



A study of vegetable and fruit export

from Eastern Region of Nepal

In 2009-10, Nepal imported vegetables worth Rs. 2.1 billion and fruits worth Rs. 4.7 billion, while it exported those goods worth 26 million and 486 million respectively.

The Eastern Region of Nepal is endowed with various climatic zones -eight districts with sub-temperate climate and three mountainous districts with temperate climate. The region produces varieties of vegetables of which only a few are exported to India. Fruit exports are not recorded at the border customs which means that the quantity is small and mostly moves through informal channels. On the other hand vegetable exports are recorded at the customs.

In 2009-10, Nepal imported vegetables worth Rs. 2.1 billion and fruits worth Rs. 4.7 billion, while it exported those goods worth Rs. 26 million and Rs. 486 million respectively. The export to import ratio for vegetables was 1:80 while for fruits it was 1:10. Thus vegetable production lags far behind the domestic demand in spite of consistent production increases in over the past 20 years. (ADS-2014).

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Vegetables grown in Illam, Panchthar, Taplejung and Dhankuta are mostly exported through the Kakarbhitta-Panitanki border crossing. It is the major border point for trade with North-Eastern States of India, Bangladesh and Bhutan.

Fruits are produced in all three physiographic regions- mountain, hills and Tarai, but production is differentiated according to the climatic conditions.

Kakarbhitta and Biratnagar are the two major customs stations in eastern Nepal. The crossings are also transit points for Nepal's overseas trade. Similarly, Pashupatinagar Customs in Illam District is another border post for trade with West Bengal and North Eastern parts of India.

India is the largest export destination for Nepalese vegetables and fruits. The bilateral trade treaty between Nepal and India allows duty free market access to primary and agricultural products on a reciprocal basis. In spite of that, SPS related measures poses a major problem for export of Nepalese plant product to India.

Bangladesh offers opportunities for export of fresh vegetables and fruits, but their tariffs are higher- as high as 25 per cent for tomato, cabbage, lettuce, carrot and all other green vegetables (all Chapter 7). All fresh fruits (except dried ones in Chapter-8) also attract 25 per cent duty¹. In addition, there are non-tariff barriers, beyond the connectivity problems. The prospects for vegetable export to Bhutan seem very bleak due to the small market size. Nepal imports potatoes from Bhutan but there is no agricultural export to that country.

Small quantities of vegetables from Illam and Panchthar Districts are also exported through

Pashupatinagar Customs. But the volume has been constantly increasing over the last five years. There was a nine fold jump in F.Y. 2014-15. The surge was attributed to export of relatively higher value vegetables such as off season cauliflower, cabbage and peas.

Most green and leafy vegetables are exported to India informally in small amounts. The quantity is not sufficiently large to be trucked and there are no collection and storage facilities in Nepal to warrant commercial consignments. Also, quarantine and food safety formalities are very time consuming. Only a few items like radish, cabbage, cauliflower, squashes and green peas are exported in bulk.

Vegetables are collected from farms by local collectors, who maintain contact with wholesalers located in Char Ali and Birtamod of Jhapa. Normally, Indian importers contact the wholesalers and declare the offered prices. Such prices are derived from prevailing prices in Indian cities of Siliguri and Kolkata. Then they deduct transportation, customs, quarantines and other border clearance charges, including the profits for the importer and the wholesaler. The farmers get their price after all the deductions along the supply chain.

The export of vegetables is heavily dependent on middlepersons. Farmers who actually produce the vegetables are the price takers-the last persons to receive benefits from the export proceeds. Farmers have incurred net losses on account of the low prices they receive.

Most of the vegetables supplied through Kakarbhitta are sold in Siliguri and Bagdogra. The contractor supplying foodstuffs to Bagdogra Military Camp is one of the bulk buyers of Nepalese vegetables. The rest is consumed in Siliguri or in Kolkata. Mostly, peas and cabbages are supplied to Kolkata.

Table 1 Some important vegetable crops exported from Kakarbhitta Customs

Local Name	English Name	Scientific Name
Moola	Radish	Rapnus sativus
Banda kopi	Cabbage	Brassica oleracea, var. capitata
Kauli	Cauliflower	Brassica oleracea
Farsi	Pumpkin	Cucurbita moschata
Iskush	Iskush	Chayote squash
Aduwa	Ginger	Zingiber officinale
Golbhenda	Tomato	Lycopersicum esculentum
Kerau	Peas	Pisum sativum

Source: Customs Office Kakarbhitta.

Figure The vegetable supply chain

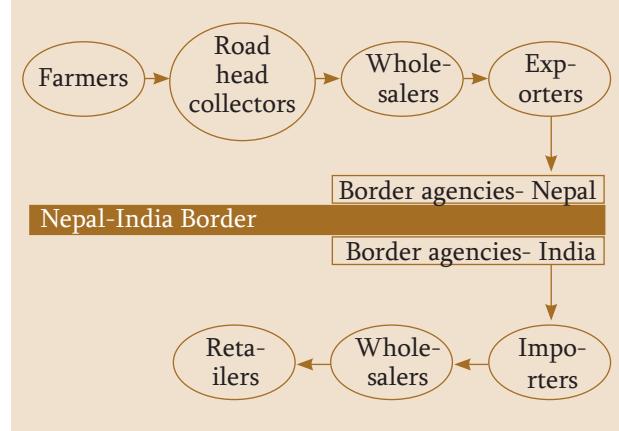


Table 2 Vegetable production in Eastern Region (2012-13)

Geographical Region	No of Districts	Vegetable Prod'n (Mt,000)	Major Vegetables
Mountain	3	30.7	Cabbage, tomato, radish, mustard leaf, peas
Hill	8	379.6	Cauliflower, cabbage, radish, squash, broccoli
Tarai	5	534.8	Cauliflower, cabbage, tomato, carrot, French bean
Total	16	945.1	
Total for the country	75	3301.7	

Source: Ministry of Agricultural Development: Statistical Information on Nepalese Agriculture, 2012-13

The export process starts with a permission of import from plant quarantine offices on the other side of the border (Panitanki). The letter of import permit requires the name and addresses of importer and exporters, description, quantity and SPS related information. Parameters normally ensure that the product is free from soil, weed seeds and plant debris. Specific requirements depend upon the potential risk of insect pests and diseases in the related plant products. A typical case in export of cabbage from Kakarbhitta shows that the permit issued by Indian Plant Quarantine Office at Panitanki requires certification from the Nepalese Plant Quarantine Office stating that the consignment is free from following pests.²

Black leaf spot (*Pseudomonas maculicola*)
Back rot (*Xanthamanascompestris*)
Black leg (*Phoma lingam*)

Further, certification is required for appropriate physical appearance of the goods, that is, the product contains no soil particle and plant debris. The Plant Quarantine Office at Kakarbhitta normally checks the sample of the export consignment and makes sure that the plant product in question meets all criteria required by the Indian Plant Quarantine Offices.

The quarantine office at Kakarbhitta lacks technical staff to operate the laboratories and related equipment. Thus, the laboratory is not functional despite the modern equipment. There is no effective control on account of quarantine in import of plant products including vegetable and fruits. In a sense, there is unchecked flow of plant products into Nepal. The volume of import is quite high in comparison to export.

Trade through informal channels

Vegetable and fruits are mostly traded informally. Cross-border trade is generally carried out on smaller vehicles like bullock carts, tri-cycles (rikshaw), pull carts, (Thela) motorcycles and bicycles and also on head load. Such movement does not involve any

proper recording, quarantine and customs clearance processes. There are also a group of people owning bicycles and pull carts providing the cross border transportation services between exporters and importers on both sides of the border. The field survey revealed that an almost equal volume of informal trade occurs in vegetables and fruits as the formal one. Vegetables and fruits that are not exported in bulk enter the other side in a very informal way.

Issues on export of vegetables and fruits from Nepal

Nepal has not been able to fully utilize the opportunities associated with production and export of fruits and vegetables. The problems are in production, value chain development and export. To sum up:

1. The 'one village one product' (OVOP) scheme has been implemented in 32 districts while all the 75 districts have implemented the 'one district one product' (ODOP) program. The programme was jointly launched by the government of Nepal and Federation of Nepalese Commerce and Industry (FNCCI). Out of these, only one district in the Central Region-Dhading- and another one in the Mid-West- Pyuthan- have been designated for vegetable production. Two districts of Rukum and Dailekh are designated for vegetable seed production. Eastern Region districts have mostly been allotted for spices and condiments-cardamom for Taplejung and Panchthar, tea for Illam, areca nut for Jhapa, turmeric for Sunsari and ginger for Terhathum. Bhojpur is identified as a candidate for orange production, Illam for kiwi and Siraha and Saptari for mango. Sankhuwasabha, Dhankuta, Okhaldhunga and Morang have been identified for producing herbs and medicinal plants, Solokhumbu for eco-tourism and Udaypur for goat farming (FNCCI-2012). However, it has been noted that not a single district in the eastern region is designated as the area of vegetable production. This is a prioritization problem.

2. Lack of adequate transport networks in the district has deprived hinterland areas of commercial farming. Farmers within one hour walking distance from the road head are found to be engaged in vegetable cultivation. Transportation, cold warehouses and collection centers are the most pressing needs for boosting vegetable farming.
3. Seasonality of production and the resulting supply glut have been blamed for rock bottom prices. Bumper harvests mean even lower prices. The supply peaks and demand could be evened out if storage and off-season production were introduced.
4. Post-harvest loss is a serious problem as harvesting techniques are traditional, packaging done in jute bags and transported in open trucks to distant markets. A survey done by High Value Agriculture Project (HVAP) in 2011 showed that post-harvest loss is highest for tomato (about 33 per cent), followed by cauliflower (14 per cent), cabbage (13 per cent), green pea (10 per cent) and bean (7 per cent). Other challenges specific to production are: disease and pest severities, deteriorating soil condition, lack of year round irrigation and poor quality of seed and fertilizers (HVAP-2011)
5. Small and fragmented land holdings have made it difficult for farmers to scale up their production through mechanization. Similarly, lack of adequate support for irrigation, credit, agro-inputs and extension services impede production. Inadequate market information and heavy handedness of middlemen also sap farmer profits.
6. Multiple taxation is also a problem. Normally, DDC [District Development Committee] taxes are levied at the exit points and sometimes local VDCs [Village Development Committee] also impose taxes on export commodities. The vegetables sourced from Panchthar and Taplejung also pay DDC taxes in Illam District. Often, local clubs and goons also impose unofficial levy on the highways.
7. Lack of harmonization of standards, tests and certification and lack of mutual recognition of laboratories is causing high costs in cross border transactions. Similarly, exports from Nepal to India pass through many hands in the process of getting clearances and completing the formalities.
8. Value addition suffers due to lack of vegetable processing units and agro-based industries.
9. Low quality products, uncontrolled use of agro-chemicals and lack of proper coordination among farmers' organizations, government service providers, research institutions and private sector business organizations has resulted in the lack lustre performance of the agriculture sector in general and the vegetable sector in particular.

Policy recommendations

Vegetables and fruits and their value chains require interventions in; the production process, post-harvest operations and marketing and export.

Table 3 Export and import of fruits and vegetables through Kakarbhitta Customs (NRs in thousand)

Particulars	F.Y 2012-13	F.Y 2013-14	F.Y 2014-15	Major products
Export to India				
Fruit	84.3	0	36.5	Cabbage,
Vegetables	33,684.2	36,381.4	56,297.5	Cauliflower, Beans, Chilly, Potato, Citrus orange, Banana etc.
Total	33,768.5	36,381.4	56,334.0	
Import from India				
Fruits	27,246.6	41,816.0	84,543.8	Potato, Onion,
Vegetables	787,496.5	984,024.5	1448,349.0	Tomato, Chilly, Beans, Watermelon, Cauliflower, Apple, Pineapple etc.
Total	814,743.1	1025,840.4	1532,892.8	
Export to Bangladesh				
Fruits	0	0	0	None
Vegetables	0	0	0	
Total	0	0	0	
Import from Bangladesh				
Fruits	0	0	0	Potato
Vegetables	0	6,781.5	657,359.6	
Total	0	6,781.5	657,359.6	

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Table 4 Export of fresh vegetables from Pashupatinagar customs			
Fiscal Year	Quantity (kilogram)	Value (Rs.000)	Remarks
2010-11	1400	8.7	Peas, squash, cauliflower and cabbage are the major export
2011-12	6,200	76.7	
2012-13	76,800	614.4	
2013-14	122,310	700.1	
2014-15	71,789	6,242.1	Off season cabbage, cauliflower and peas

Source: Pashupatinagar Customs Office, Ilam

Note: Export of vegetables with a value less than Rs. 5,000 is not recorded in the customs.

Production related interventions

Expand the focus area for vegetable and fruit production: Some districts in the Eastern Region have been identified as production pockets for some fruits, vegetables and condiment and spices under the one village one product (OVOP) program. There is a need for providing integrated services to those production centers in terms of inputs, extension services transport and marketing services. Promotion of commercial farming, proper land use planning, with the provision of contract farming and collective farming, and irrigation facilities is also required.

Promote off- season organic fruits and vegetables: Farmers can fetch up to three times higher prices for off season vegetables in comparison to the same crop grown during its normal season. But this is a difficult way to farm. The government should support poly-house technology, drip irrigation and conduct off season vegetable production training to farmers.

Promote good agricultural practices and good handling practices: Some vegetables species and almost all fruits are consumed raw- without cooking or giving them heat or cold treatment. To minimize microbial risks and chemical hazards farming must adopt good practices right from the land preparation to harvesting. Use of organic manure and organic pest control methods, judicious use of agro-chemicals and improved cultivation and harvesting practices are some important parameters for maintaining good agricultural practices. Similarly, good handling practices need to be adopted.

Introduce Pest Risk Analysis (PRA): Pest Risk Analysis (PRA) basically entails an assessment of risks at various stages of production, storage and transportation with identification of critical control points in order to

manage the risk. Countries are also adopting the internationally accepted Hazard Analysis and Critical Control Point (HACCP) mechanism that defines the process of identifying control points for measuring and monitoring. This helps correct the problems before damages occur. Nepal should start this process.

Work with farmers group and encourage forming their cooperatives: Vegetable farmers do not have the strong associations or groups like the producers of other crops like tea, coffee, ginger, and medicinal herbs. Vegetable growers should be encouraged to form their associations and cooperatives to bring out their collective voices and work together with support agencies within and outside the government.

Post harvest operation

Control post-harvest losses: The government should devise specific programmes to reduce post-harvest losses by educating producers and harvesters about optimum harvesting time, harvesting techniques, cleaning, handling techniques, packaging and transportation.

Support for improved packaging: Farmers normally use the traditional bamboo baskets and jute sacks for packaging fruits and vegetables. These are prone to damage during handling and transportation. Plastic crates, fiber boards and other suitable packaging materials are better for safekeeping of the goods. The government should encourage setting up of packaging industries in the country with appropriate incentives and tax rebate. Farmers should be made aware on the benefits of improved packaging.

Focus on development of supporting infrastructures: Agriculture related infrastructures are not adequate to facilitate the export of perishable products. In Jhapa District, there is a collection center in Chaar Ali, managed and operated by the local VDC, but without a proper building and infrastructure for safe keeping and temperature control. Collection centers for fruits and vegetables need to be developed at key locations like Itahari, Damak, and Dhulabari for export facilitation. Local elected bodies should be encouraged to set up wholesale markets and haat bazaars.

Marketing and export related

Provide market information services: With the development of mobile technology (hand held phones), it is possible to know the prices of product at various stages of the supply chain with little effort. But, this requires supporting the farmers' association

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or organization and enabling them to be a part of the information collection and dissemination process.

Remove barriers of unofficial taxes and collect official charges at a single location: Transporters normally do not wish to challenge the illegal charges of paltry amounts and pay such charges silently but unwillingly. Exporters do not object to this as they recover it by including this as a cost in the final export price. But this sort of practice takes a toll on the competitiveness of traded goods. The government should control such practices.

Create a Sub-national level (provincial level) trade facilitation body: The government should create a Sub-national level dialogue forum that exclusively deals with indigenous products like fruits, vegetables and other agricultural products. Such a mechanism could be chaired by the Regional Administrator (Special Class Officer of the government or a senior government official at the provincial level) and may include members from producers' associations, local chambers and the representatives of customs, quarantine, food labs and the district administration and district agricultural offices. The Regional Director of the Department of Agriculture could be designated as the Member Secretary of this body. Such a mechanism could be linked to the existing mechanism of Nepal Business Forum (SAWTEE-2015).

Improve the operation of laboratories at border posts: The quarantine laboratory at Kakarbhitta is underperforming due to lack of technical staff. Similar conditions may prevail in other laboratories. Frequent transfer of technical staff results in poor test and certification services.

Similarly, sanitary and phyto-sanitary standards in terms of plant quarantine and food safety need to be upgraded to the international standards, or importing country standards. The test and certification infrastructure needs to be developed to meet those standards.

Create a cross border coordination and facilitation mechanism: Protocol to Article-XI of Nepal-India trade treaty institutionalizes a joint committee headed by chief customs officers of both sides at the border to resolve any problems arising in clearance of goods, particularly perishable goods, expeditiously. However, this provision has not yet been activated. The role of this field level trade facilitation committee must be expanded for smoother agricultural trade.

There should be regular review of the works accomplished by the committee. Representatives of product associations and the local business chambers from both sides need to be invited in such meetings. This committee should be mandated to work on reducing the burden on traders. ■

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Notes

- ¹ National Board of Revenue, Bangladesh; Tariff Schedule 2015-16.
- ² As noted from the transaction file of Plant Quarantine Office at Kakarbhitta.



South Asia Watch on Trade, Economics and Environment (SAWTEE) is a regional network that operates through its secretariat in Kathmandu and 11 member institutions from five South Asian countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka. The overall objective of SAWTEE is to build the capacity of concerned stakeholders in South Asia in the context of liberalization and globalization.

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