

CEAPRED's Experience in Vegetable and Vegetable Seed Production

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Background

Agriculture is the mainstay of majority of people in Nepal. Subsistence farming system with survival strategy is predominant in the mountains there. The degraded marginal sloping lands have been brought under cultivation with survival strategies. The overall implications of human pressure on land and thereby soil erosion have resulted on reduction of soil productivity. The consequences are landslides and environment degradation. In the given situation, on one hand the basic needs of the poverty stricken people are to be managed, while on the other hand, we have to impart opportunities to live healthy in pollution free environment. The state effort alone cannot fulfill these requirements. With this consideration, Centre for Environment, Agriculture Policy Research Extension and Development (CEAPRED) was established in 1990 by a multi-disciplinary-team of professionals to develop and institutionalize the concept of participatory-people-centered economic development in Nepal. CEAPRED is a non-profit making non-political and non-government organization. It is registered with the District Administration Office, Lalitpur and has affiliation with the Social Welfare Council and the NGO Federation of Nepal. The Center is a value-based organization committed to promote people-centered-sustainable-development empowering poor, disadvantaged and women.

People are both means and goals of development. A sustainable development strategy must focus on people's empowerment. Guided by this philosophy, CEAPRED, since its inception, has been implementing projects addressing social and economic development especially income-generation, women-development, health and awareness-raising for sustainability.

CEAPRED focuses its intervention in four major areas, namely,

- a) Rural poverty alleviation through income generation,
- b) Livelihood programs for marginalized and disadvantaged peoples,
- c) Local resource mobilization and initiative and
- c) Action/policy research on agriculture.

Among these broader areas of interventions, off-season-vegetable-production and vegetable-seed-production has been the major intervention to contribute to poverty reduction and livelihood improvement in the mountains of Nepal. High value off-season-vegetables in accessible areas and high value low-volume-vegetable-seed-production in remote areas have been the priority outputs envisaged in the Agriculture Perspective Plan (APP) of Nepal. Nepal's agroecological conditions are favourable to grow different types of off-season-vegetables and vegetable-seeds. CEAPRED has been implementing different projects for fresh vegetable production and marketing in accessible areas and vegetable seed production and marketing in remote areas with following general objectives.

- To promote viable broad-based economic growth
- To provide sustainable livelihood options to the beneficiaries.
- To explore and promote domestic and export market potentials for fresh vegetable and vegetable seeds

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- To involve large number of beneficiaries and socially deprived and disadvantaged people in agricultural enterprise that has quick income generating opportunities
- Last but not least, to contribute to poverty reduction goal of Nepal Government

The specific objectives of the programs include the following:

- To promote commercialization of fresh vegetables along north-south road corridors
- To contribute to system development in vegetable seed production and marketing
- To ensure food security and improve livelihood of smallholder farmers of both accessible and remote areas facilitating them to adopt suitable enterprises.

Basic principles

Three basic principles,

- a) promotion of high value off-season vegetables in accessible areas
- b) promotion of high value low volume vegetable-seeds in remote/far-flung areas
- c) harnessing comparative advantages of diverse agro-climatic situations for agro-enterprise development,

have been adopted while selecting fresh-vegetable or vegetable-seed in a particular locality or geographical areas. The selection is guided by both production and marketing facilities and perishable nature of the commodity. These principles comply with the principles of Nepal Government as well.

Developmental and institutionalization process

CEAPRED believes in systematic development based on social capacity development. It is the process of igniting internal inertia of a person and society as a whole. Following five steps are the basic approaches of social capacity development for sustainability.

- Social mobilization preparing people to participate in development.
- Various capacity development trainings at local level to change knowledge, skill, attitude and behavior.
- Awareness raising facilitating people to organize groups at local level with inclusive strategy for excluded.
- Federating small-groups to marketing-networks and facilitating them to develop marketing cooperatives, petty-traders and service providers such as resource persons and nursery-owners.
- Helping the groups to inter into networking and collaboration with appropriate line agencies.
- Support to develop self-propelling marketing system through value chain approach promoting business development services.

Some examples of successful projects implemented by CEAPRED

The first income generating project for women-farmers along Dharan-Basantpur highway corridor through fresh vegetable production and marketing is one of the successful projects implemented by CEAPRED. This project was based on the scientific research and experience by various agencies like Parkribas Agriculture Centre, Horticulture Farm Paripatle, Fresh Vegetable and Vegetable Seed Production Project FAO/VDD and DADOs in Dhankuta and Terhathum. CEAPRED utilized their experiences and research findings into commercialization of fresh-vegetables through organizing farmers into several production groups and federating the groups into marketing cooperatives. This program, clicked into commercialization, is continuously progressing off-season vegetable

production and marketing. At present, a cooperative is marketing vegetables to different cities of Nepal and India. It is one of the successful and sustainable programs helping in reducing rural poverty through production and marketing of off-season vegetables (1992-1994 DANIDA Support).

With the success of Dharan-Dhankuta off-season vegetable production and marketing project, CEAPRED implemented several other similar projects. Some of the citable examples including those which have sustainably been successful for income generation through off-season vegetable production and marketing are as follows.

- Fresh vegetable production and marketing along Surkhet-Dailekh highway corridor (1997-2002 support from CECI-MARD).
- Fresh vegetable production and marketing along Arniko highway corridor (DANIDA).
- Fresh vegetable production and marketing along Lumle and ACAP Region (SNV).
- Smallholders' Irrigation and market Initiative (Nepal SIMI, USAID)
- Sustainable soil management and income generation project in Surkhet (SSMP support continued).
- Livelihood improvement project in Freed Kamaiya in Kailali
- Livelihood Improvement project for deprived families of Banke district.

Many GOs and NGOs have replicated the off-season vegetable production and marketing modality for income generation by now.

Vegetable seed production

Vegetable seed production is another avenue to contribute to poverty reduction in remote areas. In this regard, CEAPRED implemented 'Participatory Vegetable Seed Production Program' on the households located in remote areas of the country under the cooperation of Danish Government (DANIDA) from July 2000 to June 2003 with an overall goal to alleviate poverty and promote economic growth of rural Nepal. This program was launched in remote areas of five districts including Dolakha, Kavre, Sarlahi, Surkhet and Baitadi. As an outcome of the program, 2400 farmers involved in seed production generating an income of around Rs. 25.5 million through a sale of 140 mt seed of different vegetable crops. The program indirectly benefited 15000 fresh vegetable growers, who earned around Rs. 225 million.

Based on the success of DANIDA supported vegetable seed production program, CEAPRED continued another project - 'Promotion of Vegetable Seed for Poverty Reduction in Deprived Areas of Nepal' under the cooperation of Swiss Government from January 2004 to December 2006. With an overall goal of reducing poverty and social tension through quick income generation in the conflict-affected remote and deprived areas of the country, the main objective of the project was vegetable seed production promotion focused on deprived communities. The program was implemented in five districts namely Kavre, Dolakha, Surkhet, Baitadi and Dadeladhura. While the project was expected to generate an income of about 33 million rupees from production and marketing of 120mt vegetable seed through an involvement of 3200 farm-families in the remote areas, the actual achievement has been 36.28 million rupees from 239.59mt vegetable-seed production and marketing. To support seed production activities, 88 micro-irrigation schemes and one seed collection store have been constructed with group contribution and project support.

Reasons for successes

The vegetable projects undertaken by CEAPRED were successful because of the following reasons.

- The projects were quick income generating
- They provided rural employment to large number of small producers
- Both fresh-vegetables and vegetable-seeds have domestic and export market potentials
- The enterprises harness comparative advantages of climate and geographic conditions
- For the programs, there is ample availability of service providers and technologies
- On top of continuous technical backstopping provided by CEAPRED, the programs were based on local potentials and indigenous knowledge
- CEAPRED has built-in emphasis on marketing promotion through district and national level marketing-workshops for demand collection from local entrepreneurs.
- Production planning as per entrepreneurs' demand and formal agreement between marketing committee/cooperatives/producer-farmers and entrepreneurs
- CEAPRED's strategy to employ local social-mobilizer and field-technicians

Networking and policy input

CEAPRED has strong linkages with MOAC, DOA, NARC, NSB, SWC, DDC, AEC, DADO, NSC, SEAN and other related stakeholders through workshops, seminars, meeting and personal contacts. The linkages have always been helpful to sustain the program even after the projects phase out. CEAPRED has steering committees at district and central level for different projects.

Challenges

Though CEAPRED has been implementing seed production and marketing program successfully, following challenges have been visualized.

- Linear linkage from research to improved seed production is distorted.
- Vegetable seeds imported freely without testing compete with domestic production.
- Increasing use of imported hybrid varieties has been a challenge to local open pollinated (OP) vegetable seeds.
- Attractively-packed imported OP-vegetable seeds are replacing loosely packed Nepalese seed lots in the market.
- Only 36 vegetable varieties are officially released, but 72 varieties of 30 crops are in use.
- Inadequate variety maintenance practices in government farms (both NARC and DoA).
- Inadequate variety development works both in public and private sector due to low investment.

Lesson learned

CEAPRED has learned some important lessons while implementing seed production program

1. Market led production and crop diversification must be given top priority for sustaining vegetable seed industry of Nepal.
2. Need to promote Nepalese varieties through extension and demonstration.
3. Need to produce seeds of new varieties used by commercial vegetable growers.
4. Farmers are quality conscious. They need guarantee and nicely packed seeds. Price is secondary to the quality.
5. For export, development of varieties based on client demand with competitive quality, quantity, price and delivery-time is a must.

Conclusion and recommendations

The production of high value cash crops especially fresh vegetable and vegetable seed for domestic use and export is feasible and possible due to Nepal's agro-climatic variation and comparative advantages over other SAARC countries. Nepal experiences tropical climate in Terai, sub-tropical and warm temperate in the middle mountains and cool and alpine in the high-mountains. In view of existence of these different climates mainly influenced by altitude variation, Nepal is suitable for production of varieties of horticultural commodities both for domestic and external markets. Looking into these huge potentialities and possibilities of producing high value off-season fresh vegetable and vegetable seed for income generation, improving living standards of farmers seems easy. However, marketing them outside the country is difficult task as hindered by policy matters and product quality. In the context of WTO, quality assurance and other quarantine requirements including 'pesticide risk free certification' are of prime importance. In this connection following suggestions are presented.

Production level

1. Designation of appropriate production zone of specific crops and varieties for export promotion of both fresh-vegetables and vegetable-seeds.
2. Functional and practical quality maintenance schemes and authorized laboratory for certification.
3. Development of crops and varieties as demanded both in domestic and destination export markets.
4. Production scale of economic size with regularity and guarantee of supply as per demand.
5. Ensured technical backstopping, quality monitoring and management of quality inputs in production chain.

Marketing level

1. Development of product varieties for export based on client demands including crops and crop-varieties.
2. Supply of commodities competitive in quality, quantity, price and timely delivery.
3. Conducive quarantine and regulatory policies for legal export to abroad.
4. Attractive packaging and labeling with third party guarantee.

In the context of free market and especially in case of fresh vegetables, domestic products must be competitive in quality and available in time when the clients in destination markets are in need. While in case of vegetable-seeds, it is the selection of crops and crop-varieties and seed-quality important to harness comparative advantage of their production in Nepalese situation.

[Queries from the participants of the seminar:

In the context of 'quality packing recommendation of seed-lot', Mr R.B. Shreshtha, referring to the case of Daman, mentioned that locally produced open-pollinated vegetable-seeds are being replaced in the domestic market by imported OP-vegetable seeds not only due to loose packing but also due to poor quality of production. Regarding the suggestion for a short cut approach of variety release, Mr. G.P. Shreshtha commented that quick release of varieties with out proper investigation and required qualities in them could invite many problems in future. According to him, a decision on the issue would call for a detail discussion in the appropriate forum. In response to the former queries, the presenter added that marketing of locally produced OP-vegetable seeds deteriorated due to low volume of production and lack of supervision and quality control that could be optimally managed through public-private partnership approach. In response to the second query, he added that short cut release of variety would be possible through officially permitted adoption of locally successful varieties. With concluding remarks, the chairperson of the session suggested for the attempts towards indigenous vegetable production, health conscious and healthy production and organization of diversified marketing expos].