

# Main project completion Report

Of

PP 709

SUBMITTED TO

NATIONAL AGRICULTURE RESEARCH AND  
DEVELOPMENT FUND (NARDF)

SUBMITTED BY

Rural Development Centre

Gorkha

## Project Completion Report of PP 709

### 1. Background

Gorkha district has been lagging behind 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. In the absence of adequate development infrastructures and difficult terrain, the available economic opportunities for the people are very limited. Agriculture is the main occupation of the people. Of the total area, agricultural land covers about 15% and of that, about 76% is cultivated. About 77% economically active populations derive their employment from farming (CBO, 2004). However, majority of the households are not been able to make their subsistence living with conventional 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. Though the farmers of the other many districts have made substantial improvement in the household income through different agricultural activities like seasonal and vegetable production, the farmers here are not aware about such packages. Only 947 hectare area is covered by vegetable which is less than 2 percent of the total agricultural land (DADO, 2063). They lack adequate knowledge on improved production and marketing practices of organic vegetables.

In Nepal, use of pesticides and fertilizer is wide spread in commercial agriculture production areas due to conventional agriculture based market and infrastructure development. Pesticides and fertilizers consumption is increasing at faster rate with intensification and commercialization of farming business regardless of their detrimental effect on human and environmental health. The indiscriminate use of the agro chemicals has, in consequence, initiated several problems such as pests' resistance to pesticides and resurgence due to elimination of their natural enemies, environmental pollution (water, air and soil), toxic residues in food and feed materials, depletion of soil fertility, disruption of ecosystem, animal and human health hazards and other economic losses. This forces to think alternative strategies towards sustainable agriculture development and preserving natural ecosystem in Nepal.

Organic agriculture is a holistic production management system, which promotes and enhances agro-ecological health, including biodiversity, biological activities (FAO, 1999). This system favors maximum use of organic materials and avoids use of synthetically produced agro inputs for maintaining soil productivity, fertility and pest management under conditions of sustainability and healthy environment (Dahama, 1999; FAO, 2002).

Broadly, organic agriculture in Nepal can be categories into three types.

#### 1. Organic agriculture by default

In most of the hilly region of Nepal, farmers have been practicing traditional farming system, and thus there have never been any use of chemical fertilizers and pesticides nor the application of conventional methods of agriculture. In other words, the products in such areas are entirely organic.

#### 2. Organic agriculture in Conversion

The process of converting high input agro-chemical based farming into organic farming has gradually been growing in Nepal. From the second year of completely stopping the use of agro-chemical inputs, the farm products are defined as 'organic in conversion' and continued at least for the third year of production.

#### 3. Organic agriculture

This is a state of agriculture being transformed back from conventional farming to organic farming. In general, the fourth year of production from the complete prohibition of agro-chemical use is labelled as organic.

Organic farming claims to have the potential to provide benefits in terms of environmental protection, conservation of non-renewable resources, improved food quality, reduction in output of surplus products and reorientation of agriculture towards areas of market demand (Lampkin,1990). Sharma (2001) makes a case for farming as the most widely recognized alternative farming system to the modern one. Due to this reason organic movement is getting much impetus in many countries especially in the developed one.

Organic certification is a procedure by which an independent third party gives a written assurance that a clearly identified process has been methodologically assessed such that adequate confidence is given if specified products conform to specified requirements.

The proposed VDCs of the project area of Gorkha is accessible for transportation facility since there is year round motorable road cross cutting these VDCs. But, there is no interventions made from government as well as no government side where there is wide range of opportunities for the farmers of that road corridor. Farmers from that road corridor are not aware of improved agricultural technologies for organic vegetable production and marketing. As a result, agriculture remained at subsistence level and farmers are living with low standard due to very low level of household income.

So, this project is designed for promoting the organic vegetable production technology for vegetables "organic in conversion" during the project period and organic product after completion of the project through training, technology demonstration, observation tour, workshop, interaction, field inspection/certification and market management of the product so that farmers' income will be increased.

## 2. Research implementation performance

<b>Activity No:</b>	1.1.2	<b>Activity:</b>	Groups formation and mobilization
<b>Implementation Status:</b>	Altogether 12 groups are formed in 4 VDCs namely Taklung, Makaising, Tanglichowk and Phujel VDCs. Out of 10 groups, 4 groups are women groups. We did so to participate more women farmers in project activities.		
<b>Means of verification:</b>	Farmers' group record and minutes Trimester report		

<b>Activity No:</b>	1.1.3	<b>Activity:</b>	Cooperative formation and mobilization
<b>Implementation Status:</b>	One cooperative is formed in Makaising VDC of Gorkha. Two groups i.e. Suvgabha organic vegetable group and Naba prativa organic vegetable producer groups were upgraded into Namuna Organic Agriculture Cooperative Limited. The total members of the cooperative is 26.		
<b>Means of verification:</b>	Trimester Report Base Line Survey Report		

<b>Activity No:</b>	1.1.5	<b>Activity:</b>	Regular internal monitoring
<b>Implementation Status:</b>	The monitoring of the project activities was done by the project staff. Monitoring of the groups was done by project coordinator and DADO staff in the field. Out of 10 groups, four groups have started seedlings production in		

	<p>poly bags. Some of the farmers have also transplanted cucumber, bitterguard, summer squash and tomato. The following farmers are growing cucumber, summer squash, onion, bitter guard, tomato, sponge guards etc.</p> <ul style="list-style-type: none"> <li>• Ram Chandra Adhikari,</li> <li>• Tej Bahdur Gurung,</li> <li>• Ram Krishna Adhikari</li> <li>• Kamal Gurung</li> <li>• Sher bahadur Thapa Magar</li> <li>• Shanta Panta</li> <li>• Muna Panta</li> <li>• Bina Thapa</li> <li>• Sabina Rana</li> <li>• Kamala Sapkota</li> <li>• Goma Shrestha</li> </ul> <p>Other farmers could not protect the seedlings of cucumber, squash and bitter guard due to low temperature in the winter.</p> <p>Five groups of farmers have also started making organic and herbal pesticides locally in the village.</p> <p>Some farmers are collecting cow urine and applying in the vegetable production.</p>
<b>Means of verification:</b>	<p>Trimester Report Farmers field</p>

<b>Activity No:</b>	1.2.1	<b>Activity:</b>	Training on quality manure preparation and organic pest management
<b>Implementation Status:</b>	<p>Two days training on quality manure preparation and organic pest management was conducted in Taklung and Tanglichowk VDCs on 3-4 &amp; 9-10 mansir 2068 respectively. The resource persons for the training were project coordinator and Bir Bahadur Thapa ( Horticulture officer of DADO Gorkha). The total numbers of participants were 41. Out of 41 farmers, 37 (90 %) were the women farmers. These farmers have started preparing quality FYM, the compost and herbal pesticides from the plants available locally.</p> <ul style="list-style-type: none"> <li>•</li> </ul>		
<b>Means of verification:</b>	<p>Training Minute Trimester Report Photo</p>		

<b>Activity No:</b>	1.2.2	<b>Activity:</b>	Training on organic vegetable production techniques
<b>Implementation Status:</b>	<p>Five number of two days Organic Vegetable Production Training was conducted on 9-10 Mansir, 25-26 Poush, 2-3 Falgun, 9-10 Falgun and 14-15</p>		

	Chaitra of 2068 in Makaising, Tanglichok and Taklung VDCs. The resource persons for the training were project coordinator and DADO staff. The total numbers of participants were 104. These participants were selected from eight farmer groups. Farmers were trained on Organic vegetable production techniques both theoretically and practically.
<b>Means of verification:</b>	Training Minute Trimester Report Photo

<b>Activity No:</b>	1.4.2	<b>Activity:</b>	Demonstration of the preparation and application of herbal and bio pesticides
<b>Implementation Status:</b>	<p>Demonstration of the preparation of different organic pesticides done in eight farmers field namely are as follows;</p> <ul style="list-style-type: none"> <li>• Ram Chandra Adhikari,</li> <li>• Tej Bahadur Gurung,</li> <li>• Ram Krishna Adhikari</li> <li>• Bina Thapa</li> <li>• Sabina Rana.</li> <li>• Dip bahadur Gurung</li> <li>• Gakul Gurung</li> <li>• Shanta Panta</li> </ul> <p>The farmers have started making Giti mal, natural pesticides, quality compost by using litter, dungs and urine in pit and heap method. Two farmers have started collecting urine and making EM compost.</p>		
<b>Means of verification:</b>	Farmers field Trimester Report Photo		

<b>Activity No:</b>	1.5.1	<b>Activity:</b>	Improved Vegetables seed support
<b>Implementation Status:</b>	A total of ten farmers groups were supported for improved vegetable seed. The seed of Cauliflower, cabbage, Onion, radish, cucumber, Bitter guard, summer squash and tomato were distributed to the farmers.		
<b>Means of verification:</b>	Farmers field record Trimester Report		

<b>Activity No:</b>	1.5.2	<b>Activity:</b>	Agri equipments and plant protection support
<b>Implementation Status:</b>	Agri equipments such as water cane, drum, sprayers, EM, organic pesticides are distributed to 4 farmer groups of Tanglichowk and Fujel VDCs.		
<b>Means of verification:</b>	Farmers field record Trimester Report		

<b>Activity No:</b>	1.5.3	<b>Activity:</b>	Support for Irrigation
<b>Implementation Status:</b>	One plastic pond is constructed in fujel-2, Kaudi. The farmer was supported for 150 GSM plastic sheet. Similarly, plastic pipes was also supported for irrigating the vegetable farm.		
<b>Means of verification:</b>	Farmers field Photo		

<b>Activity No:</b>	1.6.1	<b>Activity:</b>	Field inspection
<b>Implementation Status:</b>	Field of 7 farmers field was done by Project staff and DADO representative in Shrawan 2069. The farmers whose field was inspected are as follows; <ul style="list-style-type: none"> <li>• Jun Maya Rana</li> <li>• Dili Maya Thapa</li> <li>• Ram Chandra Adhikari</li> <li>• Samjhana Tiwari</li> <li>• Tej Bahadur Gurung</li> <li>• Shanta Panta</li> <li>• Goma Tiwari</li> </ul>		
<b>Means of verification:</b>	Farmers Field Field Inspection Report		

<b>Activity No:</b>	2.1	<b>Activity:</b>	Market Study
<b>Implementation Status:</b>	The market study for exploring the organic market was done on 15- 16 Bhadra 2069. The participants in the study were project coordinator, DADO staff, NGO members and eight farmers. The different markets of Kathmandu were visited and information was collected. The main markets visited were Kalimati, vegetable market, Bhatbhateni Super Market, Maharajgunj; Organic Village, Baluwatar; Organic Store, Dhapasi etc.		
<b>Means of verification:</b>	Market study report Photo		

<b>Activity No:</b>	2.2	<b>Activity:</b>	Workshop on Organic vegetable marketing
<b>Implementation Status:</b>	An interaction workshop was organized on 3 <sup>rd</sup> Baisakh 2069 in the training hall of Jugdi vegetable and fruit producer of Taklung VDC. The total number of participants were 20. The main points discussed in the workshop were the production status of organic vegetables, possibility of difference of organic vegetables from inorganic, the pricing policy of the cooperatives and transportation of organic vegetables etc.		
<b>Means of verification:</b>			

<b>Activity No:</b>	2.3	<b>Activity:</b>	Support for collection centre establishment and operation
<b>Implementation</b>	One table, four chairs and one weighing machines as well as rent were		

<b>Status:</b>	provided to the temporary collection centre in Makaising and Taklung VDCs of Gorkha district.
<b>Means of verification:</b>	Photo Receipt

<b>Activity No:</b>	3.1	<b>Activity:</b>	Participatory monitoring and evaluation
<b>Implementation Status:</b>	The monitoring of the organic vegetable production area of Fujel and Makaising was done by a joint team of Project coordinator, DADO staff, NGO members and farmers. During the monitoring it was found that farmers are practicing the production practices of organic vegetables but are worried about the price value of organic vegetables with compared to inorganic one.		
<b>Means of verification:</b>	Monitoring Report Field record		

<b>Activity No:</b>	3.2	<b>Activity:</b>	Video Documentary Programme
<b>Implementation Status:</b>	A video has been prepared and will be distributed to the concerned stakeholders after completion of editing and copying to the CD.		
<b>Means of verification:</b>	Field Report		

<b>Activity No:</b>	3.3	<b>Activity:</b>	Stakeholder workshop
<b>Implementation Status:</b>	<p>One stakeholder workshop was organized to make discussion about production and marketing of organic vegetable in Gorkha district. The no. of participants were 40 from different area including ten farmers group representatives, DADO representative, trader representatives, cooperative representatives, NGO representatives and project team members. Out of total participants, 80 percent were women. The workshop has made the following recommendation.</p> <ul style="list-style-type: none"> <li>• Farmers should follow the rules and regulations of organic production practices.</li> <li>• DADO should support for seeds and organic pesticides to farmers</li> <li>• Cooperatives should give priority for more price of organic vegetable to the farmers</li> <li>• A district level organic production and marketing network should be established</li> </ul>		
<b>Means of verification:</b>	Photo Workshop minute Workshop report		

<b>Activity No:</b>	3.4	<b>Activity:</b>	Publication and distribution of Booklets
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<b>Implementation Status:</b>	Five hundred booklets has been published about the organic production techniques and requirements for organic vegetable production especially for organic farmers of Gorkha District. The booklets will be distributed at the end of Jestha 2070.
<b>Means of verification:</b>	Booklets

<b>Activity No:</b>	3.5	<b>Activity:</b>	Report Preparation
<b>Implementation Status:</b>	Trimester and annual, final technical and project completion reports of this project has been prepared and will be submitted to NARDF.		
<b>Means of verification:</b>	Trimester Report Annual Report Final technical Project completion Report		

### 3. Situation regarding delivery of outputs/results

The anticipated outputs of the project were as follows;

- Strengthened and mobilized the women and men farmers' groups and upgraded them into cooperatives for input supply and output marketing
- Expanded the area under commercial vegetable production
- Expanded the area of vegetable farming under plastic house for year round vegetable farming
- Established fresh vegetable marketing system
- Established reliable reporting and documentation system

The anticipated output of the project were achieved through the implementation of the project activities. About 200 farmers have started to produce vegetable production in a commercial way. Similarly 120 farmers are semi commercial. The total production area is 60 hectare on vegetable. The income of the farmers have increased by 25% of the baseline survey.

### 4. Prospects for the adoption of the new technology and achievement of purpose

The project worked as organizational body to develop capacity, to provide support to the project beneficiaries directly and other interested farmers outside the project indirectly. The farmers of the projects location have increased their income by selling vegetables. The increased income of project farmers will be motivating factors for non project farmers and they will also work on vegetable production and increase their income which is the direct effect of scaling up of vegetable production work.

The strengthen capacity of farmers on vegetable production will support for development of micro enterprises such as processing of fresh vegetable (Pickle Ketchup, sauce etc) and sell. This type