and students can also visit the area, learn and document the innovation and good practices adopted by the farmers. Upon return they can replicate and upscale such good practices/technologies in their area.

viii. DADO and other stakeholders can formulate such activities in their annual plans and programs.

ix. Project Advisory Committee will be formed in the district, which will also explore opportunities for project promotion pathways.

# 1. Synopsis of Project Status

## 1.1 Targeted Outputs:

**Output 1:** Smallholder farmers' capacity strengthened for year round sustainable production of high value vegetables

**Output 2:** Adoption of climate friendly innovative agricultural technology by farmers

**Output 3:** Strong market linkages developed to provide maximum profits to smallholder farmers

**Output 4:** Mechanisms built for project sustainability, knowledge sharing and reporting

## 1.2 Activities Proposed

| S.N. | Activities | Expected accomplishment date |
|---|---|---|
| 1.1 | Preliminary Activities | |
| 1.1.1 | Consultative meetings | February, 2015 |
| 1.1.2 | Project start-up workshop | February, 2015 |
| 1.1.3 | Formation of Project Advisory Committee (PAC) | February, 2015 |
| 1.1.4 | Baseline survey | March to April, 2015 |
| 1.1.5 | Formation and strengthening of farmers group | March to May, 2015 (formation)<br>October to January, 2016<br>June to September, 2017 |
| 1.1.6 | Hoarding boards placement | February, 2015 |
| 1.2 | High Value Vegetable production | |
| 1.2.1 | Capacity development training | June 2015 to January 2016 |
| 1.2.2 | Plant protection | June 2015 to January 2016 |
| 1.2.3 | Nursery establishment and promotion | June 2015 to January 2016 |
| 1.2.4 | Vermin-composting training | October 2015 to January 2016 |
| 1.2.5 | Delivery of inputs | June 2015 to January 2016 |
| 1.2.6 | Insurance | June to September, each year |
| 1.3 | Farmer's field visit | June to September, 2016 |
| 2.1 | Micro Irrigation | |
| 2.1.1 | Demonstration of micro-irrigation technology | June to September, 2015 |
| 2.1.2 | Support farmers in drip irrigation | June to September, 2015 |
| 2.2 | Adoption of Polyhouse by farmers | |
| 2.2.1 | Demonstration of low cost polyhouses | June to September, 2015 |

| | | |
|---|---|---|
| 2.2.2 | Support on low-cost polyhouses | June to September, 2015 |
| 3.1 | Formation of a cooperative | June to September, 2016 |
| 3.2 | Value chain analysis | February to May, 2017 |
| 3.3 | Build linkage between farmers, input providers, and traders | February to May, 2017 |
| 3.4 | Establish and promote collection centre | February to May, 2016 |
| 3.5 | Formation of Planning and Marketing Committee (PMC) | February to May, 2016 |
| 3.6 | Skills training on business literacy | June to September, 2016 |
| 4.1 | Publication | October to January, each year |
| 4.2 | Periodic monitoring | October 2015 to January 2016<br>June to September, 2016<br>June to September, 2017 |
| 4.3 | Report preparation | October to January, each year |
| 4.4 | Information dissemination workshop | October 2017 to January 2018 |
| 4.5 | End-line survey | October 2017 to January 2018 |
| 4.6 | Public Hearing | October 2017 to January 2018 |
| 4.7 | Video production | February to May, 2015<br>October 2016 to January 2017<br>June to September, 2017 |

## 2. Activities Completed

- Consultative Meeting
- Meeting at District Level

Dr. Narayani Tiwari, Chairperson of PWEDO, Project Coordinator Mr. Jagannath Adhikari and Advisor Dr. Tara Pandey making consultations with DADO Officials

# PROJECT TITLE: IMPROVING THE LIVELIHOOD OF POOR FARMERS THROUGH TAKING UP AN INTEGRATED FODDER PRODUCTION AND FEEDING MANAGEMENT OFF GOAT IN OKHALDHUNGA DISTRICT

**Project No:** 1125

| | | | |
|---|---|---|---|
| ***Project Coordinator:*** | Dr. Riddhi Shrestha | | |
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| ***Collaborating organizations:*** | 1. Namuna Livestock Farm, Harkapur-2, okhaldhunga<br>2. District Livestock Service Office , Okhaldhunga | | |
| ***Start Date:*** | Feb 2015 | ***End Date:*** | Dec 2017 |
| ***Project Cost:*** | NRs 2,510,571 (NARDF contribution: NRs 1,993,417) | | |
| ***Location of Project:*** | Ward No. 4,5,7 & 8 of Katunje VDC and ward No. 2,3,4,5 and 6 of Harkapur VDC | | |

## Project Summary

The proposed project aims to benefit at least 200 poor and disadvantaged population of the proposed district through the intervention of improved livelihood of poor farmers through Taking Up an Integrated Fodder Production & Feeding Management of goats. The project attempts to manage fodder demonstration plot & develop lead farmers at village level to disseminating technology of fodder production and its utilization. It also aims to enhance the capacity of farmers for adoption of fodder production technology through field level training and by the adoption of stall feeding technology and to enhance capacity of farmers for adoption of fodder production technology through the protection of goats from external and internal parasites by improving in food and feeding managements. This implementation will produce nutritious vegetations since most of the nutritive value fodders are not provided to small livestock like goat but are provided to big livestock especially to buffalo and cows. Since the proposed VDCs are high potential for goat farming, according to District Livestock Service Office, the technical support of the organization will ensure the increment of income source to the poor family and also this intervention will be replicated to other neighborhoods VDCs due to exposure visits and information dissemination through public hearing and local FM and newspapers. The project will be implemented for 3 years from the date of agreement.

Primarily, the project envisions improving the traditional goat farming technology through the application of field-based research approach and the indication for the intervention is that by the end of the project, of the total farmers 35% that are involved in the farming technology will increase

their income by NRS. 81,000 per annum. The participating household will hold 20 goats at the household level and thereby it has been calculated that from 20 goats at least 9 goats will be sold each year; and an average cost of each goat is NRS. 9000. Hence, the total annual income of the household is NRS. 81,000 from selling goat. The fodder will be made available in additional 40 ropani of land that has remained unused/degraded at the present. The land will be used after conducting a farmers' groups consultation because the land, with adequate irrigation facility, has very good potentiality of fodder plantation. The land will be leased from the participating beneficiary households. In the lack of knowledge on how to make proper and best utilization of the land, it has gone useless at the present. The project aims to support the farmers to get their shed improve and managed well, stall feeding, proper use of mineral blocks and proper and in-time vaccination as well as control over the external and internal parasites of goat for the better health of goats is practiced.

## Background

Large number of people in the country live in absolute poverty in meager condition. A survey report of the Third Nepal Living Standards Survey (NLSS-III) released on Thursday said 25.16 percent of Nepalese are living below the poverty line (Posted on: The Kathmandu Post dated 2011-10-21). They are deprived from the resources and their livelihood condition is very poor. For transformation of the country into "Peace, Prosperous and Just Nepal" providing means of earning and livelihood is a basic requisite for which goat farming is one of the best options. Despite having large number of goat population in the country (nearly 7 million), the country is still not self-sufficient in fulfilling its demand. Large numbers of goats are annually imported from the neighboring countries. This has been resulted from the subsistence nature of farming culminated by poor productivity, higher kid and adult mortality resulting to lower rate of annual off-take. The current project thus envisaged to address both poverty alleviation issue and improve goat meat production through goat raising and gradually transforming subsistence goat farming to commercial production with available improved goat production technologies by improving in feed and fodder management.

Goats are gifted to poor and landless people aiming to serve the best income source for single women and even disadvantaged community. There has been increasing demand for the goat meat product each year. However the supply chain is very poor in Nepal. As published in the Kathamndu Post dated 3 October 2012, State-owned Nepal Food Corporation (NFC) claims that about 70,000 goats are brought from India to the Kathmandu valley to be slaughtered for the Dashain festival. The number is 20,000 more than last year. In the district also, there is growing demand and the cost of meat is increasing each year. So, the goat has good market potentiality in the proposed area.

The current level of goat production for meat purpose is generally poor grossly associated with inappropriate feeding. Some part of the year is dry and animals heavily rely on dry roughage mainly rice straw, which is nutritionally very poor during these period. The project thus aims at demonstrating year round green fodder production and fodder based goat feeding for improved meat production

## Project Purpose/Objectives

### General purpose

Improving Livelihood of Poor Farmers through an Integrated Fodder Production & Feeding Management

### Specific Purpose

1. To manage fodder demonstration plot & develop lead farmers at village level to disseminate technology of fodder production and its utilization
2. To enhance the capacity of farmers for adoption of fodder production technology through field level practical training
3. To generate income through the expansion of the healthy meat productio

### Beneficiaries

The beneficiary detail is given below as:

| VDC | No. of Groups | Dalit | | Janajati | | Others | | Grand Total Members (one from each Households) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Male | Female | Male | Female | Male | Female | Total | Female |
| Harkapur | 4 | 13 | 13 | 20 | 24 | 31 | 18 | 119 | 55 |
| Katunje | 4 | 11 | 8 | 11 | 20 | 20 | 11 | 81 | 39 |
| Total | 8 | 24 | 21 | 31 | 44 | 51 | 29 | 119 | 55 |

### Objectively Verifiable Indicators (OVIs)

In order to achieve the goals of the proposed action, it is envisioned that by the end of project period, at least one semi commercial goat production unit established in the village in semi commercial production model producing an increment of healthy breeding bucks, male goats for meat and increased breeding does (analyzed against baseline survey). In addition to it, as a tool to demonstrate the output two proposed VDCs will establish a village based fodder nursery and a model fodder based stall feeding approach will be adopted contributing to their increased income by NRS. 81,000 per annum.

With the establishment of the fodder nursery, farmers will do the plantation of the fodder plan in 40 ropanies of private land i.e., 20 ropanies in each VDCs which was left unused. The land will be managed with fodder plantation with proper irrigation facilities. Since the key issue of the traditional farming approach is that the farmers do not have proper knowledge of nutritive food supply to goats, the project addresses the problem by providing training to 120 goat farming farmers for proper use of mineral blocks and in-time vaccination for the better health of goats. The strength of the intervention can be ensured with 2 joint monitoring visits from district authorities and the core technical support group of the proposing agency.

The goats' mortality rate controlled due to the application of control on external and internal parasites by improving in food and feeding managements.

The logical output indicators are:

**Output 1: Farmers are organized and Goat population increased by using suitable technology**

- 8 farmers groups (each contains 25 members) formed and mobilized
- 1 time exposure visit in Dhading district done to lead farmers by the end of project

**Output 2: Income generating option improved**

- By end of project, two model villages with fodder based goat production developed
- 35 % of participating benefiting household earned NRS. 81,000 annually
- 200 Farmers from 2 VDCs (100 from each VDC) trained on proper fodder and feed management
- 8 Breeding Buck introduced to 8 groups of 200 farmers

**Output 3 : Fodder based technology for meat production introduced and demonstrated**

- By end of project, 40 ropanies (20 ropanies in each VDCs) of degraded land got utilized for fodder production
- A package of Goat farming developed
- Better health condition of goats practiced among 200 farmers

## Synopsis of Project Status

**Project Status Report**

| SN | Activity | Progress status | Remarks |
|---|---|---|---|
| 1.1 | Group Formation and Mobilization | From the total of planned 8 groups, only 4 groups formation activity has been accomplished. The remaining 4 groups formation will be done in next trimester. | Fifty per cent (50%) achievement made |
| 1.2 | Project Orientation | One day orientation is done to 26 district authorities of Okhaldhunga district. The oreintation program helped to receive feedback and suggestion for the better implementation of the project | Completed |
| 1.3 | Survey (Baseline) | A baseline survey is conducted regarding the management of goat fodder by receiving baseline information from 100 goat raising farmers of 2 VDCs namely; Harkapur and Katunje | Completed |
| 1.4 | Goat health Campaign | Goat Health Campaign is conducted in Hakapur VDC in coordination with DLSO | Completed |
| 1.5 | Farmers Training on the importance of protein rich crops and Fodder & Feed management | Planned for 2nd Trimester of the current year | Yet to begin |

| | | | |
|---|---|---|---|
| 1.6 | Farmers' exposure visit and experience sharing on fodder and Feed management | Planned for the 3rd Trimester of 2nd year | Yet to begin |
| 1.7 | Distribution of Breeding Buck | Planned for 3rd Trimester of the current year | Yet to begin |
| 1.8 | Linking farmers' groups with Multipurpose Cooperative & Insurance Company | Planned for 1st Trimester of 2nd year and on the 1st trimester of 3rd year | Yet to begin |
| 2.1 | Perennial Fodder Cultivation | Planted in 10 ropanies of land in Harkapur VDC | Ongoing |
| 2.2 | Seasonal Fodder Cultivation | Planned for 2nd Trimester of the current year | Yet to begin |
| 2.3 | Demonstration on enrichment of feed management technology | Planned for 3rd Trimester of the current year | Yet to begin |
| 2.4 | Equipment Support to farmers (Castration Machine and Feeding Troughs) | Planned for 2nd Trimester of the current year | Yet to begin |
| 2.5 | Micro Irrigation Support for Demonstration Plot (Soil Cement Water Harvesting Tank- 10 cu mt) | Constructed in demonstration plot | Completed |
| 3.1 | Training to farmers on improved shed management and taking proper care of goats | Planned for 2nd Trimester of the current year | Yet to begin |
| 3.2 | Development of farmers' Linkage with Market | Planned for 2nd Trimester of the 3rd year | Yet to begin |
| 3.3 | Monitoring and Evaluation | Ongoing | One time done till date |
| 3.4 | Dissemination of information through publications and supply | Planned for 1st Trimester of 2nd year | Yet to begin |
| 3.5 | Hoarding Board and Documentary preparation | 2 Hoarding boards are displayed in 2 VDCs of the project are | Completed |
| 3.6 | District level meeting | Planned for 2nd Trimester of 2nd year and on the 3rd Trimester of 3rd year | Yet to begin |
| 3.7 | Public Hearing | Planned for the 3rd Trimester of 3rd year | Yet to begin |
| 3.8 | Report Preparation and Auditing | Ongoing Activity | Regularly done/Ongoing |

## ACHIEVEMENTS / FINDINGS

- Four farmers' groups formed to implement the project activities effectively and efficiently.
- Valuable information obtained from the baseline survey which would be very useful in implementation of the project activities.
- District authorities and farmers are oriented about the project and its activities during the district and VDC level awareness workshops which created favorable and friendly environment in implementation of the project activities.
- Information regarding project has been disseminated through hoarding board
- Encouraged women, Dalits and ethnic minorities for food security and improve nutrition, health and sanitation status of the participating households particularly through goat farming
- Increment of women participants in project activities.
- Decision making power of groups as well as female members is expected to increase

# PROJECT TITLE ADOPTION OF LOW COST IMPROVED PACKAGE OF PRACTICES (IMPROVED TECHNOLOGIES) IN INCREASING COW MILK PRODUCTION AT PANCHKHAL MUNICIPALITY, KAVREPALANCHOWK DISTRICT

**Project No: 1126**

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|---|---|
| ***Project Coordinator*** | Shambhu Bahadur Pandey ,<br>Phone: 977-1-4822687; 977-9841239162 |
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| ***Telephone*** | 977-1-5541444/5537341; 977-9841239162<br>Chairperson: Dr. Binod Kumar Sharma,<br>Phone: 977-1-5541444; 977-9851074576 |
| ***Fax*** | |
| ***E-mail*** | ttri99@hotmail.com |
| ***Collaboration/Partners*** | District Livestock Service Office, Dhulikhel, Kavrepalanchowk |

## Project Summary

Despite the market demand, production is low in the dairy sector in Nepal. Although the year 2011 had the liquid milk production of about 1.68 million metric tons from about 1.02 million milking cattle cows and 1.37 million milking buffaloes, the country had still far behind the milk production as per the standard set up by the country, facing the deficit of about 1.70 million metric tons of liquid milk per year (MoAD, 2012/13). Also, the per capita availability of milk (50.7kg) is about 11.1 percentage units lower than the per capita requirement (57.0kg) of milk in Nepal (MoAD 2012/13).

Milk is an important source of daily income of the farmers living either in the rural or the peri-urban areas. Nepal has higher cost of milk production (Rs. 17/liter (Sharma, 2065)-Rs.25.59/liter (Upreti et.al.2011) compared to India (NRs 11.0/liter) and China (NRs 7.0/liter) (Sharma, 2065). The increase in the cost of milk production in Nepal as compared to India and China are mainly due to the factors such as high amount of concentrate feeding, increased use of untreated crop residues, diseases, poor management practices and imbalanced and/or inadequate feeding of nutrients during different physiological conditions of the cattle.. The feeding objective is not to minimize feed costs per liter of milk produced but rather, it is important to determine whether feed ingredients are being converted into milk at expectations (St. Pierre, 1998). All these factors mentioned above indicate the need of developing commercial scale of dairy farming at rural and peri-urban areas in Nepal. This will directly benefit the farmers who are the resource poor, marginalized and economically disadvantaged. However, these farmers are often problems with

appropriate technologies for the commercial dairy farming. Hence, the project has a purpose to increase on-farm income of the small scale dairy farmers of the project area.

In order to fulfill this purpose, the project's intended outputs are, 1. Enhancement of the capacity of farmers in increasing cost-efficient milk production, 2. Identification of the appropriate and sustainable technologies and package of practices for the cost-efficient milk production, and 3.Widely dissemination and scaling up of the project outputs. Some of the important activities which are the cost efficient technologies or the package of practices to be included in the methodology of the project to increase milk production are steaming up of pregnant cows, year round green fodder production, urea/molasses/mineral block(UMMB) feeding, silage and the utilization of dry forages and improved breeding, feeding and health management of the animals.

## Purpose of the Project

The proposed purpose aims to increase on-farm income of the small scale dairy farmers and dairy cow raisers who are the resource poor, marginalized and economically disadvantaged farmers in the selected dairy production pockets of Kavrepalanchowk district by increasing milk production with the help of improved technologies. The improved technologies to be used in this project will be cost-efficient, environment friendly and utilizing locally available feedstuffs by balancing nutrients needed for the milk production of the lactating cows at the rural household level.

Secondary objective of this project is to validate and expand the generated technologies in regional and national level. Lack of technical know-how and decrease in availability of natural resources of feeds and inadequate veterinary support are the alarming constraints of the dairy production system. Promotion of the subsistence dairy farming system to a commercial/semi commercial production system for increased income and improved livelihood of dairy farmers through their capacity building on production system improvement is in urgent need.

## The Target Groups and Beneficiaries

The primary target groups and beneficiaries of this project are the small scale dairy farmers and dairy cow raisers who are the resource poor, marginalized and economically disadvantaged farmers in the selected dairy production pockets of Kavrepalanchowk district. Some information regarding the target groups and beneficiaries of this project are highlighted in the Tables-1 and 2). For examples, there are about 42% Janajati (Newar and Tamang), 28% Dalit (Damai, Kami and Mijar) and 30% (Brahmin and Chhetri) of the total households (348) at Tinpiple, Dunganabesi (Site-1, Table-1). Similarly, there are about 17% Janajati (Newar and Tamang), 14% Dalit (Damai, Kami and Mijar) and 69% (Brahmin and Chhetri) of the total households (485) at Devdhunga, Baluwa (Site-2, Table-2). The field research and study of this project will be carried out at two important dairy pockets, 1.Tinpiple, Dhunganabesi, Ward No.5 (Project site-1), and 2.Devbhumi, Baluwa, Ward No.11 (Project site-2) of Panchkhal Municipality area of Kavrepalanchowk district. Priority will be given to the women farmers of the project sites. The secondary beneficiaries will be the other dairy farmers of project sites, adjoining wards of Panchkhal Municipality. The results or the outputs from this project will not only benefit the farmers from this area, but will also be applicable in other similar ecological conditions in the country. The most important reason is the collaborative work with technical staffs from DLSO, Kavrepalanchowk and other related agencies/institutions

(extension workers, GO/NGO/CBOs and planers) where they are the intermediate users of this project output during and after the project period. All the research works are planned to be executed in the farmers' field with the active participation of the dairy cattle raising farmers or the beneficiaries' farmers from the proposed site of the project.

## Objectively verifiable indicators for the outputs.

- The objectively verifiable indicators for the outputs have been identified in this project. After the commencement of project in about 12 months, capacity of the participating farmers will be enhanced on low cost milk production by 20%.
- By the end of the year 2015 the existing situation of milk production, management and marketing systems in relation to the resource base of the project (Panchkhal Municipality) produced.
- By the end of 2016 cost of milk production reduced by 15%.
- By the end of 2016, farmers from the project sites and in around the areas of the project will have adequate knowledge of the improved technologies or package of practices for the small scale commercial dairy farming. As its consequences, the economic and nutritional status of the dairy farmers will be enhanced.
- By the end of 2016, atleast 70 resource poor, marginalized and economically disadvantaged farmers from the project sites will be engaged in raising small scale dairy cows.
- By the end of 2016, more than 70 resource poor, marginalized and economically disadvantaged farmers from the project sites will have publications on low cost improved package of practices or improved technologies in increasing milk production.
- Technologies such as steaming up of cattle, year round green fodder production, urea/molasses/mineral block (UMMB) feeding, silage and the utilization of dry forages including crop residues and by-products, will be adopted with improved breeding, feeding and health management of the animals by the end of 2016.
- By the end of the project period, a booklet containing all the tested technologies or the outputs regarding dairy farming will be produced and distributed to all the concerned stakeholders of the project.
- By the end of 2017, low cost milk production technologies disseminated and scaled up.

**The proposed promotion pathways for the uptake, or up scaling, of the project outputs by the intended beneficiaries.**

The proposed promotion pathways for the uptake, or up scaling, of the project outputs by the intended beneficiaries in this project will be as listed below:

1. The primary beneficiaries or the small scale dairy farmers who are resource poor and marginalized will learn the technologies or the package of practices through their active participation in the project activities right from the commencement to the completion of the project.
2. Transfer of technologies or the outputs of the project in around the project sites will be possible through the informal sharing, exchange of ideas and visiting the project sites.

3. DLSO staffs and other related line agencies, NGOs and the other stakeholders will be the secondary beneficiaries to promote pathways for the uptake, or up scaling outputs due to their involvement during the implementation and monitoring and evaluation process of the project.
4. After the completion of the project, there will be the publications containing generated technologies, new knowledge and package of practices. These publications will then be distributed to all the participating farmers, related other groups of farmers, agencies and organizations of the district Kavrepalanchowk.
5. Radio and TV will also be used to disseminate the outputs and activities of the project through the national and district level broadcasting systems.
6. Public Hearings of the Project Outputs: During the final workshop after the completion of the project, arrangements will be made for the public hearings of the outputs or the results of the project. This will help uptake, or up scaling, of the project outputs by the interested farmers from other similar areas of Nepal.

## The project's intended outputs.

1. **Capacity of farmers enhanced in increasing cost-efficient milk production**

   Most of the farmers are rearing dairy animals in a traditional feeding and management system. They have little or no technical knowledge on nutritionally balanced feeding, technically sound health management and hygienic milk production. This project will focus mostly on the above mentioned activities (feeding of nutritionally balanced feeds, technically sound health management and hygienic milk production) through training and technical support.

2. **Appropriate and sustainable technologies and package of practices for the cost-efficient milk production identified**

   Improved technologies such as steaming up of pregnant animals 60 days prior parturition, UMMB supplementation, silage and dry forage utilization during feed scarce periods and feeding and supplementation of green fodder year round will be tested and identified. The identified technologies will increase milk production and will be cost-efficient (Utilizing the locally available feed ingredients by balancing and the utilizing the nutrients), sustainable and environment friendly.

3. **Project outputs(Improved technologies) widely disseminated and scaled up**

   Outputs of the projects will be disseminated by using local, district and regional level FMs, newspapers, paper presentation, leaflets and booklets.

**The project's activities with budget and expected accomplishment(accomplit) date:**

| Proposed Activities | Year 1 (2015) | Year 2 (2016) | Expected Accomplit date |
|---|---|---|---|
| **Output 1** | | | |
| 1.1 Household survey | 41300 | | Mar.,015 |
| 1.2 Preparation of hoarding board | 5000 | | Mar.,015 |

| | | | |
|---|---|---|---|
| 1.3 Project inception workshop | 93700 | | Mar.,015 |
| 1.4 Publication of project inception report | 5400 | | Apr.,015 |
| 1.5 Training of farmers | 70400 | | May,015 |
| 1.6 Identify existing marketing channel | 14700 | | Mar.,015 |
| 1.7 Publication of trimester report / technology | 10200 | 10200 | July,015-July,016 |
| **Output 2** | | | |
| 2.1 Farmers group formation and design of on farm feeding trials | 16100 | | Mar.,015 |
| 2.2 Publication of technical and scientific materials | 9800 | 9800 | July,015-July,016 |
| 2.3.1 Silage making | 33900 | 33900 | Oct.-Nov.,015<br>Oct.-Nov.016 |
| 2.3.2 Utilization of dry forages | 33700 | 33700 | Dec.015-Sep.,016 |
| 2.3.3 Steaming up of animals | 28300 | 28300 | Jan.-Feb.,016 |
| 2.3.4 Year round fodder production | 55300 | 55300 | Apr.,015-Oct.,016 |
| 2.3.5 Urea molasses mineral block (UMMB) feeding | 173000 | 173000 | Nov.,015-Feb.016 |
| 2.3.6 Schedule health management | 32300 | 43300 | Apr.,015-Jan.,017 |
| 2.3.7 Schedule breeding management | 29800 | 41800 | Apr.,015-Jan.,017 |
| 2.3.8 Project follow up workshop | | 83000 | May,016 |
| 2.3.9 Follow up and monitoring of project activities | 41000 | 41000 | Aug.,015-<br>Apr.,016 |
| 2.3.10 Calculation of cost benefit analysis | | 7000 | Dec.,016 |
| **Output 3** | | | |
| 3.1 Farmers exchange visit | | 59800 | Apr.,016 |
| 3.2 Video preparation of project activities | 5000 | 10000 | Jan.,016-Feb.017 |
| 3.3 Final technical paper writing and publication | | 119000 | Dec.,016-Feb.017 |
| 3.4 Final project workshop | | 91000 | Feb.,017 |
| Activity Total Cost | 698900 | 840100 | - |
| Overhead 12% | 83868 | 100812 | - |
| Contingency 3% | 20967 | 25203 | - |
| Gross Total | 803735 | 966115 | - |
| VAT 13% | 104486 | 125595 | - |
| **Grand Total** | **908221** | **1091710** | - |

# आयोजना शिर्षक : दीगो भूव्यवस्थापनमा आधारीत कृषि प्रणाली प्रवर्द्धन आयोजना अर्घाखांची

**Project No:** 1127/2015/16

| | | | |
|---|---|---|---|
| ***Project Coordinator:*** | बीरेन्द्र हमाल | | |
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| ***Collaborating organisations:*** | जिल्ला कृषि विकास कार्यालय अर्घाखांची<br>युवा किसान उत्थान जागरण मञ्च, अर्घाखाँची | | |
| ***Start Date:*** | फाल्गुन २०७१ | ***End Date:*** | २०७४ आश्विन |
| ***Project Cost:*** | १९९९६७०.६०/- | | |
| ***Location of Project:*** | अर्घाखांची जिल्लाको असुरकोट, नुवाकोट र खिल्जी गाउँ विकास समिति | | |

## Background

नेपालको कुल जनसंख्याको ६५.६% कृषिमा आधारित हुनाले आर्थीक विकाशको मुख्य श्रोत,कृषिभूमिको दीगो व्यवस्थापन गरिनु पर्छ। ३५ वर्ष अघिसम्म धान चामल निर्यात गर्ने देश अहिले खाधान्न अभावग्रस्तदेशमा झरेको छ। अर्घाखांची जिल्लामामात्र प्रतिवर्ष खाद्यान्न ३४८८३ मे.टन् र तरकारी तथा फलफूल तर्फ २६९१४ मे.टन् न्यून हुन्छ (कृविका अर्घाखांची)।

नेपालको कृषि भूमिवाट प्रतिवर्ष प्रतिहेक्टर ५ देखि २०० मे. टन मलिलो माटो बगेर जान्छ[1]। नेपालमा क्षतिग्रस्त कृषि भूमि भएका प्रमुख जिल्ला मध्ये अर्घाखांची एक हो। महाभारत पर्वतको सवैभन्दा होचो र चुरे क्षेत्र समेटीएको अर्घाखांचीको जमिनमा ढुंगा कम र माटो वढि छ। भिरालो पाखोमा वढि खनजोत गर्ने प्रकारको वाली लगाउने खेती प्रणालीले गर्दा माटोको क्षयीकरण दिन प्रतिदिन बढ्दो छ।

सुधारीएको प्राङ्गारीक मलको उपयोगबाट कृषि उत्पादन वृद्धि एवं माटोको गुणस्तर सुधार गर्न सकिने कुरा पनि सवै किसानसम्म पुगेको देखिन्न। माटोमा चिस्यान कायम रहने क्षमता, प्राङ्गारीक पदार्थ, विरुवाकोलागि प्रमुख तथा सुक्ष्म खाद्यतत्त्वको आवश्यकता, कोशेवालीको उपयोगद्वारा कृषि भूमिको गुणस्तर वृद्धि र क्षयीकरण नियन्त्रण गर्न सकिने कुरा पनि किसानहरुले बुझेका छैनन्।

[1] National Action Program on Land Degradation and Desertification: Website Publication of MO Environment Science and Technology- Nepal (2009)

NARDF को सहयोगमा यस अघि संचालित "क्षतिग्रस्त कृषि भूमिको व्यवस्थापनद्वारा उत्पादकत्व र उत्पादन वृद्धि आयोजना"का सफलतावाट सो आयोजना वाहिर पनि प्रशस्त प्रभाव पारेको थियो। उनै आयोजना क्षेत्र वाहिरका कृषक समूहहरुले आवेदक संस्था र साझेदार संस्थामा पटक पटक कृषि भूमिको माटो दीगो रुपमा उपयेाग गर्न सकिने ज्ञान, सिप धारणा विकास गराउन सहयोगकोलागि माग गर्दै आई रहेका थिए।

## Project Summary

भिरालो जमिनमा वढि खनजोत गर्ने पर्ने बाली प्रणाली, गुणस्तरहीन प्राङ्गारीक मल वा अन्धाधुन्ध रसायनिक मलको प्रयोग वाट नेपालको कृषिभूमिको क्षयीकरण भईरहेको छ । नेपालमा कृषि भूमिमा अत्याधिक भूक्षय हुने १२ जिल्ला मध्ये अर्घखाची पनि एक हो।

उत्पादनमा अनुकुल प्रभाव पार्दै कृषि भूमिको संरक्षण र गुणस्तरमा सुधार गर्ने प्रस्तावित आयोजनाको उद्देश्य हो। सहभागितात्मक रुपमा "गर्दै र सिक्दै जाने" प्रक्रियाको तालिम, कृषकहरुको अगुवाईमा कृषक पाठशाला, जिवित आली निर्माण (contour line hedgerow), "भिरालो कृषि भूमि प्रविधिको खेती प्रणाली", प्राङ्गारीक मलको गुणस्तरमा सुधार जस्ता तरिका (Methods) अवलम्वन गरी माटोको दीगो व्यवस्थापन हुने गरि खेती गर्ने परिपाटी स्थापित गरिनेछ। यसवाट कृषि क्षेत्रको उत्पादन र उत्पदकत्वमा वृद्धि हुनेछ।

## Project Purpose/Objectives

यस आयोजनाको मूख्य उद्देश्य "कृषि भूमिको क्षयीकरण नियन्त्रण र माटोको गुणस्तरमा दीगो रुपमा उपयोगी हुने गरि सुधार" गर्ने रहेको छ। त्यसको लागि भिराला पाटाहरुलाई "भिरालो कृषि भूमि प्रविधि" अनुसारको जिवित आली (Hedgerow) निर्माणवाट भुक्षय नियन्त्रण गरी समतल गह्रामा परिणत गर्नेछ।

किसानहरु आफ्नो भई रहेको बाली प्रणालीमा एकैचोटी नया प्रविधि अपनाउन हतपति तयार हुदैनन्। तसर्थ उनीहरुले गरि रहेको अन्नबालीमा कोशेबाली समायोजन, बाली सघनता वृद्धि गर्न बारीमा ३ खेती प्रणाली र उच्च मूल्यका प्राङ्गारीक कृषि जन्य उत्पादन तर्फ किसानलाई अभ्यस्त गराई उनीहरुले अहिले लिई रहेको उत्पादन भन्दा वढि उत्पादन हुने अवस्था सृजना गर्नु पनि आयोजनाको उद्देश्य हो।

नेपाल जस्तो भिराला पाखाहरुमा खेती गर्ने परिपाटी भएको देशमा दीगो रुपमा माटोको व्यवस्थापन गर्दै खेती गर्ने र गर्न सिकाउन सक्ने प्राविधिकहरु जहिले सुकै समुदायमा उपलव्ध हुन सक्दैनन्। तसर्थ दीगो भूव्यवस्थापन प्रणालीमा आधारीत खेती प्रणालीमा अन्य किसानहरुलाई सिकाउन सक्ने विशेष दक्षता भएका किसानहरु समुदाय स्तरमा विकास गराई उनीहरु मार्फत आयोजना क्षेत्र वाहिरका किसानहरुमा पनि दीगो भूव्यवस्थापन विधि प्रविधि अभ्यास गर्ने परिपाटी स्थापित गर्ने पनि आयोजनाको उद्देश्य रहेको छ।

## Beneficiaries

आयोजनावाट २२५ परिवार प्रत्यक्ष रुपमा लाभान्वीत हुने छन्। उनिहरुले जिवित आली निर्माण गरि गह्रा सुधार, भिरालो कृषि भूमि प्रविधिको बाली प्रणाली सम्वन्धि आवश्यक ज्ञान, सिप, धारणा विकास गरि उत्पादन बढाएर लाभान्वित हुनेछन्। जिल्ला कृषि विकास कार्यलयमा पहिले नै दर्ता भएका महिलाहरुमात्र समावेश भएका कृषक समुहहरु लाभान्वित हुने छन्।

आयोजनामा प्रत्यक्ष संलग्न हुने समुदायको विवरण निम्नानुसार रहेको छ।

| क्र.स. | समुहको नाम | गा.वि.स | जम्मा | दलित | जनजाति | अन्य |
|---|---|---|---|---|---|---|
| १ | मखमली कृषक समुह | नुवाकोट ८ | १५ | ० | ७ | ८ |
| २ | ताराखसे कृषक समुह | नुवाकोट ३ | १५ | ० | १ | १४ |
| ३ | उज्वल कृषक समुह | नुवाकोट ४ | १५ | ० | ० | १५ |
| ४ | नवविकास कृषक समुह | नुवाकोट ७ | १५ | ८ | ५ | २ |
| ५ | लालिगुराँस कृषक समुह | नुवाकोट ३ | १५ | ५ | ५ | ५ |
| ६ | फुलवारी कृषक समुह | असुरकोट ४ | १५ | ० | १५ | ० |
| ७ | लालिगुराँस कृषक समुह | असुरकोट ३ | १५ | १ | २ | १२ |
| ८ | अर्घाखाँची कृषक समुह | असुरकोट २ | १५ | १ | ८ | ७ |
| ९ | मनकामना कृषक समुह | असुरकोट ६ | १५ | ० | ९ | ६ |
| १० | नमुना कृषक समुह | असुरकोट ७ | १५ | ० | १३ | २ |
| ११ | लालिगुराँस कृषक समुह | खिल्जी ७ | १५ | १५ | ० | ० |
| १२ | हरियाली कृषक समुह | खिल्जी १ | १५ | २ | ६ | ७ |
| १३ | भगवती कृषक समुह | खिल्जी ४ | १५ | ० | १२ | ३ |
| १४ | चाँदनी कृषक समुह | खिल्जी ६ | १५ | ३ | १२ | ० |
| १५ | रामकोट कृषक समुह | खिल्जी २ | १५ | ३ | ६ | ३ |
| **जम्मा** | | | **२२५** | **३८** | **१०१** | **८४** |

आयोजनामा प्रत्यक्ष रुपमा संलग्न किसानहरुलाई दिईने तालिमवाट प्राप्त ज्ञान सिप अनुसार खेती गर्ने किसानहरुको अभ्यास देखेर वा उनीहरुसंग सोधखोज तथा अनुसरण गरि आयोजना क्षेत्र वरपरका अन्य १०० किसान परिवार पनि लाभान्वित हुन सक्नेछन्। आयोजना क्षेत्र भन्दा टाढाका किसानहरु पनि आयोजना क्षेत्रका आफ्ना आफन्त मार्फत वा संचार माध्यमवाट दीगो भूव्यवस्थापन वारेमा जानकारी लिई सोही अनुसार अनुकरण गरि लाभान्वित हुन सक्ने छन्।

आयोजना क्षेत्रवाट भूक्षय भई वग्ने भलवाट हुने नोक्सानी वेहोरी रहेका आयोजना क्षेत्र भन्दा तल्लो क्षेत्रका किसानहरु, ग्रामिण सडकका उपभोक्ताहरु पनि आयोजनाको प्रभाववाट भल नियन्त्रीत भई भलवाट हुने हानी नोक्सानी कम भई लाभान्वित हुन सक्नेछन्। आयोजनामा काम गर्ने कर्मचारी साझेदार सस्थाका कर्मचारी पनि विभिन्न सिकाई किसानका अनुभुती भोगाई थाहा पाई आफ्नो दक्षता अभिवृद्धि गर्ने अवसर प्राप्त गर्नेछन्।

## Targeted Out puts and Objectively Verifiable Indicators (OVIs)

**Output 1 : भिराला पाटाहरुवाट भई रहेको माटोको क्षयीकरण नियन्त्रण र माटोको गुणस्तरमा सुधार भएको हुनेछ।**

- आयोजनाको अन्तसम्म आयोजना क्षेत्रका २०० किसानहरुले २/२ रोपनी क्षेत्रफलका भिराला पाटाको जिवित आलीको माध्यमवाट भुक्षय नियन्त्रण गरि समतल गह्रामा परिणत भई रहेका हुनेछन्।

- आयोजना क्षेत्रमा २०० किसान परिवारले आफ्नो भिराला पाटाहरुमा "भिरालो कृषि भूमि प्रविधि नं. १" अनुसारको खेती गरि औषतमा प्रतिवर्ष प्रति परिवार रु २० हजार थप आम्दानी गरी रहेका हुनेछन् ।

**Output 2 : सफल र अनुकरणीय विधि प्रक्रिया प्रचार प्रसार भएको हुने छ .**

- आयोजना क्षेत्र वाहिरका कम्तिमा १०० किसानहरुले बहुउपयोगी विरुवाको उपयोग गर्दै जिवित आली निर्माणको अभ्यास थालेका हुनेछन् ।
- आयोजना क्षेत्र वाहिरका कम्तिमा १०० किसानहरुले आफ्नो भिराला पाटाहरुमा "भिरालो कृषि भूमि प्रविधि" अनुसारको खेती गर्ने अभ्यास गरी रहेका हुनेछन् ।

## Up-scaling Pathways

गरीवको जीवनस्तर उठाउन उनीहरुलाई नियमित रुपमा आम्दानी भई रहने अवस्था हूनु पर्छ । अर्घाखांची जिल्लामा आम्दानीको लागि जमिनमा आधारीत हुनै पर्छ । गरीवहरुको जमिन रुखो पाखो वढिहुन्छ त्यही जमिनको अवस्था सुधारेर उत्पादन वृद्धि गर्न सकिन्छ । रुखोपाखो जमिनमा कृषि उत्पादन गर्दा लागत वढि र उत्पादन कम हुन्छ । प्रस्तावित आयोजनाले गरीव किसानहरुको कृषि भुमिको मलिलोमाटो बगेर जाने प्रकृयामा नियन्त्रण, पोषिलो घांसको आपूर्तिमा वृद्धि र वाली सघनता र वाली चक्रमा सुधार, गरि उत्पादन र उत्पादकत्व वृद्धि गर्न सहयोग गर्ने छ । जसवाट उनीहरुको भई रहेको जमिनवाटै कम उत्पादन लागतमा कृषि तथा पशुजन्य उत्पादन वृद्धि गर्न सक्नेछन् । यसवाट गरीवि न्यूनीकरणमा प्रत्यक्ष सहयोग पुग्ने छ ।

आयोजना संग प्रत्यक्ष रुपमा संलग्न २०० किसानले आंफूले हाल गरि आएको निख्लो अन्नबाली (मकै, कोदो, गहुं, तोरी, फापर) को ठाउंमा अन्नवाली भित्र घुसुवा बालीको रुपमा मकै भित्र बोडि, सिमि, मस्याम र गहुं तोरी तथा फापर भित्र मुसुरो तथा चना खेती गरी औषतमा प्रति परिवार वार्षिक रु १० हजार वरावरको कोशेवालीको उत्पादन गर्न सक्ने छन् । यसरी यस आयोजनाको सहयोगवाट आयोजना क्षेत्रका २०० जना किसानहरुको आफ्नै उत्पादनले खान पुग्ने अवधिमा कम्तिमा २ महिना थप भई गरीवि न्यूनीकरणमा प्रत्यक्ष सहयोग पुग्ने छ ।

यसरी गरीव किसानहरुको कृषि भूमिको अवस्थामा दीगो रुपमा सुधार भई कम उत्पादन लागतमा बढि मुल्य हुने वस्तुको उत्पादनद्वारा थप आम्दानी गर्ने अवस्था सृजना भई यस आयोजनावाट दीगो रुपमा गरिवी न्यूनीकरणमा प्रत्यक्ष योगदान पुग्ने छ ।

## Synopsis of Project Status

## Activities Proposed

| Activities | | Progress status |
|---|---|---|
| १.१ | कार्यक्रम वारे जानकारी | |
| १.१.१ | जिल्ला स्तरिय गोष्ठि | २०७१ चैत्रमा सम्पन्न भई सकेको |
| १.१.२ | गा.वि.स.स्तरको सरोकारवालाहरुको कार्यशाला गोष्ठि र समूह पहिचान | २०७१ चैत्रमा सम्पन्न भई सकेको |
| १.२ | अवस्था पहिचान किसान छनौट | २०७१ चैत्र र वैशाखमा सम्पन्न भई सकेको |
| १.३ | गह्रा सुधार | |

| | | |
|---|---|---|
| १.३.१ | जिवित आली मार्फत गह्रा सुधार | २०७० चैत्रमा सम्पन्न भई सकेको |
| १.३.२ | नर्सरी व्यवस्थापन | २०७१ चैत्रवाट निरन्तर रुपमा सन्चालन भई सकेको |
| १.४ | भिरालो कृषि भूमि प्रविधिको खेती अभियान | प्रथम वर्षको दोश्रो चौमासिक वाट सन्चालन गर्ने तयारी भएको |
| २.१ | अनुगमन तथा चौमासिक प्रगति समिक्षा | २०७२ जेष्ठमा सम्पन्न भई सकेको |
| २.२ | वार्षिक प्रगति समिक्षा तथा कृषक अनुभव आदान प्रदान | प्रथम वर्षको दोश्रो र तेश्रो चौमासिकमा सन्चालन गर्ने तयारी |
| २.३ | सुचना, शिक्षण तथा संचार सामाग्रीको उत्पादन तथा वितरण | |
| २.३.१ | ब्रोसर प्रकाशन र होडिङ्ग वोर्ड निर्माण | प्रथम वर्षको दोश्रो चौमासिकमा प्रकासन गर्ने तयारी भएको |
| २.३.२ | भिडियो डकुमेन्ट्री निर्माण | प्रथम वर्षको दोश्रो चौमासिकवाट निरन्तर शुरुवात गर्ने तयारी |
| २.४ | अनुगमन तथा मुल्यांकन तथा प्रतिवेदन प्रस्तुती | |
| २.४.१ | नियमित अनुगमन, प्राविधिक सहयोग र चौमासिक प्रगति प्रतिवेदन | २०७१ चैत्रवाट माघ वाट परियोजना क्षेत्रमा भएका गतिविधिको नियमित रुपमा अनुगमन गर्ने कार्य भई रहेको |
| २.४.२ | संयुक्त अनुगमन | प्रथम वर्षको तेश्रो चौमासिकमा सन्चालन गर्ने तयारी गरेको |
| २.४.३ | अन्तिम मुल्यांकन तथा मुल्यांकन प्रतिवेदन प्रकासन | तेश्रो वर्षको अन्तिम चौमासिकमा सन्चालन गर्ने |

## Achievements (also include Findings in case of Research Projects)

१. आयोजना क्षेत्रमा आयोजना सन्चालन गर्नका लागि १५ वटा समुहहरु छनौट गरि तथ्यांक संकलन गर्ने कार्य सम्पन्न भई सकेको छ ।

२. आयोजनामा प्रत्यक्षरुपमा संलग्न हुने २०० किसानहरुले २/२ रोपनी क्षेत्रफलका भिराला पाटाको जिवित आलीको माध्यमवाट भुक्षय नियन्त्रण गरि समतल गह्रामा परिणत गर्न तयार भई सकेका छन् ।

३. आयोजना क्षेत्रका ७५ जना कृषकहरुले "भिरालो कृषि भूमि प्रविधि नं. १" अनुसारको खेती गर्न तयारी अवस्था रहेका छन् ।

४. आयोजना क्षेत्रका असुरकोट, नुवाकोट तथा खिल्जी गा.वि.स.मा १/१ ..... जातका घासका नर्सरी स्थापना भइ सकेको छ ।

५. आयोजना क्षेत्रका किसानहरुले हाल संरक्षणमा ध्यान नदिएको गोठेमललाई घाम पानी वाट सुरक्षा र त्यसै खेर फाली रहेको पशुमुत्रको संकलन तथा सदुपयोग गर्न उत्प्रेरित गरिएको ।

६. कृषि विकास कार्यालय, स्थानिय साझेदार संस्था र अन्य सरोकारवालाहरुसंग समन्वय गरी कार्यक्रम संचालन गर्ने गरिएको छ ।

# PROJECT TITLE: UPLIFTING THE LIVELIHOOD IMPROVEMENT OF FARMERS OF TANGARAHA VDC OF RAUTAHAT DISTRICT OF NEPAL THROUGH COMMERCIAL FISH FARMING

| | | | |
|---|---|---|---|
| ***Project No:*** | 1128 | | |
| ***Project Coordinator:*** | Kalyan K.C. | | |
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| ***Telephone:*** | 9845403819, 9845022380 | | |
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| ***Email:*** | nhdc2005@yahoo.co.in | | |
| ***Collaborating organisations:*** | DADO, Rautahat<br>CSD Center, Rautahat | | |
| ***Start Date:*** | March, 2015 | ***End Date:*** | February 2017 |
| ***Project Cost:*** | NRs 2294891 (NARDF contribution: 1998891.00) | | |
| ***Location of Project:*** | Ward no. 1, 3, 7, 8 & 9 of Tengaraha VDC of Rautahat District | | |

## Project Summary

### Background

Nepal has been doing carp fish farming since last four decades. The commonly culture carp fish species are Silver, Bighead, Grass, Rohu, Naini and Common carp which were introduced at different time from different country. In the past huge efforts were made for the enhancement of pond productivity by providing technical support and services, as a result the national fish production had substantially increased from 1150 tons to 56000 tons from 1979 to 2013 (Agriculture Diary, 2070). Out of this 90 % fish production comes from terai region where warm climate exist throughout the year. Moreover, there are more than 10000 ha village ponds (old and new) which are highly potential for carp fish production.

The carp polyculture in ponds of Rautahat districts is a common aquaculture practice and the most important means of animal protein production for local people.Currently, there are 582 fish ponds in the district covering 495 ha water surface area. The number of pond fish operators has reported 2223 and produces 1857 Mt food fish annually having productivity of 3.75 Mt/ha (DADO, Rautahat, 2069/070) The role of small-scale aquaculture in household economy and food security have been increasingly appreciated in recent years in the district. Though the aquaculture production rate has been increased in recent time in the district, but still not satisfactory in comparison to other districts like Bara (6Mt/ha) and Chitwan (5Mt/ha). The project proposed site i.e. Tengaraha VDC where women and other socio-economically deprived group of people are operating 40 ha water surface area and produces 120 Mt fish annually. This level of productivity is far below than carrying capacity of these ponds. There are some constraints and problems (low level input application with

small size fingerlings and poor management practices) in the existing culture system which needs to be addressed properly to increase the pond productivity.

In this context, this project has designed with the purpose to increase the pond productivity by introduction of intensive fish culture practices with the active participation of beneficiaries and collaborators.

## Project Purpose/Objectives

Increase income and employment opportunity in rural areas through large scale carp fish production is the main purpose of this project. The project aims to help/support technically and financially the rural farmers with special emphasis on women empowerment and mainstreaming the socio-economically deprived people to raise their household economy by increasing production as well as productivity of their ponds and scaled-up improved technologies for wider scaled of adoption.

## Beneficiaries

The program is targeted to the poor marginalized families including women of the proposed location. Socio-economically deprived groups within the community will be encouraged to participate actively in the project activities. The direct beneficiaries of the project will be fish farmers, covering 100 HHs are expected to be involved in activities of fish culture like pond cleaning, feeding to fish, marketing and cooking. Similarly, 30 per cent socio-economically deprived caste and ethnicity will benefit from the action of the project. Other associated people like supplier of the goods and services as well as the fish hatchery owners, nursery keepers and fish marketers/traders also will be benefitted from the action of the project.

## Objectively Verifiable Indicators (OVIs)

The project outputs will be verify by the help of the following indicators;

1.1 At least 100 farm families adopted improved package of fish production

2.1 The existing pond productivity (3Mt/ha) increased to 6 Mt/ by the end of project.

2.2 At least 3 markets identified for marketing of fresh and value added fish product by the end of project.

2.3 Proven technology will be published through video documentary, article and booklets.

### Up-scaling Pathways

During project implementation, the result and method demonstration of the implemented activities, group meeting and discussion among the stakeholders, training to farmers and visits in fish pocket area are the uptake pathways of the project output. Furthermore, publications and distribution of booklets, video documentary related to production and marketing of fish and fish products will also be undertaken. The published materials will be widely circulated across the needy areas of the country having potential for such commercial fish farming and value addition. Efforts will also be made to pass these technologies through television, radio, FM stations, local and national daily

newspapers, agricultural newsletters and bulletin for the benefits of large number of farmers, domestic and export traders located both in urban centre and other parts of the country.

## Synopsis of Project Status

**Targeted Outputs:**

- Intensive fish production technologies verified and documented
- Production and marketing of fish increased
- Intensive fish pro technologies scaled-up

## Project Status Reports:

| Activities | Progress status | Remarks |
|---|---|---|
| 1.1 Inception meeting | Completed | |
| 1.2 Group formation and mobilization | Completed | |
| 1.3 Baseline survey | Completed | |
| 1.4 Training to farmers | Completed | |
| 1.5 Field demonstration for hatchlings nursing | On going | |
| 1.6 Field demonstration for fingerlings production | On going | |
| 1.7 Field demonstration for intensive fish production | Second trimester of first year | |
| 2.1 Equipment support for farmers | Second trimester of first year | |
| 2.2 Exposure visit to commercial fish farming area | Second trimester of first year | |
| 2.3 Follow-up training | Second trimester of Second Year | |
| 2.4 Interaction workshop with market stakeholders in the value chain network | Second trimester of first & second year | |
| 3.1 Report preparation | On going | |
| 3.2 Technical publication | First trimester of second year | |
| 3.3 Internal monitoring | On going | |
| 3.4 Joint monitoring | Third trimester of first & second year | |
| 3.5 Hoarding board display | Completed | |
| 3.6 Video documentary | On going | |
| 3.7 District level output sharing workshop | Third trimester of second year | |
| 3.8 Public hearing | Third trimester of second year | |
| 3.9 Post project evaluation survey | Third trimester of second year | |

## Achievements:

- Farmers are organized in commercial fish farming groups
- Farmers have gained the skill and knowledge for commercial fish farming technology.

| | |
|---|---|
|  |  |
| Hoarding board | Training on Commercial fish farming |

# आयोजना शिर्षक: पहाडी पोषणयुक्त घाँसे वाली उत्पादन, बिक्रि बितरण तथा मासुको लागि उन्नत बाखापालन, विकास र प्रबर्द्धन आयोजना

**Project No. :** 1129

| | |
|---|---|
| ***Project Coordinator*** | शिव प्रकाश आचार्य |
| ***Address*** | चन्द्रागिरी न.पा.वडा नं. २०, कालिकानगर, नैया नैकाप, काठमाण्डौ |
| ***Telephone*** | ९८४१२६७५२९/९८५१०८९०२६ |
| ***Email*** | Acharya.shiba@yahoo.com |
| ***Collaboration/Partners*** | जिल्ला पशु सेवा कार्यालय, दोलखा<br>जिल्ला कृषि विकास कार्यालय, दोलखा<br>जिल्ला भूसंरक्षण कार्यालय, दोलखा<br>जिल्ला वन कार्यालय, दोलखा<br>महिला तथा वाल वालिका कार्यालय, दोलखा |
| ***Duration of Project*** | ३ वर्ष ( २०७१ चैत्र १ गेते देखि २०७४ फल्गुण मसान्त सम्म) |
| ***Project Cost*** | रु.३२,८३,८३७०० (नार्डेफको सहयोग) रु २९९७९४७०० |
| ***Location of Project*** | नाम्दु, भीरकोट, गैरीमुदी, मिर्गे गाविसहरु र भिमेश्वर नगरपालिका वडा नं. ६, दोलखा |

## Project Summary:


बाखापालन व्यवसायमा गरेको लगानीबाट कृषकहरुले आशातित प्रतिफल प्राप्त गर्न सकेका छैनन । यसको प्रमुख कारण कमजोर पशु आहारा व्यवस्थापन रहेको छ । व्यवसाय प्रवर्द्धनको निमित्त सरकारी तथा अर्ध सरकारी निकायको तर्फबाट नश्ल सुधारका कार्यक्रम, खोर सुधार, पशुआहारा व्यवस्थापन तथा घांस खेती विस्तारका कार्यक्रम संचालन गर्नु आजको आवश्यकता रहेको छ । सोही समस्यालाई मध्यनजर गरी व्यवसायिक घाँस खेतीको विस्तार तथा वाखा श्रोत केन्द्रको विकास गरी मासुजन्य पशु उत्पादनमा प्रवर्द्धन गर्ने उदेश्यले यो परियोजना तयार गरिएको हो ।

परियोजनाले आफ्नो कार्यक्षेत्रका क्षेत्रका ५ समूहका जम्मा १०० किसान परिवारले बाखापालन तथा मासु व्यवसाय (खोर सुधार, उन्नत बाखापालन र मासुको गुणस्तर, पशु स्वास्थ्य उपचार र रोग नियन्त्रण, पशु आहारा, उन्नत जातका घाँसहरुको खेती, घांस संरक्षण र अभिलेख व्यवस्थापन) सम्बन्धी आधारभुत प्रविधि, अनुशिक्षण तथा तालिम प्राप्त गर्ने छन् । संस्थाको प्रत्यक्ष सहभागगितामा एक नमूना बाखा फार्मको विकास हुनेछ । बाखाको वजार व्यवस्थापनका लागि नाम्दु गाविस वडा नं. ६ छापमा सूचना तथा संकलन केन्द्रको स्थापना हुनेछ । उन्नत जातका पोषणयुक्त घाँस २०० रोपनीमा विस्तार भएको हुनुको साथै उन्नत घाँसको श्रोत केन्द्रको ५ वटा नर्सरीको स्थापना हुनेछ । खरी बाखामा बोयर वा अन्य उन्नत जातको बोका क्रस गराई वर्णशंकर जातको पाठापाठी उत्पादन गरिनेछ । आयोजनको अन्त्य सम्ममा ३०० स्थानिय बाखामा नश्ल सुधार भएको हुनेछ ।

कृषकहरुको क्षमता अभिवृध्दिका लागि आयाजनाले आयोजना क्षेत्रका ५ समुहका १०० कृषक सदस्यहरुलाई वाख विकास फार्म वन्दिपुरमा भ्रमण सहितको तीन दिनको वाखा पालन तालिमको कार्यक्रम संचलन गर्ने छ ।

आयोजनाको दोश्रो वर्षमा नाम्दु गाविसमा १ सुचना केन्द्र सहितको वाखा संकलन केन्द्रको स्थापना भई अन्तिम वर्ष सम्ममा कम्तीम ३०० खसि वोकाको खरिद विक्री भएको हुने अपेक्षित लक्ष्य राखिएको छ। पशु आहार विकासकालगि प्रथम वर्षकोमा ५ वटा घांसको नर्सरी स्थापना भएको हुने र पहिलो वर्षमा ५० रोपनी, दोश्रो वर्षमा ५० रोपनी र तेश्रो वर्षमा १०० रोपनी गरि जम्मा २०० रोपनी क्षेत्रफलमा सार्वजनिक तथा निजी जग्गामा उन्नत घांसको विकास तथा विस्तार वृध्दि गरिने छ। त्यस्तैगरि आयोजनाको प्रथम वर्षको अन्त्य सम्म एउटा नमुना वाखाफार्मको स्थापना हुने छ। आयोजना संचालन तथा प्रतिफलको प्रचार प्रसारको लागि प्रारम्भिक गोष्ठी, कार्यक्रम सम्वन्धी होर्डिंगवोर्ड, सार्वजनीक सुनुवाई, संघ संस्थासंगको समन्वय, संयुक्त अनुगमन र प्राविधिक पुस्तिकका प्रकाशनका कार्यक्रमहरु संचालनमा ल्याईने छ।

| Activities | Activity status | Remarks |
|---|---|---|
| **प्रतिफल १: कृषकहरुको क्षमता अभिवृध्दि भएको हुने** | | Work is delay due to devastating earthquake |
| **क्रियाकलाप १.१:** बेसलाईन सर्भे | On going | |
| **क्रियाकलाप १.२:** संस्थागत संरचना निर्माण/गठन | Completed in April, 2015 | |
| **क्रियाकलाप १.३:** व्यवसायिक वाखा फार्मको स्थलगत अध्ययन भ्रमण सहितको ३ दिने तालिम | Yet to begin | |
| **क्रियाकलाप १.४:** नश्ल सुधार सम्वन्धी व्यवस्था | Yet to begin | |
| **क्रियाकलाप १.५ किसानमा प्रविधि हस्तान्तरण** | | |
| कृषक समुहमा वोका (५ वटा) तथा वाखा (४० वटा) वितरण | Yet to begin | |
| **क्रियाकलाप १.६: पशु स्वाथ्य सेवा व्यवस्थापन** | | |
| १.६.१ पशु स्वाथ्य उपचार कोष | Yet to begin | |
| १.६.२ टयागिङ औषधी, भ्याक्सिन | Yet to begin | |
| १.६.३ डिपिंग ट्यांकको निर्माण | Yet to begin | |
| **क्रियाकलाप १.७:** वाखा संकलन केन्द्र प्रबर्धन कार्यक्रम | Yet to begin | |
| **क्रियाकलाप १.८:** सन्तुलित आहारा व्यवस्थापन सम्बन्धि तालिम | Yet to begin | |
| **प्रतिफल २: घांसको श्रोतकेन्द्रको स्थापना भएको हुने।** | | |
| **क्रियाकलाप २.१:** भूव्यवस्थापन, घाँस विकास तथा नर्सरी स्थापना | On going | |
| **क्रियाकलाप २.२:** घाँस संरक्षण तथा भण्डारण व्यवस्थापन | Yet to begin | |
| **क्रियाकलाप २.३: नमूना बाखा फार्मको स्थापना** | | |
| २.३.१ खोर निमार्ण | Yet to begin | |
| २.३.२ फिडर ट्रफ निर्माण | Yet to begin | |
| २.३.३ खुला क्षेत्र निमार्ण (Paddock Fencing) | Yet to begin | |
| २.३.४ नमुना वाखा फार्मका लागि वाखा (३०) र वोका (१) खरिद | Yet to begin | |
| २.३..५ नमुना वाखा फार्मका लागि उपकरणहरु खरिद (बर्डिजो काष्ट्रेटर, टयागिङ मेसिन, डिजिटल तराजु, ग्लोबस, प्राईमरी केएर किट, टयाग, खोले पकाउने र दिने भाडा, च्याफ कटर, सिकेचर, फिडिङ मिक्स्चर) | Yet to begin | |

| | | |
|---|---|---|
| **प्रतिफल ३: आयोजनाको प्रतिफलको प्रचार प्रसार भएको हुने ।** | | |
| **क्रियाकलाप ३.१:** प्रारम्भिक गोष्ठी र प्रतिवेदन तयारी गर्ने | On going | |
| **क्रियाकलाप ३.२:** कार्यक्रम सम्बन्धी Hoarding Board स्थापना | Ongoing | |
| **क्रियाकलाप ३.३:** जिल्लामा कार्यरत सम्बन्धित संघ संस्थासँग समन्वय तथा साझेदारी | Yet to begin | |
| **क्रियाकलाप ३.४:** अनुगमन तथा मुल्याङकन | Ongoing | |
| **क्रियाकलाप ३.५:** उपलब्धी सर्वेक्षण | | |
| **क्रियाकलाप ३.६:** सार्वजनीक सुनुवाई | | |
| **क्रियाकलाप ३.७:** श्रव्यदृष्य सामाग्री उत्पादन | | |
| **क्रियाकलाप ३.८:** उपलब्धी गोष्ठी र प्रतिवेदन तयारी गर्ने | | |
| **क्रियाकलाप ३.९:** प्राविधिक प्रतिवेदनको तयारी | | |

**अहिले सम्मको प्रगती:**

हिले सम्म प्रति गा.वि.स १ समुह गरि ४ वटा गा.वि.स र १ नगरपालीकामा १ गरी जम्मा ५ समुह गठन गरि सकिएको छ । प्रति समुह २० सदस्यका दरले ५ समुहमा १०० जना कृषकहरु सदस्य समेटिएका छन।

# PROJECT TITLE: ADAPTATION OF CLIMATE-RESILIENT RICE VARIETIES THROUGH SEED MULTIPLICATION AND MARKETING FOR ENSURING FOOD SECURITY

**Project No. :** 1130/2070/071

| | |
|---|---|
| ***Name of Organization*** | Socio-economic Development & Research Centre (SODEC)-Nepal Pvt.ltd |
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| ***Project Coordinator*** | Tapeshwar Yadav |
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| ***Duration of Project*** | 2 Year (Chaitra 10, 2071 to Chaitra 09, 2071) |
| ***Project Cost*** | NRs 19,96,845 |
| ***Location of Project*** | VDC Bagbana, Birwaguthi and Basadilwa of Parsa district. |
| ***Collaborators/Partners*** | District Agriculture Development Office (DADO) Parsa, Birgunj<br>Regional Agriculture Research Centre (NARC), Parwanipur,Bara |

## Project Summary

## Project's background

In Nepal, rice is one of the most important staple food crops for economic as well as social value. Its contribution is about 22% to AGDP & provides more than 50% of the total calories requirement to the Nepalese people. Southern Terai region which supply about 56% of the national grain demand have steady affected by drought due to climate change for 5-7 years. The rice field remain vacant (fallow) in *kharif* & production decrease, turning traditionally rice pocket area into food deficit zone like central region of Nepal by 4,04,192 mt in 2012/13 ((MoAD, 2013).

*Here, give a brief description about the* ***project's background, main purpose/ objectives, expected beneficiaries (details****) from the project,* ***Objectively Verification Indicators (OVIs)*** *to measure Project Outputs and* ***Up-scaling pathways*** *under separate paragraphs, in a clear, concise and descriptive language (maximum limit 950 words).*

In last five year, food shortage (from 0.44 to 3.6 percent of the total requirement) is mainly attributed by climatic variability in the country. In 2008-09, the total food grain deficit was 1,32,916 mt affecting 6,95,895 people across the country (Dahal and Khanal, 2009). Different regions of the country face a shortage of healthy and safe food and the government itself has declared 31 out of the 75 districts as food-deficit in 2013 which was limited on 27 in 2012. Similarly, Nepal has imported huge amount of rice to feed the people of unsecured district with worth of NRs. 9288.12 millions (MoAD, 2011/12) except illegal export that cause much loss of Nepalese.

Biotic and abiotic factors which depend on climate change are very much responsible for health and productivity of rice plant. It has been estimated that the climate changes are likely to reduce yield/or damage crop in the 21st century (IPCC, 2007).

Several major constraints has been identified to increase production, including unavailability of quality seed, lack of irrigation, lack of improved varieties, lack of improved production technology, lack of linkage and coordination and lack of effective marketing system.

Among production inputs, quality seed contributes in yield enhancement up to 20-25%, being one of the cheapest inputs in agricultural production. Around 90 percent of the seed requirement of rice is still being met by farmers themselves through own production, saving, farmer-to-farmer exchange and informal purchase. Formal institutions have not met farmers' growing demand of improved seeds, which is evident from the very low SRR i.e., 11 % (Sqcc, seed balance report, 2069/70).

Thus, avenues to tackle for questionable rice production in such unfavorable/drought monsoon condition is by using drought tolerant varieties such as Sukha 1, Sukha 2, Sukha 3, Sukha 4, Sukha 5, hardinath 1 and Tarahara 1, Hardinath 2, improved technology, seed multiplication and marketing, linkage among partners/private sectors of seed business of short duration climate-resilient rice varieties to reduce additional water requirement at seed bed, transplanting for higher and sustainable production to enhance food security and poverty alleviation. Thinking all of the above facts, the project for climate-resilient rice seed production for drought environment to ensure food security and poverty alleviation has been proposed.

## Main purpose/ objectives

Sustainable increase in production and productivity (3 mt per ha), improve food security status (250 kg per year) through seed production and marketing of short duration drought tolerant rice varieties will be main purpose of the project.

Due to prolong drought, temporal & spatial change in rainfall pattern, farmers are unable to transplant paddy on time & eventually rice production decreases. Sometimes, there is lack of soil moisture during flowering and milking stage, resulting failure of crop. Through quality seed production and marketing of climate-resilient short duration rice varieties, per unit rice production could be maximized. The specific purposes can be summarized as follows.

- To alleviate hunger, food insecurity and poverty through use of short duration rice varieties suited to drought condition.
- To ensure livelihood security through adoption (seed multiplication and marketing) of climate-resilient rice varieties for poor farmers.

- To provide practical knowledge & skill training on various agriculture practices suitable for rain fed condition.
- To build up linkage among seed producer group/cooperatives, seed company/agro-vet and sqcc/lab for value addition of seed business.

Thus, through seed production and marketing, 450 mt rice seed will be produced ( 225 mt for seed purpose after 50% recycling), with 600 people employment and ultimately rice yield of the proposed areas will be increased to 3 mt per ha through improved input and technology.

## Expected beneficiaries (details*):*

Followings are the beneficiaries of the project

## Direct Beneficiaries - 150 HHs

150 small farmers, excluded group, poor, *dalits*, women, drought victims farmers members, are interested to participate in project implementation. They will be organized in 6 groups and female participation will be assured at least 50% in all activities, decisions and resources sharing. Detail of beneficiaries with different social categories is given below:

| VDCs | Total population of VDCs | Beneficiaries | | | | | No of Group | Total Population |
|---|---|---|---|---|---|---|---|---|
| | | Based on gender | | Social structure | | | | |
| | | Men | Women | Dalit | Janjati | others | | |
| Bagbana | 6964 | 25 | 25 | 15 | 12 | 23 | 2 | 150 |
| Birwaguthi | 13248 | 25 | 25 | 15 | 10 | 25 | 2 | |
| Bisadilwa | 6410 | 25 | 25 | 12 | 11 | 27 | 2 | |
| Total Beneficiaries | | 75 | 75 | 42 | 33 | 75 | 6 | |

## Indirect Beneficiaries

- Neighboring farmers (500 farmers HHs) will be indirect beneficiaries with technology adoption and quality source seeds.
- NGOs, CBO, private organization, extension agencies who may involve information/technology dissemination will be indirect beneficiaries.
- 15 traders/agro -vets will be benefited.

Women, excluded group will be empowered through participating in the groups for group decisions and benefit sharing. Plantation of short duration rice varieties even in acute drought condition will helpful to improve economic condition and social value of rain- fed areas.

## Objectively Verification Indicators (OVIs) :

Following are OVI for the outputs,

By the end of the project,

- Farmers will be provided with 6 ICM, 6 PVS, exposure visit and social mobilization for capacity building.

- Established a well functioning seed resource center/market network (cooperatives/ private firms), single in each VDC for value addition of seed business.
- Technology adoption will be increased by 70%. By the end of 2 years,
- SRR will be increased from 11 to 12.5%.
- At least 225 mt quality seed produced in first year will be utilized as source seed to plant 4500 ha of land in next season.
- Increased rice productivity from 1.8 to 3 mt/ha.
- 600 people will be employed.

### Up scaling Pathways

Availability of quality seed of climate-resilient rice on time is one of the major activity of this project which contributes in yield enhancement up to 20-25%, encourage farmers to up scaling the output.

As a part of survival strategy to some extent, selection and development of appropriate varieties/ technology is only one option to expand the area of production with the farmers in such risk prone environment in drought where the transplanting is not possible for proper growth and development of seedlings to alleviate hunger, poverty and food insecurity through sustainable rice cultivation in rain fed condition.

Participatory approach will be adopted for overall promotion pathways for uptake or up scaling of the project outputs through ICM, PVS, exposure visit, farmers day which help to confidence building among farmers for technology adoption. Farmers to farmer's interaction will also encourage for up scaling of project outputs.

Since producers, traders/agro-vets and consumers are target group, technology transfer, inputs support, market networking and information sharing will help to concentrate for commercialization of seed multiplication for sustainable income generation.

Project outputs and information will be disseminated with use of local FM, organizing workshop, training, booklet/leaflet and finally publication of reports which will helpful for technology up-scaling.

By the end of the project, impact assessment reports, documentary making and 1000 booklets on prepared and disseminated.

## Synopsis of Project Status

### Targeted Outputs:

***Output 1:*** Strengthening and institutional development of farmers groups for adaptation of climate-resilient short duration rice varieties.

***Output 2:*** Improve food security status of, excluded group, poor, *dalits*, women, drought victim farmer members in target area with enhanced rice productivity.

***Output 3:*** Farmers to farmer's technology will be disseminated.

**Activities proposed**

| Activities | Activity status | Remarks |
|---|---|---|
| **Output 1** | | |
| 1.1 Baseline Survey | Completed | |
| 1.2 Social mobilization and group formation | Group formation completed and social mobilization is being continued | |
| 1.3 Stakeholders meeting. | 2072-04-09 | |
| 1.4 ICM trainings | Nursery established with different rice varieties | |
| 1.5 PVS conduction- | Nursery established with different rice varieties | |
| 1.6 IRD/miniskirts | Nursery established with different rice varieties | |
| 1.7 Linkage with DADO and RSTL, Hetauda | 2073-08-09 | |
| **Output 2** | | |
| 2.1 Seed multiplication, Source Seed | Nursery established with different rice varieties | |
| 2.2 Seed resource center | 2073-08-09 | |
| 2.3 Tools and equipments Sprayers Distribution | 2073-08-09 | |
| **Output 3** | | |
| 3.1 End line survey and impact analysis report | 2073-12-30 | |
| 3.2 Extension material | 2073-12-30 | |
| 3.3 Video documentary making | 2073-12-30 | |
| 3.4 Joint /Participatory Monitoring | 2073-12-09 | |
| Internal monitoring (6 nos.) | 2073-12-09 | |
| 3.6 Hording boar | Hording board established | |
| 3.7 Public hearing | 2073-11-30 | |
| 3.8 Reporting | 2073-12-09 | |

## Major Achievements

- Households' surveys of 625 house/family were conducted based on pre-identified cluster community.

- Six group formation with participation of dalit, jannati, women, and poor @ 2 from each VDC.
- 150 farmers were interested and actively participated in program implementation.
- 4400 kg foundation seed of different varieties such as Hardinath-1, sukha 1, sukha 3, radha 4, sabitri, sambha mansuli sub 1, swarna sub 1 has been purchased and distributed.
- Hording board with overall information of project including beneficiaries, budget, activities etc.

| | |
|---|---|
|   |   |
| Hording board | Group Meeting |

# PROJECT TITLE: SHORTCOMINGS AND OPPORTUNITIES OF ENTREPRENEURIAL GOAT PRODUCTION SYSTEM IN TERAI AND MID-HILLS OF WESTERN NEPAL

**Project No. :** 1131/2014/015

| | |
|---|---|
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| ***Collaboration/Partners*** | Srijana Improved Goat Farm (Srijana Unnat Goat Farm), Semlar-2, Rupandehi, Western Nepal, DLOS Arghakhanchhi and Rupandehi, |
| ***Duration of Project*** | Two year and six month |
| ***Project Cost*** | NRs. 19,99,625/- (Nineteen Lakhs Ninety-nine Thousand Six Hundred and Twenty Five Rupees Only) |
| ***Location of Project*** | Rupandehi and Arghakhanchhi districts of western Nepal |

## Project Summary

### Background

Goat is considered as one of the important livestock species as a source of income for rural household, which can be raised even in low resource base with minimum input supplied in small farmers and minority peoples as well. They are distributed along the hills and terai of Nepal. A study report (TLDP, 2003) showed that goat meat accounts about one fifth of the total meat production. Yet goats tend to be kept on a non-commercial basis for meat production (TLDP, 2002). About 0.2 millions goat were imported from India only for Kathmandu during 1998. This shows the need of developing commercial scale of goat meat enterprises by the Nepalese farmers. However, the goat farmers are constrained with technologies on commercial goat raising; especially that with selection practices; profitable flock size of raising goats based on their resources, and selection of prolific dam and buck lines through breeding management. Hence, the project has aim to find out shortcoming of existing goat enterprises especially in the western mid-hill and Terai regions and lesson learned from it will be taken as opportunity to develop appropriate technologies for profitable goat production. From commercial goat farming perspective, the project also aims to integrate the maximum use of community forest and other forest resources of the western mid hills and non-conventional feeding based systems in the terai regions of Nepal due to which goat enterprise can be

developed as the alternative income generating source to improve the livelihood of the farmers of the rural areas.

## Purpose of the Project

Nepalese farmers in the mid-hills and terai are still raising goats for subsistence type consumption but not in commercial scale for meat production. And some having commercial flock size are not aware about the package of practices to be followed for sustainable production. This is mainly due to scarce information on appropriate technologies and poor adoption of the technologies generated so far (HARP, 2004). Therefore, the project is aimed to determine the weakness and limitations of existing commercial scale goat farms and point out the drawbacks to mitigate the faulty management practices. Thus, the opportunities obtained will be maximized for the substantial improvement of commercial goat farms.

## Expected Beneficiries

The target groups of this project are the subsistence farmers and potential goat raisers (both male and female) i.e medium to potential entreprenuers. Minimum of 206 farmers in the project sites will be chosen to establish four cooperatives in the project area as primary value chain beneficiaries of goat farming. Among the members 100 will directly take part in training activity as well. On the other hand 30 households will directly be involved under experimental groups of goat production. Composition of the participants will follow the national reservation values for the dalits and Janajati peoples. As much as possible participation of dalit and marginalized groups will be promoted. In the cooperative there will be at least 63 females, 46 dalit and 61 janajati beneficiaries of the project.

Similarly other hundreds of farmers on surrounding areas will get direct or indirect benefits like nutritious grass and fodders, breeding with improved buck, information of proper management systems, take benefit from mulching etc.

### Objectively Verifiable Indicators (OVIs)

By the end of First year Baseline information's of the project area will be completed. Activities like interaction, selection of potential farmers and participants etc. will be completed a complete structure of the project will be achieved.

Following indicators will verify the achievements of the research.

By the end of first year,

- One comprehensive baseline report on entrepreneurial goat production will be prepared
- Existing market centres and involved stakeholders for trade of goat will be identified
- Baseline survey report and list of plants potential for production of fodder and forage will be developed
- List of participant farmers will be prepared by the end of first trimester
- Training manuals, leaflets, brochures, pamphlets will be prepared
- Database for 4 entrepreneurial goat production farm developed

- Four improved buck would have provided in the project area
- Data sheet for regular measurement of the records developed
- There will be production of improved seasonal/perennial grasses and saplings of fodder by the participants
- Video documentary of the goat production will be developed
- Records of details of inputs applied for goat production
- One improved commercial goat management package developed
- Four cooperative working on goat production will be established
- 100 farmers trained on improved packages of goat production
- One model farm established having facilities for commercial scale goat farming and other production aspects
- Publications like booklets, pamphlets, brochures etc.
- One comprehensive book on complete package of practices for goat production will be developed
- One pictorial booklet for entrepreneurial production will be prepared

## Up scaling pathways

**Farmers will get Technical Assistance regarding;**

- Health care of goat including external internal parasite control and disease control
- Knowledge of seasonal forage production
- Knowledge of production of nutritious feeds from local materials
- Know how to feed goat at scarce events like rainfall and extreme cold
- Knowledge on preparation and use of hey, silage and other dry matter on feeding
- Direct support of seeds of forage and saplings of fodder species

## Knowledge dissemination

- Enrich Farmer's knowledge on sustainable livestock farming through training and sharing of expert's knowledge, especially for degraded land management, development of cultivation of notorious seasonal forage, management of housing, inbreeding and so on.
- Periodic joint meeting and discussion with the concerned stakeholders about the project outputs during the project period will also help in disseminating the information on the several potential aspects of production and marketing of goat enterprise.
- Comprehensive publication of packages of practices on commercial goat production and management and its distribution will disseminate the result among those concerned stakeholders.
- Workshop at the end of the project will disseminate the generated project outputs to district officials, farmers, local traders, CBOs, NGOs and locals.
- Exchange and Sharing of Knowledge on livestock farming practice on different eco-regions (Mid-hill and Terai regions) of Nepal.

**Establishment of value Chain:** Establish cooperatives will make linkage of farmers with concerned stakeholders which aids to establish value chain and assure sustainability of commercial goat farming.

**Replication of invented technology for goat production**: Availability of final project report at local stakeholders e.g. DLSO, DDC and respective VDCs will support peoples in the project area for management of their farm. Moreover, concern authority will be support for finding limitations and planning to overcome the reduced productivity of goat farming that ultimately increase productivity. Similarly, media coverage for dissemination of project outcomes will induce regional level replication of goat farming practice.

## Synopsis of Project Status

## Outputs

Overall outcome of this project is to manage the existing problems faced by the farmers for goat farming and identify the potential resources to promote entrepreneurship, furthermore providing supplementary training and demonstration to the farmers along with establishment of institution working on value chain.

1. Existing goat production and marketing system will be identified to trace out the shortcomings for entrepreneurship.
2 Appropriate management packages for commercial scale of goat production for this area prepared.
3. Potential local resource for commercial scale goat production & trade will be identified and institutionalized.
4. Institute working for value chain on goat farming will be established and public disclosure materials will be prepared for replication

## Activities Proposed

Each project activity with their activity number and their implementation status has provided in table below:

| **Activities** | | **Activity status** | **Remarks** |
|---|---|---|---|
| Activity 1.1 | Baseline survey and Consultation Meetings | Checklist required for baseline study has prepared | Basic visit to the DLSO has completed and stakeholders at district level meeting have conformed. |
| Activity 1.2 | Identify existing goat production and overall management system | Checklist has prepared | |
| Activity 1.3 | Identify existing marketing system and potential resource base of the goat farmers | | |
| Activity 1.4 | Records and Record keeping | Checklist for the study has prepared | |
| Activity 2.1 | Training and orientation about the commercial goat production | Interactions has begun at farmers level | |

| Activities | | Activity status | Remarks |
|---|---|---|---|
| Activity 2.2 | Explore use of fodder from the adjoining forest | Yet to begin | |
| Activity 2.3 | Breeding and overall management of shed and system of farming | Yet to begin | |
| Activity 2.4 | Distribution of essential inputs | Yet to begin | |
| Activity 2.5 | Analysis of the information and technical findings | Yet to begin | |
| Activity 3.1 | Determining optimum resource based flock size for entrepreneurial goat farming | Yet to begin | |
| Activity 3.2 | Allocation of optimum management inputs | Yet to begin | |
| Activity 3.3 | Development and Demonstration of model commercial goat farm | Yet to begin | |
| Activity 3.4 | Exploration of existing goat market and possible path to develop market linkage | Yet to begin | |
| Activity 4.1 | Development of enterprise budget and establishment of organization | Yet to begin | |
| Activity 4.2 | Publication of farmers' friendly posters, leaflets & booklets | Yet to begin | |
| Activity 4.3 | Workshop at the respective district with the concerned stakeholders | Yet to begin | |
| Activity 4.4 | Record keeping, Video Recording, Publications and broadcasting, monitoring & Final Report Writing | Yet to begin | |

## Achievements (also include Findings in case of Research Projects)

1. Preparatory materials like checklist and questionnaire required for baseline study has prepared by the study team.
2. Project site visit was performed in coordination of NRM expert. It includes interactions with DLSO officers and chief of the livestock health sub – center at Semlar and centers at Parrohoa and Thada.
3. Consultation with DLSO officer was focused for selection of the participants at district level meeting.
4. Detail of the project was provided to the officials at livestock service centres and sub-centres in project area. From the officials a circular for interested participants were announced. It has increased awareness regarding project implementation in the area and also attracts individuals to participate in the program.

# PROJECT TITLE: DEVELOPMENT OF FORAGE SEED RESOURCE CENTERS OF TROPICAL SPECIES IN MAHOTTARI

**Project No. :** PP-1132/2015

| | |
|---|---|
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| ***Collaboration/Partners*** | District Livestock Service Office (DLSO), Mahottari |
| ***Duration of Project*** | March 2015 to June 2017 |
| ***Project Cost*** | NRs. 19, 99, 434.00 |
| ***Location of Project*** | Bathnaha and Siswa Kataia VDCs of Mahottari district |

## Project Summary

## Project's Background

Livestock population of Nepal is estimated to be 7.27, 5.24, 0.8 and 9.78 million cattle, buffalo, sheep and goats, respectively with increasing rate 0.39, 3.4 and 3.4 per annum for cattle, buffalo and goat, respectively (MoAD, 2013).The increasing population of livestock has exerted excessive pressure on available feed resources. The number of livestock per unit of cultivated land in Nepal is highest in the world (220 numbers of livestock /Km2 compared with the human density of 141). There is an excessive pressure on cropland and forest for fodder which directly affecting the sustainability and conservation of available resources. Inadequate supply of green forage is leading towards poor nutrition during the dry winter months (December to April) is one of the biggest constraints to the promotion of livestock development in Nepal. Malnutrition over a significant part of the year reduces the condition of the animals and adversely affects production levels (Panday, 2007).

To meet the animal feed requirement, year round forage production is now practiced and helpful in attaining green matter production. Annual forage crops are easy to cultivate, fast-grown and nutritious to dairy animals. The ideal annual forages should have more than 40% legumes to provide protein and energy rich feed for ruminants and to fix nitrogen in the soil for following crops and grasses. In winter, barseem, lucerne, oat and vetch are commonly practiced to sow immediately after harvesting of rice, and in summer sorghum and teosinte cultivation are common. In spring, teosinte, bajra, sudan is cultivated. Moreover, stylo and kudzu are also popular in terai region and have great demand which could be also cultivated for seed production. They are helpful to make up nutritional need during monsoon and autumn season as well. It is anticipated that the improved supply of quality feeds and forage could alone enhance the animal production by three folds and save much of the degradations of the natural resources.

Green forages are the cheap and nutritious source of livestock feeding and only means to lower down the cost of production of animal products. According to National Forage and Animal Nutrition Development Centre of DLS, Mahottari district is one of the potential districts for oat, barseem, jowar, teosinte, sudan, bajra, vetch, stylo, kudzu and molasses seed production. Hence, this project aims to produce seed of aforesaid forage and reduce forage seed deficit in the country.

### Main Purpose/Objectives

The main purpose of the project is to establish forage seed resource centers as the income generating for improving the livelihoods of farm families who are currently living with very limited resources to support their livelihoods. The characteristic feature of this project is to introduce the project in a holistic manner so that all components will ultimately contribute to income generation and livelihood support. The most successful interventions like forage seed production in a complete package of practices so that outputs of each could provide a sustainable and year round income for the participating families and could become a sustainable basis of livelihoods for these families. These interventions supported by inputs and training support, group saving scheme and capacity building on technical and managerial aspects would lead to a sound and sustainable basis for income generation and livelihood improvement for the most impoverished community in Nepal.

## Expected beneficiaries

All activities of the project will be implemented in the two adjoining VDCs i.e. Bathnaha and Siswa Kataia of Mahottari district involving 90 farm families in the commencement of the project and later100-150 families. The target groups and principle beneficiaries of the project is summarized as in given table;

| Category | Particular |
|---|---|
| Target group | Two woman group from 30 farm families each of Bathnaha VDC and one woman group from 30 farm families of Siswa Kataia VDC so total three groups from 90 (30X3) farm families of two VDCs who directly involved in the project activities. |
| Principle beneficiaries of the project | Women member of the families who directly involved in the project activities. |
| Direct beneficiaries | Ruminant animal raiser, Forage seed buyer and seller, rural unemployed people, district line agencies and the development organizations involved in livestock and forage development and poverty alleviation programs etc. |
| Indirect beneficiaries | Agro vet, Agriculture technician, Agriculture research and development program, program for improving the livelihood of poor and marginalized communities, program for soil conservation, development organizations involved in forest and environment protection etc. |

## Objectively Verifiable Indicators (OVIs):

- By 2015, existing forage production status of district identified.
- By 2016, forage seed centers established.
- By 2017, forage seed production technology by season scaled up in another 2 districts

### Project Outputs:

1. **Existing forage production status identified**

   During interaction with farmers and door to door household survey period, existing cropping pattern, forage production situation, type of forage production, forage demand and supply situation, forage seed production trend, land holding per household, irrigation facility of the sites, household income level, knowledge of farmers on improved grass and leguminous forage seed production will be documented

2. **Forage seed centers established**

   Farmers will get knowledge on forage seed production from the training and cultivation of different forage species by season. Furthermore, they will compare income generated from forage seed production and cereal production from same unit of land. This will convince farmers to produce forage seed rather than cereal which will lead to establish forage seed resource centers.

3. **Project outputs widely disseminated and scaled up**

   The project outputs will be disseminated to other resettlement camps through visits, development agencies, and media and by formal and informal interaction workshop organized in the district. Similarly, outputs of the projects will be disseminated by using local, district and regional level FMs, newspapers, paper presentation, leaflets and booklets. Observing the income from forage seed production other farmers will also start to scale up this activity and participating farmers will expand their seed production activity.

## Upscaling pathways

The project outputs will be disseminated to other resettlement camps through visits, development agencies, and media and by formal and informal interaction workshop organized in the district. Similarly, outputs of the projects will be disseminated by using local, district and regional level FMs, newspapers, paper presentation, leaflets and booklets. Observing the income from forage seed production other farmers will also start to scale up this activity and participating farmers will expand their seed production activity.

## Synopsis of Project Status

### Targeted Outputs:

**Output 1 : Existing forage production status identified**

During interaction with farmers and door to door household survey period, existing cropping pattern, forage production situation, type of forage production, forage demand and supply situation, forage seed production trend, land holding per household, irrigation facility of the sites, household income level, knowledge of farmers on improved grass and leguminous forage seed production will be documented

**Output 2 : Forage seed centers established**

Farmers will get knowledge on forage seed production from the training and cultivation of different forage species by season. Furthermore, they will compare income generated from forage seed production and cereal production from same unit of land. This will convince farmers to produce forage seed rather than cereal which will lead to establish forage seed resource centers.

**Output 3 : Project outputs widely disseminated and scaled up**

The project outputs will be disseminated to other resettlement camps through visits, development agencies, and media and by formal and informal interaction workshop organized

in the district. Similarly, outputs of the projects will be disseminated by using local, district and regional level FMs, newspapers, paper presentation, leaflets and booklets. Observing the income from forage seed production other farmers will also start to scale up this activity and participating farmers will expand their seed production activity.

## Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Site selection and interaction with farm families and identification of target families | Completed in June 2015 | |
| 1.2 Project inception workshop | Completed in April 2015 | |
| 1.3 Baseline survey | Completed in May 2015 | |
| 2.1 Selection of farmers, group formation and hoarding board fixing. | OngoingYet to Begin | |
| 2.2 Training of participating farmers. | Yet to Begin | |
| 2.3 Cultivation of different winter (Oat and Berseem), annual (stylo) and summer (Teosinte and sorgham) grass including legume species for seed production. | Ongoing | |
| 2.4 Internal and joint monitoring. | Yet to Begin | |
| 2.5 Formation of cooperative | Yet to Begin | |
| 2.6 Performance survey/ end line survey and cost benefit analysis | | |

## Achievements (also include Findings in case of Research Projects)

- Survey of the villages are completed.
- Status of the Forage Seed Production is known.
- site have been selected for Forage seed production.
- Conserned agencies have been informed about the project.

Photograph of Survey.

# PROJECT TITLE: GENERATION AND DISSEMINATION OF IRRIGATION TECHNOLOGIES FOR SMALL HOLDER'S HIGH VALUE CROPS, IN KHALTE VDC, DHADING

**Project No. :** 1036/2014/18

| | |
|---|---|
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| ***Collaboration/Partners*** | Development Inn Pvt. Ltd./ Forum for Community Up-liftment System, Nepal (FOCUS- Nepal) |
| ***Duration of Project*** | April, 2015 – March 2018 |
| ***Project Cost*** | 34,47,313.60 |
| ***Location of Project*** | Khalte VDC, Ward no-1 and 5, Dhading |

## Project Summary

### Background

With the support from National Agriculture Research and Development Fund Nepal (NARDF), Development Inn Pvt. Ltd./ Forum for Community Up-liftment System, Nepal (FOCUS-Nepal) is implementing a research project "Generation and dissemination of irrigation technologies for small holder's high value crops, in Khalte village of Patlekhet VDC of Dhading district. Earlier, Water from the two springs was diverted to irrigate 23 ha (CCA) land which was supported by Non-Conventional Irrigation project in participatory approach. The water acquisition part was complete, however due to limited amount of water it is not possible to irrigate by canal method. Hence, this project proposal has been developed to improve the water distribution efficiency by using more efficient methods. The-command area has good potential for crop intensification and diversification, primarily to switch over high value vegetables. The current agriculture practices are based on rain water. Various kinds of training are needed to strengthen capability of the farmers to solicit envisaged benefit of the project. The types of needed trainings are O&M, water management, use of irrigation technologies, leadership development, technology transfer on high value vegetable cultivation, pest control, post harvest handling and kitchen gardening and its importance as well. The project which began since April 2015 has a total period of 3 years.

### Objectives

The main purpose of the project is to improve irrigation efficiency and disseminate technology for agricultural productivity for the poor communities in their active participation. The proposed research project thus intends to improve water availability and delivery through utilization of existing infrastructure to the crops with minimum conveyance loss. As the available water is not

enough to irrigate by traditional method. the project will introduce micro-irrigation (drip, sprinklers) that will allow farmers to irrigate larger land area with less water. The implication will be - much easier access to water, more crops with greater yields, commercialization of high value crops, increasedlivestock and manure and ultimately, capacity to afford the new technology and disseminate it to all.

## Beneficiaries

Direct beneficiaries of the project are 150 households consisting of 809 persons. Most of the households are from Janajities and dalits. The project will also benefit to water users association, agro-business centers, cooperative, vegetable collection center of the nearby areas. About 2 thirds of the total direct beneficiaries will be among women. Indirect beneficiaries will be at least 1629 farmers who will observe the good irrigation water application practices.

## Objectively Verifiable Indicators [OVI]:

The followings are the main OVI adopted in this project;

i. Number of households practicing high value crops production including kitchen gardening.
ii. Increase in annual household income
iii. Number of households adopting water application technologies.
iv. Total area of plantation
v. Number of check dams built

## Up-scaling pathways

The results will be published in papers. Demonstration farms will be set up. The project will prepare a package of materials for dissemination of good practices and results. This will include Video, leaflets, posters, case studies and awareness materials. The successful results can be disseminated through various media such as newspaper, FM Radio, television etc. Hoarding boards will be set up near the demonstration units. The results will be shared in the district and regional level workshops/seminars.

## Synopsis of Project Status

### Targeted Outputs:

Output 1: Small water sources conserved and developed

Output 2: Modern and cost effective irrigation water application technology adopted/practiced

Output 3: High value cash crops and vegetable production increased

Output 4: Result and impact propagation and dissemination materials of the project produced/ distributed

**Activities Proposed**

| Activity | Activity Status | Remarks |
|---|---|---|
| 1.1 Conduct baseline and water source assessment work at field | Ongoing | |
| 1.2 Identify soil and water conservation technique | Ongoing | |
| 1.3 Conduct Group Formation Meetings | Ongoing | |
| 1.4 Develop bio- check dams, identify suitable plants and herbs to be adopted and planted. | | |
| 1.5 Practice hedge grows and catch drains. | | |
| 1.6 Demonstrate innovative tank/pond | | |
| 2.1 Lay water distribution network | | |
| 2.2 Install small drips and sprinklers | | |
| 2.3 Installation training on handling drips and sprinklers for vegetable cultivation. | | |
| 2.4 Arrange spare parts and train on maintenance. | | |
| 3.1 Conduct Training on High value cash crops and pest control techniques. | | |
| 3.2 Promote Compost preparation at site. | | |
| 3.3 Identify and demonstrate appropriate high value crops. | | |
| 3.4 Training on post-harvest handling of vegetables | | |
| 3.5 Introduce forage/grass cultivation | | |
| 3.6 Establish nurseries for high value crops. | | |
| 3.7 Organize joint and internal monitoring | | |
| 4.1 Prepare pictorial leaflets | | |
| 4.2 Prepare Video | | |
| 4.3 Develop other awareness materials | | |
| 4.4 Final evaluation and end line survey and prepare evaluation report | | |
| 4.5 Placement of project information board and conduct public hearing program | | |

Due to devastating earthquake on 25 April, 2015, there has been delay to complete all activities of the 1st trimester. The beneficiaries of the project are also hard hit from the earthquake. Now the situation is almost back to normal and the remaining activities will be completed smoothly in the upcoming trimester.

## Achievements (also include Findings in case of Research Projects)

Here, mention the main achievements so far achieved from the project (Point-wise) (Maximum Limit: 200 words)

As mentioned above only few activities (1.1, 1.2 and 1.3 are underway).

# PROJECT TITLE: PROMOTION OF WATER HARVESTING TECHNOLOGY FOR DRY SEASON IRRIGATION IN PERI URBAN AREA (LAPSIPHEDI AND NANGLEBHARE VDCs) OF KATHMANDU

**Project No.** PP-1137/2014/15

| | |
|---|---|
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| ***Collaboration/ Partners*** | District Agriculture Development Office, Kathmandu |
| ***Duration of Project*** | 2 Years 8 Months (April 2015 to November 2017 ) |
| ***Project Cost*** | Total cost of the project 3,309,754<br>Collaborator Contribution NPR 330,000<br>Requested from NARDF 2,979,754 |
| ***Location of Project*** | Peri urban area (Lapsiphedi and Nanglebhare VDCs) of Kathmandu |

## Project Summary

### Background

The project is going to implement in the Nanglebhare and Lapsiphedi of the Kathmandu district from April 2015 to November 2017. The proposed project will analyze the rainfall pattern of the Kathmandu valley and demonstration site will be established in the Lapsiphedi and Nanglebhare VDCs. These are the periurban and potential areas for the proposed projects. Being the potential for the production and marketing of the vegetable, farmers are practicing the traditional cereals instead of vegetable production. The demonstration site is expected to encourage the farmers to grow the dry season vegetables commercially.

Thus the proposed project will be helpful to improve the livelihood of the farmers of the Lapsiphedi and Nanglebhare VDCs and as demo-site for the people of Kathmandu valley to learn how the rainwater harvesting will be the potential source for the irrigation.

### Purpose/Objectives

The main purposes of the projects are,

- Rainfall situation within the Kathmandu valley will be analyzed to identify the potential area for the rainwater harvesting.
- To establish the water harvesting system to produce the vegetables in dry season.

- To enhance the dry season vegetable production technology
- To disseminate the good practices to the community and relevant stakeholders
- Through the implementation of this proposed project, it is expected that there will be 20 rain water harvesting ponds and 20 vegetable demo farm established and promoted and 300 marginal farmers utilized the harvested rainwater for dry season commercial vegetable.

## Expected Beneficiaries

Farmers from the lower economy groups and disadvantage groups are the main target group of the project. About 300 families are directly benefited from the project. About 500 indirect beneficiaries are also benefited by IEC/BCC materials and demo-farm.

**Table: Direct beneficiaries**

| VDC | Targeted Beneficiaries | | | | |
|---|---|---|---|---|---|
| | **Women** | **Dalits** | **Janajati** | **others** | **Total** |
| Nanglebhare | 75 | 10 | 80 | 60 | 150 |
| Lapsiphedi | 75 | 10 | 70 | 70 | 150 |
| Total | 150 | 20 | 150 | 130 | 300 |

## Objectively Verifiable Indicators (OVIs)

**Output 1:** Rainfall situation within the Kathmandu valley will be analyzed and potential area for the rainwater harvesting will be identified.

1.1 Rainfall data of Kathmandu Valley will be interpolated by 2017

1.2 Rainfall map of different station of Kathmandu valley will be prepared by 2017

**Output 2:** Rain water harvesting technology for irrigation will be established and promoted.

2.1 20 rain water harvesting sites will be established and promoted by 2017.

**Output 3:** Technology of rainwater harvesting and production of vegetables in dry season using it will be adopted.

3.1 300 household will know to used harvested rain water for irrigation purpose by 2017

3.2 20 vegetable demo farm will be established using harvested rainfall

**Output 4:** The technology will be disseminated.

4.1 400 farmers know about rain water harvesting technology by 2017

4.2 2000 leaflets and 250 technical report will be published and disseminated by 2017

## Upscaling Pathways

Following pathways will be adapted to upscale project;

The project itself an upscaling type and try to adopt the technology to the wider scale. The project is not only designed with rainfall harvesting system but also gives proper irrigation method for harvested rain as well as helps to the farmers to produce the vegetable commercially and linkages

to the market. The technology dissemination workshop with participants of different stakeholders and farmers may be the one of the best up scaling mechanism. It is assumed that the publication will be useful to a range of other users such as;

- Government and Non Governmental Organization.
- Irrigation business enterprises.
- Politicians, policy makers.
- Researchers.
- Staff and members of VDCs, DDCs.
- Farmers and cooperatives members

Thus, project will also put the outcomes and guideline in webpage. The project will bear the cost of uploading in the internet service.

## Synopsis of project Status

### 1. Targeted outputs

Briefly the outputs of the project were outlined as;Rainfall situation within the Kathmandu valley will be analyzed and potential area for the rainwater harvesting will be identified.

a. Rain water harvesting technology for irrigation will be established and promoted.

b. Technology of rainwater harvesting and production of vegetables in dry season using it will be adopted.

c. The technology will be disseminated.

### 2. Activities Proposed

| SN | Activity Detail | Activity Status | Remarks |
|---|---|---|---|
| 1.1 | Literature review on rain water harvesting | Ongoing | Field level program execution disturbed due to the devastated earthquake for the time. Project intervention really address the earthquake victims in the project area |
| 1.2 | Organization of orientation workshop/meeting on V.D.C. level. | yet to begin | |
| 1.3 | Base line data collection and compilation | yet to begin | |
| 1.4 | Preparation of rainfall maps and construction of isohyets. | Ongoing | |
| 2.1 | Reviewing and compilation of data on preparation/ construction of harvesting ponds and wells (Design and estimate) | Ongoing | |
| 2.2 | Formation and strengthening of farmer's group | yet to begin | |
| 2.3 | Construction of water harvesting ponds. | yet to begin | |
| 2.4 | Information/hoarding board at the demo sites | yet to begin | |
| 3.1 | Install micro-irrigation system in the integrated 0n-farm experimental/ demonstration plot | yet to begin | |

| | | | |
|---|---|---|---|
| 3.2 | Vegetable demo farm establish by using harvested rainwater | yet to begin | |
| 3.3 | Training to the farmers | yet to begin | |
| 3.4 | Data collection and reporting. | yet to begin | |
| 4.1 | Publication and distribution of Leaflets and booklets | yet to begin | |
| 4.2 | Participatory monitoring and evaluation | yet to begin | |
| 4.3 | Video documentary preparation | yet to begin | |
| 4.4 | Project intervention post study | yet to begin | |
| 4.5 | Public Hearing | yet to begin | |
| 4.6 | Completion workshop/Talk program | yet to begin | |
| 4.7 | Publication of periodic and final technical report | yet to begin | |

# PROJECT TITLE: PROMOTION OF LOW COST FODDER BASED MILK PRODUCTION SYSTEMS FOR THE LIVELIHOOD OF THE SMALLHOLDER DAIRY FARMERS OF KAVREPALANCHOWK DISTRICT

**Project No. :** PP-1138/2014/15

| | |
|---|---|
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| ***Collaboration/Partners*** | DLSO, Kavrepalanchowk |
| ***Duration of Project*** | 2071 Chaitra to 2074 Falgun |
| ***Project Cost*** | NRs.1999931 |
| ***Location of Project*** | Anekot and Mathurapati-Fulbari VDCs of Kavrepalanchowk district |

## Project Summary

Nepalese milking cow and buffalo have much higher potential to produce more milk, however due to scarcity of quality and in quantity of fodder there is low milk production. This low production is responsible for reduction of the household income of majority of resource poor farmers and the condition is more severe in mid hills where there is forage deficit of more than 50% of dry matter and they are forced to raise animals on concentrate based feeding systems which is contribution to higher cost of production. Secondarily, Kavreplanchowk district in the central mid hills of Nepal which is selected for this project implementation is a largest dairy pocket in the country with about 296,000 dairy animals and 80,000 MT of yearly mild production (DLS 2014). Thus, this project is for the promotion of low cost fodder based milk production systems for the livelihood of the smallholder dairy farmers in the district with special focus on women and disadvantages group people (DAG) and done through training and demonstration regarding fodder based milk production system. This project has been started from Chaitra 2071 and will be continue till 2074 Falgun on Anekot and Mathurapati Fulbari VDCs of the district.

The main purpose of the project is fodder and feed management to increase production and reduce the cost of milk production for improvement in livelihood of dairy farmers of Kavre district which will be verified by the end of third year, participating farmers/farmer groups increase their income by 30% through reduced cost of milk production and maximized production.

**The specific objectives of this purposed project are:**

- Strengthening the capabilities of the dairy farmers group in Kavrepalanchowk district through adoption of approved technology of cultivation practices of quality fodder species
- Promotion of low cost fodder based feeding systems on year round basis to reduce the cost of milk production.
- Promotion of small scale dairy enterprises to create localized markets of dairy products through skill enhancement especially for the women and other disadvantaged members.

- Empowerment of small dairy farmers group focusing on women members through improved skills on feeds and feeding management, breeding management, improved animal health facilities and hygienic and quality milk production.
- Development of institutionalism on dairy farming and linkage between small scale dairy farmers and the stakeholders in the district.

4 farmers group (30 member each and 2 groups in each VDC) thus total of 120 milk producing farmers from 2 VDCs along with 2 primary milk collection centre (1 on each VDC) are the direct beneficiaries. Whereas, 1493 household of Anekot VDC with total population of 7100 (3396 male, 3704 female) and 973 household of Mathurapati Fulbari VDC with total population of 4458 (2079 male, 2379 female) who learn by demonstration and get their animal treated in animal health camps in the VDC are secondary beneficiaries from the project.

**The following four main outputs are intended to be achieved by the project.**

1. Small scale dairy animal farmers are facilitated and empowered.
2. Fodder yield and milk production increased resulting in reduced cost of milk production and improved household incomes.
3. Support activities and marketing assistance done.
4. Linkage established and project outputs disseminated.

**Objectively verifiable indicators for the outputs can be as follows:**

- 120 direct beneficiaries selected and 4 milk producer's group formed, which are assessed through the inception report and first trimester report.
- 4 Dairy animal management training and 12 fodder production training organized which are assessed through trimester reports.
- 12 Demonstration plot established, mini-kits distributed to 120 household and 2 Milk collection centre got project support for quality milk collection which are assessed through trimester reports and project compilation report.
- Records of activities and findings kept properly and publication of finding (150 booklets and one video documentary) done is also the OVIs for output.

## Synopsis of Project Status

**Targeted Outputs:**

Output 1: Fodder yield and milk production increased, cost of milk production reduced; thus household incomes improved.

Output 2: Awareness and capacities of small scale dairy animal farmers enhanced.

Output 3: Group effort and institutionalism on dairy farming developed and linkage made between stakeholders in the district.

Output 4: Training manuals (booklets) and video documentary prepared regarding to dairy animal management and fodder cultivation.

**Activities Proposed**

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Baseline Survey | Completed in Jestha 2072 | 2 Earthquake which disturbed it. |
| 1.2 Beneficiaries selection and milk producer's group formation | Completed | Delayed by Earthquake |

| Activities | Activity status | Remarks |
|---|---|---|
| 1.3 District level inception workshop | Completed | |
| 2.1 Dairy animal management training | 4 completed | |
| 2.2 Fodder production training | 4 completed | |
| 2.3 Demonstration plot establishment | Yet to begin | |
| 3.1 Minikit Distribution | Yet to begin | |
| 3.2 Diagnostics And Veterinary Activities | Yet to begin | |
| 3.3 Marketing Assistance | Yet to begin | |
| 3.4 Record Keeping | Yet to begin | |
| 4.1 Project Monitoring | Yet to begin | |
| 4.2 Hoarding Board | Yet to begin | |
| 4.3 Output sharing workshop and publication of findings | Yet to begin | |
| 4.3.1 Output sharing workshop | Yet to begin | |
| 4.3.2 Booklets publication | Yet to begin | |
| 4.3.3 Preparation of short video documentary | Yet to begin | |
| 4.4 End line Survey (Post operation Survey) | Yet to begin | |
| 4.5 Public Hearing | Yet to begin | |
| 4.6 Reporting and other secondary Activities | Yet to begin | |

## Achievements (also include Findings in case of Research Projects)

- Baseline Survey
- Beneficiaries selection and milk producer's group formation
- District level inception workshop
- Dairy animal management training (2 day * 4)
- Fodder production training (1 day*4)
- Hoarding Board

Farmer in Mathurapati Fylbari showing his fodder grass during household survey.

Baseline Survey in Mathurapati Fulbari VDC.

## आयोजना शिर्षक: 'जलवायू अनुकुलन व्यवशायिक तरकारी खेती प्रवर्द्धन आयोजना'गुल्मी

**Project No:** 1140/2015/16

| | | | |
|---|---|---|---|
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| ***Start Date:*** | चैत्र २०७१ | ***End Date:*** | २०७४ कार्तिक |
| ***Project Cost:*** | १९,९६,४२२/६ | | |
| ***Location of Project:*** | गुल्मी जिल्लाको रुरु, रिमुवा र ग्वादी गाउँ विकास समिति | | |

## Background

विश्वमा भई रहेको जलवायू परिवर्तनको कारणले गर्दा सवै किसिमका कृषि वालीको उत्पादकत्वमा प्रतिकुलता थपिदै गएको छ। नेपाल जस्तो मनसूनमा आधारीत कृषि प्रणाली भएको देशमा जलवायू परिवर्तनको असर स्वरुप हुने मौशमि परिवर्तनले झन धेरै अप्ठ्यारो पारेको छ। त्यसैले नेपाल सरकारले कृषि क्षेत्रमा जलवायूको असर न्यूनीकरण गर्न उच्च प्राथमिकता दिएको छ।

गुल्मी जिल्ला ९१.०३% वासिन्दा कृषिमा आधारीत भएको पहाडि जिल्ला हो। यस जिल्लाको आवादी जमिन मध्ये १०६२.३३ हेक्टर खेत र २४०३०.५ हेक्टर वारी रहेको देखिन्छ। जिल्लाको २८०१६५ जनसंख्या मध्ये महिला १५९१६५(५६.८२%) र पुरुष १२०९९५ (४३.१८%) छन् (जिविस गुल्मी)[२]। राष्ट्रिय अनुकुलन योजना (NAPA) मा गुल्मी जिल्लालाई Climae Change Vulnerabilty Mapping को मापांक ०.१८१-०.३५५ राखेको पाईन्छ।[३] जिल्लाको पाखोवारीमा गरिने मुख्य बाली मकै र कोदो उत्पादकत्व राष्ट्रिय औसत भन्दा कम (प्रतिरोपनी मकै ७५ केजी र कोदो ४१ केजी)[४] भएकोले कृषि कर्म प्रति कृषकहरुको वितृष्णा बढ्दै छ। अझ कोदोको उत्पादन लागत भन्दा उत्पादन कम भएकोले किसानहरुले मकै पछि जमिन वांझै राख्न थालेका छन्।

जलवायूमा आएको पविर्तन न्यून गर्न निकै वर्ष लाग्छ। त्यसकारण जलवायू परिवर्तनवाट कृषि क्षेत्रमा परेको घाटा बैकल्पिक उपाय अपनाएर परिपूर्ति गरीनु पर्छ। त्यसकोलागि कृषिकोलागि उपयुक्त

2 राष्ट्रिय जनगणना २०६८ अनुसार: आवधिक जिल्ला विकास योजना गुल्मी (२०५९/०६० - ०६३/०६४)

3 MoE/NAPA Project (2010) Climate Change Vulnerability mapping for Nepal.

4 बर्षिक कृषि विकास कार्यक्रम तथा तथ्यांक पुस्तिका २०६७/०६८ - कृषि विकास कार्यालय गुल्मी

मौशम भएको समयमलाई अधिकतम सदुपयोग र प्रतिकुल मौशमकोलागि अनुकुलन योजना वनाई व्यवशायिक रुपमा उत्पादन गर्नु नै उत्तम उपाय देखिन्छ ।

यस आयोजना कृषिकोलागि उपयुक्त मौशममा बाली सघनतामा अधिकतम् वृद्धि र प्रतिकुल मौशम (सुख्खा मौशम)मा बैकल्पिक उपायवाट सिंचाईको सुविधा प्राप्त गरि वजारको माग अनुसारको व्यवशायिक कृषि प्रणाली स्थापित गर्न तयार पारीएको हो । त्यसकोलागि वर्षातको समयमा मकै भित्र घुसुवा बालीको रुपमा काउली, बन्दा तथा टमाटरको व्यवशायिक उत्पादन गर्ने, हिउंदमा घरेलु प्रयोगवाट खेर जाने पानीलाई संकलन गरि तरकारी खेतीकोलागि सिंचाईकोलागि प्रयोग गर्न सक्ने वनाउन आयोजनाले सहयोग गर्ने छ ।

गुल्मी जिल्लाका रुरु, ग्वादि र रिमुवा बाह्रै महिना यातायात सुविधा र कृषि विकासको लागि निकै मेहनती लगनशिल  किसानहरु भएको क्षेत्र हो । यहाँको आवादी जमिन मध्ये २६६.३ हेक्टर खेत, २००९.२१ हेक्टर पाखो वारी रहेको छ ।[५] यो क्षेत्र सुख्खा तथा भिराला पाखाहरु भएको पहाडि क्षेत्र हो । यस क्षेत्रका खानेपानीका लागि समेत पानीका श्रोतहरु अप्रयाप्त भएकोले सिंचाई सुविधा नभएको क्षेत्र हो । यस क्षेत्रका १५ समूहमा आवद्ध २१२ महिला सहित ३६६ जना कृषकहरुले विगत केही वर्ष देखि बैकल्पिक खेती प्रणाली अपनाउन प्रयास स्वरुप संगठित रुपमा व्यवशायीक रुपमा प्राङ्गारीक ताजा तरकारी खेती गरी रहेकाछन् । तर तरकारी खेतीलाई आवश्यक पर्ने पानीका श्रोतहरु घट्दै गएकोले कतिपय किसानहरुले पिठ्यूमा पानी बोकेर भए पनि तरकारी खेती गर्ने प्रयास गरि रहेकाछन् ।

## Project Summary

जलवायूवाट परेको असर घटाई कृषि जन्य उत्पादन वढाउन निकै लामो समय लाग्छ । त्यसैले जलवायू अनुकुलको वैकल्पिक कृषि उत्पादन प्रणालीको विकास तथा अभ्यासद्वारा कृषि क्षेत्रमा परेको नकरात्मक असर न्यून गर्नु यस आयोजनाको मूख्य उद्देश्य हो ।

आयोजना क्षेत्रका पाखो वारीमा परम्परा देखि मकैलाई मुख्य बाली मानि त्यसैको उत्पादनलाई प्राथमिकता दिने गरिएको छ । तर जलवायू परिवर्तनको कारण मनसुनी वर्षामा मकैको उत्पादनमा प्रतिकुल असर नपारीकन मकै भित्रै व्यवशायिक ताजा तरकारी खेती गरी वजारमा महंगोमा विक्रि हुने मौषम (दशै तिहार) विक्रि गर्ने गरि उत्पादन गर्न सामाजिक परिचालनको आध्यमवाट किसानहरुको दक्षता क्षमता विकास गरिने छ ।

कालीगण्डकीसंग जोडिएका गुल्मीका रीमुवा, ग्वादी र रुरुको माथिल्लो क्षेत्रका मेहनती किसानहहरु तरकारीको व्यवशायिक खेती गर्न प्रयासरत छन् । तर भएका पानीका श्रोतहरु पनि घट्दै गएकोले पानीको अभावले समस्यामा छन् । आयोजनाले तिनै कठिनाईका साथ तरकारी खेती गरि रहेका रीमुवा, ग्वादी किसानहरुलाई सहयोग पुऱ्याउने छ । त्यसकोलागि पानी पर्याप्त हुने समयमा घुसुवा तरकारी खेती, थोरै पानीले धेरैलाई पुग्ने गरि वहुवर्षिय लहरेबाली तरकारी, साना सिंचाईको प्रयोगद्धारा घरवगैचा निर्माण तथा घरेलु प्रयोगवाट खेर जाने पानीलाई संकलन गर्ने व्यवस्था भएको जुठेल्ना निर्माण गर्न सहयोग गर्नेछ । यसवाट उनीहरुले व्यावशायिक तरकारी खेती गर्न सक्ने अवस्था सृजना हुनेछ । किसानहरुलाई परिवर्तित अवस्था अनुसारको व्यावशायिक तरकारी खेती गर्न सक्ने विधि प्रविधि प्रयोग गर्न सक्ने बनाईने छ ।

## Project Purpose/Objectives

"भोटको घाटा मधेशमा उठाउने" उखान जस्तै जलवायू परिवर्तनवाट उत्पन्न प्रतिकुल परिस्थितिले कृषि जन्य उत्पादनमा पारेको घाटा बैकल्पिक उपायद्वारा परिपुर्ति गर्नु पर्छ । त्यसैले प्रस्तावित आयोजनाको उद्देश्य

[५] जिल्ला कृषि विकास कार्यलय गुल्मी, वार्षिक कृषि विकास तथा तथ्यांक पुस्तिका - ०६८/६९

*"जलवायू परिवर्तनका कारणवाट कृषि क्षेत्रमा परेको नकरात्मक असरलाई न्यूनीकरण गर्ने"* रहेको छ। त्यसकोलागि किसानहरुलाई बैकल्पिक विधि प्रविधि वारेमा व्यवहारीक ज्ञान, सिप धारणा विकास गरि जलबायू अनुकुलको व्यावशायिक खेती गर्ने कृषक तयार पारीने छ।

आयोजनाले मकै उत्पादनमा प्रतिकुल असर नपर्ने गरी घुसुवा तरकारी खेती र हिउंदमा वहु वर्षिय लहरे तरकारी वालीको खेती गर्ने विधि प्रविधिलाई प्रवर्द्धन गर्ने उद्देश्य राखेको छ। जलवायू परिवर्तनको कारणले कृषि जन्य उत्पादनमा परेको नकरात्मक असरको क्षतिपूर्तिको लागि किसानहरुले नै गर्न सक्ने कार्य "जलबायू अनुकुलन कृषि प्रणाली"को व्यापक प्रचार प्रसार गर्नु पनि यस आयोजनाको अर्को उद्देश्य हो। प्राकृतिक अवस्थालाई सहजै परिवर्तन गर्न सकिदैन तसर्थ प्रकृति अनुकुल हुन नसक्नेको अस्तीत्व संकटमा पर्छ। त्यसैले यस आयोजनाको मुख्य उद्देश्य *जलवायू परिवर्तनका कारणवाट संकटमा परेको परम्परागत कृषि प्रणालीलाई जलवायू अनुकुलको व्यावशायिक कृषि प्रणालीमा रुपान्तरण गर्ने* रहेको छ। त्यसकोलागि आयोजनाले किसानहरुलाई निम्नानुसारका कार्य गर्न सक्ने बनाउईने छ।

- सिंचाईको आवश्यकता नपर्ने समयको बाली प्रणालीमा सुधार र बाली सघनता वृद्धि गरी उच्च मूल्यका कृषि उत्पादन गरी रहने परिपाटी स्थापित गर्ने।
- सुख्खा समयमा गरिने व्यवशायिक तरकारी खेतीकोलागि आवश्यक पर्ने पानीको जोहो गर्न सुक्दै गएका मुहान संरक्षण तथा सदुपयोग एवं घरेलु प्रयोगवाट खेर जाने पानीको सदुपयोग गरि बैकल्पिक सिंचाईको व्यवस्थ गर्ने।

विरुवाको जरामामात्र सिंचाई गर्ने विधि अपनाई वढि उत्पादन लिन सकिने वजारमा माग भएका बालीहरुको व्यवशायिक उत्पादन र सो को प्रचार प्रसार र वजार व्यवस्था

## Beneficiaries

जलवायू परिवर्तनले सवै भन्दा वढि असर ग्रामिण क्षेत्रका थोरै जग्गा जमिन भएका गरीव किसानलाई परेको छ। गरीव किसानहरुसंग वर्षातको पानीमा आधारीत खेती गरीने पहाडको माथिल्लो भागको थोरै पाखोवारीमात्र हुन्छ। जलवायू परिवर्तनले सवै भन्दा वढि असर यस्ता पाखोवारीमा गरीने खेतीमा परेकोले विपन्न किसानहरुको जीवन अरु कष्टकर वनेको छ। प्रस्तावित आयोजनाले पहाडको माथिल्लो भागमा वसोवास गर्ने सिंचाई सुविधा विहिन थोरै पाखोवारी भएका गरीव किसानहरुलाई आफ्नो लक्षित वर्ग भनेर पहिचान गरेको छ।

आयोजनाका मुख्य लक्षित वर्ग भनेको ३ गा. वि. स. का पहिलेनै जिल्ला कृषि विकास कार्यलयमा दर्ता भएका १५ वटा समुहवाट छनौट गरीएका ३०० (६०% महिला र ४०% पूरुष, त्यस मध्ये कम्तिमा ३०% जनजाति, १०% दलित र ६०% ब्राहमण र क्षेत्री) कृषक परिवार हुनेछन्। आयोजनामा प्रत्यक्ष रुपमा संलग्न किसानले मकै भित्र घुसुवा तरकारी खेती, बैकल्पिक सिंचाई प्रविधिमा आधारीत तरकारी खेती गर्न आवश्यक दक्षता/क्षमता विकास तथा बैकल्पिक सिंचाई संरचना निर्माणमा सहयोग प्राप्त गर्नेछन्। यसरी प्राप्त ज्ञान, सिप, धारणा र निर्माण भएका संरचनाको सदुपयोग गर्दै व्यवसायिक ताजा तरकारी उत्पादन गरि नजिकैको स्थानीय बजार तथा कृषि उपज संकलन केन्द्रमा विक्रिगरी निरन्तर लाभ लिन सक्नेछन्।

**आयोजनामा प्रत्यक्ष रुपमा लाभान्वित हुने घरधुरीहरु**

| जिल्ला | गाविस | दलित | | | जनजाती | | | अन्य | | | जम्मा | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | महिला | पुरुष | जम्मा | महिला | पुरुष | जम्मा | महिला | पुरुष | जम्मा | महिला | पुरुष | जम्मा |
| गुल्मी | रुरु | ३ | २ | ५ | ६ | ४ | १० | २७ | १८ | ४५ | ३६ | २४ | ६० |
| | ग्वादी | ९ | ६ | १५ | २७ | १८ | ४५ | ३६ | २४ | ६० | ७२ | ४८ | १२० |
| | रिमुवा | ६ | ४ | १० | २१ | १४ | ३५ | ४५ | ३० | ७५ | ७२ | ४८ | १२० |
| कुलजम्मा | | १८ | १२ | ३० | ५४ | ३६ | ९० | १०८ | ७२ | १८० | १८० | १२० | ३०० |

आयोजना क्षेत्रमा उत्पादित तरकारी उपभोग गर्ने उपभोक्ता, तरकारी व्यापारी पनि आयोजनाको सहयोगवाट उत्पादित तरकारी उपभोग वा खरीद विक्रि गरेर लाभान्वित हुन सक्नेछन् । आफ्नो जमिन नहुने कृषि मजदूरहरु पनि व्यवसायिक कृषि गर्ने किसानकोमा थप कामको अवसर प्राप्त गरि लाभान्वित हुनेछन् ।

## Targeted Out puts and Objectively Verifiable Indicators (OVIs)

**Output 1 : परम्परागत खेती प्रणालीको सट्टा नाफामूलक मकै भित्र घुसुवा तरकारी खेती प्रणाली स्थापित भएको हुनेछ ।**

**आयोजनाको अन्त्य (वि.स.२०७४) सम्ममा आयोजना क्षेत्रका:**

- १५० किसानहरुले मकै भित्र घुसुवा तरकारी खेती गरि दशै तिहारको बेला औषतमा प्रति परिवार ५०० के.जी काउली, वन्दा, टमाटर तथा सिमि विक्रि गरी गरि रहेका हुनेछन् ।
- रीडि, तम्घास तथा तान्सेनका ५ जना तरकारी व्यापारीहरुले दशैं तिहारको बेला आयोजना क्षेत्रवाट उत्पादित तरकारी खरीद गरि विक्रि गरी रहेका हुनेछन् ।

**Output 2 : आयोजना क्षेत्रका सिंचाई सुविधा नभएका किसान परिवारले समेत हिउंदमा पनि व्यावशायिक तरकारी खेती गर्ने परिपाटी स्थापित भएको हुनेछ ।**

**आयोजनाको अन्त्य (वि.स.२०७४) सम्ममा आयोजना क्षेत्रका:**

- ७५ जना किसान प्रत्येकले वैकल्पिक सिंचाई सुविधा प्रयोग गरेको घरवगैचामा उत्पादित तरकारी घरेलु उपयोगवाट वचेको १०००केजी प्रति वर्ष हिंउदे तरकारी विक्री गरी रु.२०००० थप आम्दानी गरि रहेका हुनेछन् ।
- ७५ जना कृषकहरुले कम पानीमा पनि उत्पादन गर्न सकिने वहुवर्षिय लहरेवालीको व्यवशायिक तरकारी खेती गरी उत्पादीत तरकारी घरेले उपयोगवाट वचेको ५०० केजी प्रति वर्ष विक्री थरि रु.१००००० थप आम्दानी गरि रहेका हुने छन् ।
- रीडि, तम्घास तथा तान्सेनका ५ जना तरकारी व्यापारीहरुले फाल्गुण चैत्रमा आयोजना क्षेत्रवाट उत्पादित इस्कुस, हिउंदे सिमि जस्ता तरकारी खरीद गरि विक्रि गरी रहेका हुनेछन्

**Output 3 : जलवायू अनुकुलन तरकारी खेती प्रविधिको प्रचार प्रसार भएको हुने छ ।**

- व.सं.२०७४ आश्विनसम्ममा आयोजना क्षेत्र वर परका १०० किसानहरुको मकै भित्र घुसुवा तरकारी लगाई उत्पादन लिई रहेका हुनेछन् ।
- व.सं.२०७४ सम्ममा आयोजना क्षेत्र बाहिरका ५० कृषकहरुले आफ्नो घरेलु प्रयोगवाट खेर गएको पानीको सदुपयोग गर्दै तरकारी खेती गर्न शुरु गरेका हुनेछन् ।

## Up-scaling Pathways

आयोजना क्षेत्रका ४५% किसानहरुलाई आफ्नो उव्जनि र नियमित आम्दानीले ६ महिना पनि खान पुग्दैन । त्यसकारण आयोजनामा प्रत्यक्ष रुपमा संलग्न हुने किसानहरुमा आधा भन्दा वढि गरीव किसान छन् । आयोजनाले रुखो पाखो वारी भएका विपन्न किसानहरुकोलाई सिंचाई नचाहिने समयमा वाली सघनता वृद्धि र खेरजाने पानीको सदुपयोगद्वारा व्यवसायिक ताजा तरकारी खेती गर्न सक्ने बनाउने छ । विपन्न किसानहरुले यसरी उत्पादित तरकारी विक्रि गरि अहिले भई रहेको भन्दा वढि आम्दानी गर्नेछन् । त्यसै गरि आफ्नो नियमित खानामा ताजा तरकारीको उपयोगवाट सन्तुलित आहार प्राप्त गर्नेछन् । यसवाट उनीहरुको स्वस्थ्य राम्रो भई वढि काम गरि थप आम्दानी गर्न सक्नेछन् । यसरी प्राप्त थप आम्दानीवाट ति विपन्न परिवारले आफ्ना अन्य आवश्यकताहरु परिपूर्ति गरि आफ्नो जीवन स्तर सुधार गर्न सक्नेछन् ।

आयोजनाले सिकाउने विधि प्रविधि किसानहरुले सजिलै सिक्ने र अनुकरण गर्न सक्ने भएकोले विपन्न किसानहरुले पनि यस्को निरन्तर उपयोग गर्न सक्नेछन् । आयोजना कार्यान्वयनको चरणमा निर्माण गरिएका साना सिंचाई प्रणाली तथा जुठेल्नो सुधारका संरचनाहरु लामो समयसम्म टिक्ने हुनाले उनीहरुलाई झट्टै पुनर्निर्माणको जरुरत पर्दैन केही वर्ष पछि टुट फूट भए पनि व्यवशायिक तरकारी खेतीवाट गरिएको आम्दानीले सहजै मर्मत संभार तथा आवश्यकता अनुसार पुनर्निर्माण गर्न सक्ने हुनाले यस आयोजनामा संलग्न किसानहरुको दीगो रुपमा गरीवि न्यूनीकरण गर्न मद्दत पुग्ने सुनिश्चित छ ।

पहाडको माथिल्लो भागमा वसोवास गर्ने विपन्न किसानहरुको जमिन भिरालो हुनाले पानी नजम्ने खालको हुन्छ । पहाडको माथिल्लो भागमा श्रावण भाद्रमा काउली वन्दा, सिमि तथा टमाटरकोलागि चाहिने चिस्यान र तापक्रम दुवै अनुकुल हुन्छ । सोही अनुकुलतालाई उपयोग गर्दै विपन्न किसानहरुलाई मोटो डांठ हुने (देउती, मनकामना ३) जातको मकै रोपी सो भित्र घुसुवा वालीको रुपमा काउली, वन्दा सिमि/वोडि वा टमाटरको व्यवशायिक खेती गर्न लगाईने छ । यसरी गरिएको खेतीले मकैको उत्पादनलाई यथावत राख्दै ४१ केजी कोदो उत्पादन हुने एक रोपनी जमिनमा १ मे.टन काउली वन्दा उत्पादन गरी बेचेर रु २०,००० भन्दा वढि थप आम्दानी गर्न सक्छन् ।

खेती योग्य जमिन प्रयाप्त नभएका किसानहरुलाई कम पानीको प्रयोगवाट एउटै खाडलमा स्कुस र हिउंदे सिमिका धेरै वोट लगाई छुट्टाछुट्टै थाक्रा दिई उत्पादन लिने प्रविधि अनुसार खेतीवाट खेती तथा सो को विक्रिवाट पनि थप आम्दानी हुने छ । पानीको मुहान संरक्षण र पुराना पोखरी मर्मत सुधारवाट हुने पानीको उपलव्धता वृद्धिले पनि विपन्न समुदायको जिविकोपार्जनमा सहयोग गर्ने छ ।

माथिका सवै अवस्थाले गरीवहरुलाई थप आम्दानी गर्न वा आफ्नो खर्च घटाउने अवसर दिने हुनाले यसले गरीवी न्यूनीकरणमा दीर्घकालसम्म प्रत्यक्ष योगदान गर्ने छ । किनभने कृषि क्षेत्रको व्यवसाय स्थापित र नाफा मुलक भयो भने दीगो समयसम्म चल्छ ।

## Synopsis of Project Status

### Activities Proposed

| Activities | | Progress status |
|---|---|---|
| १.१ | कार्यक्रमवारे जानकारी | |
| १.२ | आभारभुत तथ्यांक संकलन तथा कृषक छनौट | २०७२ वैशाखमा सम्पन्न भई सकेको |
| १.२.१ | आधारभुत तथ्यांक संकलन | २०७२ वैशाखमा सम्पन्न भई सकेको |
| १.२.२ | कृषक छनौट | २०७२ वैशाखमा सम्पन्न भई सकेको |

| | | |
|---|---|---|
| १.३ | मकै भित्र घसुवा तरकारी खेती | २०७२ वेशाखमा सहभागी छनौट गर्ने कार्य सम्पन्न |
| १.४ | प्राविधिक रेखदेख र अनुगमन | प्रथम वर्षको दोश्रो चौमासिक वाट निरन्तर सन्चालन |
| २.१ | जलवायू अनुकुलन तरकारी खेती अभियान | प्रथम वर्षको दोश्रो चामासिकमा सन्चालन गर्ने तयारी |
| २.२ | थोंपा सिंचाईमा आधारित घरवगैचा नमुना प्रर्दशन | प्रथम वर्षको दोश्रो चामासिकमा सन्चालन गर्ने तयारी |
| २.३ | कृषक तथा व्यापारी विच अन्तरक्रिया | दोश्रो वर्षको तेश्रो चौमासिकमा सन्चालन गर्ने तयारी |
| ३.१ | अनुगमन तथा चौमासिक प्रगति समिक्षा | प्रत्येक चौमासिकको अन्त्यमा सन्चालन गर्ने तयारी |
| ३.२ | वार्षिक प्रगति समिक्षा तथा कृषक अनुभव आदान प्रदान गोष्ठि | प्रथम वर्षको तेश्रो चौमासिकमा सन्चालन गर्ने तयारी |
| ३.३ | सुचना, शिक्षण तथा संचार सामाग्रीको उत्पादन तथा वितरण | |
| ३.३.१ | ब्रोसर प्रकाशन र होडिङ्ग वोर्ड निर्माण | प्रथम वर्षको दोश्रो चौमासिकमा प्रकासन गर्ने तयारी |
| ३.३.२ | भिडियो डकुमेन्ट्री निर्माण | प्रथम वर्षको दोश्रो चौमासिकवाट निरन्तर शुरुवात गर्ने तयारी |
| ३.४ | अनुगमन, मुल्यांकन तथा प्रतिवेदन प्रस्तुती | |
| ३.४.१ | नियमित अनुगमन, प्राविधिक सहयोग र चौमासिक प्रगति प्रतिवेदन | २०७२ वैशाख वाट परियोजना क्षेत्रमा भएका गतिविधिको नियमित रुपमा अनुगमन गर्ने कार्य भई रहेको |
| ३.४.२ | संयुक्त अनुगमन | प्रथम वर्षको तेश्रो चौमासिकमा सन्चालन गर्ने तयारी गरेको |
| ३.४.३ | वार्षिक तथा अन्तिम मुल्यांकन प्रतिवेदन तयारी तथा मुल्यांकन प्रतिवेदन प्रकासन | तेश्रो वर्षको अन्तिम चौमासिकमा सन्चालन गर्ने |

## Achievements (also include Findings in case of Research Projects)

१. आयोजना क्षेत्रमा आयोजना सन्चालन गर्नका लागि ३ वटा गा.वि.स.का १५ वटा समुहहरु छनौट गरि तथ्यांक संकलन गर्ने कार्य सम्पन्न भई सकेको छ ।

२. आयोजनासंग क्षेत्रका मकै भित्र घुसुवा काउली, वन्दा, टमाटर खेती गर्नका लागि १५० किसानहरुको छनौट कार्य सम्पन्न भई सकेको छ ।

३. आयोजना क्षेत्रका ७५ किसान परिवारमा घरवगैचा निर्माण तथा थोपा सिचाई प्रविधिवाट पानीको प्रयोग गर्दै व्यवशायिक रुपमा कम्तिमा १/१ रोपनी जमिनमा व्यवशायिक तरकारी खेती गर्ने किसानहरुको छनौट भई सकेको छ ।

४. आयोजना क्षेत्रका किसानहरुले हाल संरक्षणमा ध्यान नदिएको गोठेमललाई घाम पानी बाट सुरक्षा र त्यसै खेर फाली रहेको पशुमुत्रको संकलन तथा सदुपयोग गर्न उत्प्रेरित गरिएको ।

५. कृषि विकास कार्यालय, स्थानिय साझेदार संस्था र अन्य सरोकारवालाहरुसंग समन्वय गरी कार्यक्रम संचालन गर्ने गरिएको छ ।

# PROJECT TITLE: COMMERCIAL CAULIFLOWER PRODUCTION AND MARKETING IN SARLAHI DISTRICT

**Project No.** : 1141/2015/016

| | |
|---|---|
| ***Project Coordinator*** | Mr. Ram Sogarath Shah |
| ***Address*** | Janakpur-15, Dhanusha |
| ***Telephone*** | 9842034861 |
| ***Email*** | ramsogarath07@gmail.com |
| ***Collaboration/Partners*** | District Agriculture Development Office, Sarlahi Horticulture farm, Nawalpur, Sarlahi Commercial Crop Division, NARC, Lalitpur |
| ***Duration of Project*** | Three Years (April 2015 to March 2018) |
| ***Project Cost*** | NARDF Contribution: NPR. 2995348<br>Collaborator Contribution: NPR. 357363 Total: NPR. 3352710 |
| ***Location of Project*** | 3 VDCs (Arnaha, Ramban and Bagdah) of Sarlahi District |

## Project Summary

This project envisages production of cauliflower in Sarlahi districts at commercial scale through six farmers group. Cauliflower is a major crop to have high impact on rural livelihood through income generation and by creating employment opportunity. Increased consumer's income is forcing higher consumption of vegetables therefore there is increase in demand for cauliflower. Lack of technologies for commercial cauliflower production is only constraints at present situation and that is creating gap between demand and supply situation for this crop.

Commercial production and marketing of Cauliflower in Sarlahi district is the main purpose of this project. It will deliver commercial production technologies to six farmers groups in the proposed locations where there is no such intervention has been made neither by DADO nor by any other developing agencies. The farmers will be given technologies on package of practice for commercial cauliflower production. The farmers will get participatory training; from the nursery raising to the end market, so that they could know all the aspects of production and marketing of cauliflower. The farmers will also benefitted by installing deep tube well for irrigation system in project locations.

The produced vegetables will be sold through cooperative as well as seed company. For this purpose, project will support to establish marketing networking in Malangwa, Barhathwa, Lalbandi and Kathmandu as a distant market. In case of Kathmandu, Krishi guru, a private based company will help for marketing of produced commodity. This company is selling different vegetables through its own outlets in Kathmandu. Agreement for selling of the produced cauliflower done.

The production technologies as a booklets, leaflets, posters, success story and video documentary will be scaled upto the farmers, stakeholders and DADOs of other Terai districts.

The main beneficiaries of the project will be 150 participating farmers who will be involved in commercial production of cauliflower. Similarly, more than 20 service providers like agrovets will also be the beneficiaries as they will supply inputs like seeds, manures, fertilizers, pesticides and instruments. Likewise, more than 1000 workers will also be benefitted from this project as they will get work/job for the production of vegetables in commercial basis as participant's own family labor will not be sufficient.

The secondary beneficiaries will be the farmers, local traders, input suppliers and workers of other communities, technician and traders who will use the finding of the technology.

Formation of six groups consisting two cauliflower production group in each project VDC will be done at the end of first year. This group will engage in commercial scale production of cauliflower in respective project location. The group will equipped with latest technology on cauliflower production at the end of second year. This will strengthen the farmers group to produce cauliflower at large scale. In subsequent year, the number of cauliflower producing farmers increase to 200 and by the end of this project there will be 300 farmers actively cultivating cauliflower in project VDCs . Transformation of all these six group into one single cooperative done at the end of this project so there will be sustainable cauliflower production as well as strong linkages with other stakeholders.

## Synopsis of Project Status

### Targeted Outputs:

1. Baseline situation of project beneficiaries identified and work plan and value chain established
2. Commercial scale cauliflower production technology established and production of cauliflower at commercial scale done
3. Key project finding disseminated

### Activities Proposed

| Activities | Activity status | Remarks |
|---|---|---|
| 1.1 Conduction of baseline survey<br>1.2 Value chain study of cauliflower<br>1.3 Inception meeting and Formation of commercial cauliflower cultivation group | • On going<br>• On going<br>• Inception meeting completed on May 23, 2015 & group formation on going | |
| 2.1 Participatory training on commercial cauliflower production technology<br>2.2 Demonstration plot establishment<br>2.3 Vermicompost pit establishment<br>2.4 Commercial scale cauliflower production<br>2.5 Post harvest handling and marketing support<br>2.6 Marketing channel establishment<br>2.7 Benefit cost ratio analysis | • To be done in later trimester | |

| Activities | Activity status | Remarks |
|---|---|---|
| 3.1 Hoarding board establishment<br>3.2 Technical publication<br>3.3 Joint monitoring<br>3.4 Scaling up verified technology<br>3.5 Observation tour<br>3.6 Production of video documentary<br>3.7 Technology transfer workshop<br>3.8 Public hearing<br>3.9 Post project evaluation<br>3.10 Preparation of deliverables | • To be done in later trimester | |


Glimpse of Inception workshop