



Small-scale Commercial Vegetable Production to Promote Livelihood and Food Security in the Rural Hills of Nepal

RRN's experiences and observation show that though majority of the farmers in Nepal are small-holders, yet they possess immense potential for agriculture development. Hence focusing on small-holders for commercialisation would constitute a promising strategy towards promoting rural livelihoods and food security situation.



Commercial vegetable farming in Sankhuwasabha district

The Context

The agriculture sector continues to provide the livelihood base for about 66% of Nepal's total population, yet it is largely based on low-value cereals and subsistence production with a mere 13 percent of output traded in markets. While the development of the agriculture sector is the key for the development of the national economy, there is low supply response of the agricultural sector resulting in low agricultural growth, and hence slow growth in rural incomes. The prevailing food insecurity problem in several parts of the country, especially in the remote hilly and mountain areas, is also the manifestation of low agricultural growth.

Given the persistently increasing food insecurity situation together with the soaring food prices, the central challenge for agriculture in Nepal is to increase agricultural production and

productivity to feed the growing number of hungry mouths. With such realization, the National Agricultural Perspective Plan (1995-2015), Nepal government's National Agriculture Policy (2004) and the Three-year Interim Plan (2008-2010) robustly put emphasis on expansion of commercial agriculture production for agriculture development in Nepal in an effort to combat poverty of growing segment of the population. This implies that one of the potential ways out to meet the food needs of the people is to commercialise agriculture by increasing productivity and output of a few selected agro-commodities that would offer a definite comparative and competitive advantage to Nepali farmers.

Drawing upon the evidences from the RRN supported community development project entitled 'Sustainable Rural Livelihood Project' in Sankhuwasabha, a remote hill district of Nepal,

Scaling-up with appropriate investment

Mr. Puspa Bahadur Niraula, a 55-year old farmer from Wana VDC -7 of Sankhuwasabha district, is currently living together with his wife, a son and daughter-in-law - all of these family members constitute the key source of farm labour for his commercial vegetable farm. Since last three years, he has been one of the largest producers and suppliers of vegetables (cauliflower) which he has been growing twice a year with the monsoon rice as a third crop replacing the nine-year old cropping pattern, i.e., maize-millet grown under the rain-fed condition. He succinctly articulates that growing of three crops a year (rice-cauliflower-cauliflower) has been possible just because of the provision of irrigation facility and the technical competencies developed through the training on Integrated Pest Management (IPM). In fact, the irrigation facility included nothing more than a support of 700 meters high-density polythene pipe for a group of five households including Mr. Niraula for fetching the irrigation water from a nearby source to their farm lands. He gives immense credit to the training on IPM, which appeared to have made him competent enough to undertake the present scale of vegetable farming enterprise in a more scientific way without much use of external inputs and chemicals for pest control. He is also adequately skilled to prepare pesticides using indigenous techniques right in his village.

He further elucidates 'with the hefty amount of income earned from the commercial vegetable farming, I have been able to buy some land to expand my farmland. In fact, I had almost nothing more than 1.5 Ropani (20 Ropani = approximately 1 hectare) of land when I started this enterprise three years ago. I had to sell some patches of land to a neighbour as I needed the cash to manage my household activities and daily life. But now I have bought my land back and expanded vegetable farming, besides accumulating some more physical assets. With this I have been employing some of landless persons to heave my farm products to the market centres (nearby periodic market and at the district headquarters) on a regular basis'.

The project aims at reducing poverty and improving quality of life of socially excluded and marginalized people in a gender sensitive and environmentally sustainable way. The project basically focuses on strengthening the livelihood support mechanism through access to improved infrastructure as well as sustainable rural livelihood options.

this briefing paper asserts that while commercialisation of agriculture is a necessary condition for agriculture development, the policy to go for it must not be restricted to the large-holders alone. RRN's experiences and observation shows that though majority of the farmers in Nepal are small-holders, yet they possess immense potential for agriculture development. Hence focusing on small-holders for commercialisation would constitute a promising strategy towards promoting rural livelihoods and food security situation. The information for this paper comes from the review of the project documents, relevant publications, the project beneficiary farmers through individual interviews as well as free story-telling, field observation, and focus group discussions.

The Sustainable Rural Livelihood Project (SRLP) is in operation in Sankhuwasabha district of Nepal since November 2001 in partnership with HORIZONT3000, and with the support from European Commission, ADA/KFB in Austria. The project district is characterised by remote but very rich in biodiversity and with micro-climatic variation ranging from tropics to tundra. Rugged topography, poverty, poor infrastructure, widespread mass illiteracy, poor facilities of health and communication, insufficient livelihood options, less productive employment, traditional and unproductive farming system, etc. are the constraints to the development process. The project locations in the district have been selected based on the poverty occurrence, dwindling socio-economic and environmental

status. The project, therefore, aims at reducing poverty and improving quality of life of socially excluded and marginalized people in a gender sensitive and environmentally sustainable way. The project basically focuses on strengthening the livelihood support mechanism through access to improved infrastructure as well as sustainable rural livelihood options. So far, the programme has covered a total of 11000 women and men belonging to various ethnic categories including the dalits.

In the project district, one of the livelihood potential options identified is 'commercial vegetable farming. For promoting this enterprise, RRN implemented a few strategic activities. The activities included: training on Integrated Pest Management, farm inputs (seeds) support, small-scale irrigation schemes, and institutional development. The training on IPM contributed to enhancement of farming competencies of the beneficiary farmers. The IPM also taught them to minimise the production cost by avoiding the use of pesticides but encouraging adoption of chemical-free indigenous farm management practices, which eventually led to the farming that is more economic, environmentally friendly and socially acceptable. These activities served the long-term need rather than the short term ones. On the whole, the intervention has created an enabling environment (development of human resource with necessary skills to handle modern technologies, assured irrigation in the dry season, etc.) for intensive seasonal vegetable farming on a commercial scale.

Rationale for shifting from subsistence to commercial farming

RRN's initiative for commercial vegetable production was triggered by the fact that it would be almost impossible to cope with the food crisis facing the small land-holders in the project area often practicing the subsistence farming in the absence of other economic opportunities. The farmers in this area have not had access to benefits of the agricultural extension programmes of other development actors to the extent that they were able to describe any significant changes brought about in them. This clearly depicts a situation where despite the government's policy to commercialise agriculture to combat the hunger and rural poverty, development support such as research, road and market infrastructure, irrigation, fertiliser and other inputs for small holders is yet to reach the farmers in the hinterlands.

In the past, a vast majority of the small holders in the project area used to practice the traditional and subsistence oriented agriculture as the major source of their livelihoods. The cropping pattern in their farming practices included just two crops, i.e., millet followed by maize, under the rain-fed condition. Consequently, the amount of gross output received from this cropping pattern was neither enough to provide food for the agricultural year to support their household food needs, nor commensurate with the economic value of the labour and other inputs they put into the production process.

The reasons, inter alia, for low food production for the past two and half decades in Nepal include: practice of subsistence farming, small and fragmented land holding size, low agriculture input used and low land productivity, and uneconomical farming units, and unsystematic agricultural development programmes at the grass-roots. It is obvious that land-based farming activities like the commercial vegetable farming have the limitations that the landless and farmers with smaller land holding might not be able reap the benefits of vegetable farming on a commercial scale. With the SRLP intervention, the shift from subsistence to commercial vegetable farming, albeit in a small scale, has brought about tremendous social and economic changes in the beneficiary farmers. Even with the small scale of the current situation, the farmers are able to generate incomes directly from vegetable farming. As experienced by them, commercial vegetable farming is not only more lucrative enterprise but also creates livelihood

From tenant to land owner

Mrs. Chandra Kumari Shankar, a 42-year old dalit woman from Wana VDC -7 of Sankhuwasabha district, lives together with her four sons and husband. Before she entered into the commercial vegetable production which she had been undertaking for the last three years, she could support her family's food needs for hardly 7-8 months a year with the amount of production received from the cultivation of millet and maize in her small farmland. In the absence of alternative livelihoods, she and her husband had been working as share croppers in others' farmland in order to feed themselves. Presently, with the support of RRN's SRLP, she has been growing vegetables such as cauliflowers, tomatoes, chillies, and keeping some livestock, from the sale of which her family is in a much better position to afford adequate and quality food besides supporting the expenditure for her children's education. She says 'with the extra income earned from the commercial vegetable production from my own land, my husband and I now do not need to sell out our labourer to others doing tiresome work at a much lower rate, nor do we need to borrow loan from the local merchants at a much higher interest rate as I used to do'.

opportunities for the landless and economically poor people in the community by bringing them into the commercial value chain. As expressed and experienced by the farmers adopting commercial vegetable farming, the cost-benefit ratio per unit land area stands at 10 times more than that of cereal (maize and millet) based farming system. Moreover, it has also generated employment opportunities for others in the community. It is now the case that landless people are able to engage themselves in carrying the backload of vegetables to the market centres on a regular basis as a way of earning their living.

The success of commercial vegetable farming in the project area to such an extent could be attributed to two major factors: i.e., provision of irrigation water and the Farmers Field School (FFS) on Integrated Pest Management. The conduction of FFS contributed to raising awareness among the farmers about the adverse effects of excessive use of pesticides on the crops and under storage condition, as well as enhancement of the appropriate technical know-how and do-how on the part of the farmers. In the project area, the spill-over effects of the commercial vegetable farming have also been observed. To some extent, the economic opportunity created by the commercial vegetable farming has also prevented the out-migration of male population in the community. Due to the attractive income earned by the project beneficiaries from commercial vegetable farming, the other farmers in the neighbourhoods have also gradually initiated converting their traditional cereal (maize and millet) based farming practices into commercial vegetable farming.

As expressed and experienced by the farmers adopting commercial vegetable farming, the cost-benefit ratio per unit land area stands at 10 times more than that of cereal (maize and millet) based farming system.



A project beneficiary selling vegetables at a roadside make-shift market

Commercial vegetable farming, albeit in a small scale, offers a promising strategy to promote livelihood and food security situation in the hills.

Social cohesion among the vegetable growing farmers is another benefit they have received through their group being formed for the purpose of undertaking this enterprise. Such a group which has been formed by them, governed by them, and operated by them in a democratic manner is considered an ideal mean to promote their agricultural production and farm income, and enhance agricultural sustainability. Because of formation of farmers' own group, a great number of them have felt empowered to stimulate economic growth in the community through collective farming. The sharing of farming experience and innovative ideas among the farmers often takes place in group situation - more precisely to call it a 'farmer-to-farmer extension'.

Implication for policy and practice

Commercial vegetable farming, albeit in a small scale, offers a promising strategy to promote livelihood and food security situation in the hills.

Therefore, in view of the small-size land holding as well as other resources available with the Nepalese farmers, the efforts to meeting the increased demand for food and other livelihood needs from domestic production must come through shifting agriculture from subsistence to commercial farming. This is because the subsistence nature of agriculture produces food just to meet the needs of the local communities rather than to fulfill the demands of the market. As it appeared in the project area, commercial vegetable farming can be further scaled up by enhancing productivity and linking it with the traders and distance market. Therefore, from a policy stand point, the study suggests that concerted efforts must be directed towards promoting small scale commercial vegetable farming through enhancement of the competencies of the producers and provision of technical service, irrigation, road and market infrastructures.

The study also indicated that the government extension programmes aimed at improving agricultural production have not been able to cater to the needs of many of small holders in a significantly perceivable manner. On the other hand, because of its own limitations, non-government organisations are not able cover a huge mass of the farmers. This implies that mustering the government, non-government and private sectors will be a meaningful step towards collectively working under the concept of Public-Private Partnership to assist the farmers towards enhancing agricultural productivity through commercialisation of farming activities. As the results of the study revealed, the farmers' field school approach of agricultural extension has been instrumental in developing the technical competencies of the farmers. Therefore, appropriate extension approaches like the FFS must be widely adopted to assist farmers to improve their efficiency and agricultural productivity.

Contributing authors : Neeraj N. Joshi and Ratna Karki

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Published by : Rural Reconstruction Nepal (RRN)
P. O.Box: 8130, Kathmandu, Nepal.
Street Address: 288 Gairidhara Marg, Gairidhara, Kathmandu, Nepal.
Tel: +977 1 4004976, 4004985 Fax: 977-1-4004508 & 4443494

Email: rrn@rrn.org.np, Website: www.rrn.org.np

Rural Reconstruction Nepal (RRN), established in 1989, is a Nepali non-government, social development organisation involved in rural development, action-oriented research and policy advocacy focusing on peasants, poor women, dalits and indigenous nationalities, and other vulnerable communities through the process of facilitation, social mobilisation, empowerment and self-organisation. RRN's work is based on the four-fold approach to rural reconstruction covering: education to combat illiteracy and empower people to access their rights; sustainable livelihood to fight poverty; health to prevent disease, and self-government to overcome civic inertia.