

EXIM BANK: RESEARCH BRIEF

Sikkim: Export Potential and Prospects



June 2009

EXPORT-IMPORT BANK OF INDIA

Visit us at www.eximbankindia.in

No. 49

Sikkim: A Macroeconomic Perspective

Sikkim is a strategically located state sharing its international border with three countries – Nepal, Bhutan and Tibet. This renders it particularly amenable to international trade. State GDP, in real terms, has been increasing at a healthy pace, from Rs. 964 crore in 2000-01 to Rs. 1,516 crore in 2006-07, thereby recording an annual average growth rate of 7.8 percent as against the national average of 7.0 percent. The economy is largely agrarian, although only about 11 percent of the total geographical area is under agriculture. The share of primary sector has witnessed a decline – from 46.5 percent in 1990-91 to 20.5 percent in 2004-05. On the other hand, the contribution of secondary sector has increased from 13.0 percent in 1990-91 to 30.2 percent in 2004-05 while that of the tertiary sector has gone up from 40.5 percent to 49.2 percent during the same period. The comparative advantage for Sikkim from an export perspective lies in high value horticulture and floriculture sector. Within this, the products that have been identified as having good potential for exports include large cardamom, orchids (cymbidium variety), Temi tea, ginger, mandarin, medicinal plants, honey and handicrafts.

Large Cardamom

Sikkim is the largest producer of large cardamoms, not just in India but globally. The state produced 3,883 metric tonnes (MT) of large cardamom, of the overall Indian production of 4,303 MT in 2006-07,

i.e. 89.1 percent of the country's production. It is possible to aim at an export target of 7,800 MT by 2015, which would mean achieving a CAGR of 23 percent during the next 8 years. The traditional markets for exports of large cardamom have been Pakistan, UAE, UK, USA and Canada. However, if trends in export markets is analysed, Middle East and Pakistan appear to be the regions exhibiting maximum growth and future potential. Exports of large cardamom from Sikkim currently occur indirectly with the supply chain being highly fragmented – cardamoms are sold to outside traders in dried form and exported to the Middle East and Pakistan through Amritsar. Export price is contingent largely upon demand in the Middle East. Most cardamom plantations in Sikkim are at least three decades old and infested with viral diseases resulting in declining yields. Management of these pests and diseases and implementing new plantations is of utmost importance to increase productivity. Further, there is a need to move up the value chain through a two step process for drying and extraction of essential oils and oleoresins. A processing cum extraction plant for the purpose of deriving essential oils and oleoresins from large cardamom – commercially viability of which has already been proven – could greatly enhance the value of exports from Sikkim.

Orchids

Orchids account for 10 percent of international fresh cut flower trade, which stood at US\$ 6.0 bn in 2006. The major Asian markets are Japan and Singapore. Total imports of orchids by Japan

amounted to US\$ 57.4 mn in 2008 making it the largest importer of orchids in the world. Cymbidiums are the most popular orchids and they fetch the highest prices in major international markets including the Netherlands, Japan and Singapore. Sikkim has the maximum number of orchid species in India after Arunachal Pradesh. About 30 lakh cut flowers of rose, 5 lakh orchids, 5 lakh liliium, 5 lakh gerbera and 20 lakh gladioli are estimated to have been sold in Sikkim in 2007-08, providing an approximate income of Rs. 1 crore to the producers. The Government of Sikkim has established two joint venture companies especially for development of cymbidium orchids, anthurium and other flowers. Orchids, particularly cymbidium, hold the maximum potential for exports from Sikkim. Sikkim has a time advantage in terms of the flowering season which is during October-April period as against competing countries like Australia and New Zealand who supply cut flowers during June-October season. In order to enhance orchid exports from the state, the producer groups could consider joining a marketing organization in another country. A suitable organization would be one which might benefit from the collaboration, by gaining in accomplishing assortment and/or quality, and/or off-seasonal supply. The best example for this kind of collaboration is the Israeli-Dutch collaboration. The Netherlands' flower auctions get Israeli flowers during the seasons these flowers cannot grow in Holland; while the Israeli growers gain the efficiency and the market accessibility of the Dutch system. This mechanism is operating successfully for more than three decades with almost 85 per cent of Israel's exported

flowers being voluntarily channelled through this system. Further, the possibility of acquiring a Geographic Indication (GI) so as to increase saleability of cymbidium orchids needs to be explored. Other strategies for enhancement of exports could include enactment of strong legislation to check outflow of quality planting materials from the state, induction of modern technologies including large scale tissue culture, development of tissue culture laboratories in both the public and private sectors and incorporation of orchids in government and private gardens for landscaping.

Tea

Tea grown in Sikkim is famous by its brand name 'Temi Tea' and is exclusively grown at the Temi Tea Estate in the Temi region of Sikkim covering an area of 435 acres under plantation and producing 100 tonnes per year. The entire production has been certified organic since June 2008. Temi tea, sold under the Orthodox category, is very rich in flavour, has medicinal properties, fetches one of the highest prices at the Kolkata Tea auction and has high export potential. The premium quality tea produced is exported indirectly through the auctions conducted in Kolkata where it fetches about Rs. 2000-3000/kg on an average. Only 25 percent of the total production is sold in the local market at prices marginally higher than cost while the remaining 75 per cent is sold through auction houses. The main export markets are Germany, USA, France, Canada and Japan. If Temi tea is exported directly, it will fetch an even higher price, estimated at nearly double of what it is getting now through auctions, particularly considering that in mature Western markets, there is an increasing demand for organic tea. However, direct exports entail undertaking strategic marketing, which cannot be executed by the Temi Tea Estate on its own and needs external expertise. Conducting focussed workshops on export procedures and documentation as also export marketing and packaging would enable facilitation of Temi tea exports from Sikkim. Upgrading the processing machinery at Temi Tea Estate and introducing a conveyor belt system to

increase efficiency, registering for Geographic Indication, as is the case for Darjeeling tea, getting Temi Tea Fairtrade certified to facilitate its popularity internationally and help it get a premium price in the international market and further investigating the medicinal properties of Temi tea are other measures that could be taken to augment exports of Temi tea from Sikkim.

Ginger

Sikkim is among the major producers of ginger, contributing to about 5 percent of the country's production. Production of ginger has witnessed steady increase in Sikkim, from 23,610 tonnes in 2002-03 to 37,700 tonnes in 2007-08, both on account of increase in productivity as also due to increase in area under production. Ginger is largely grown in Sikkim for exports as green ginger. Even though improved varieties with less fibre are available to the grower, they continue to rely on the local fibrous *Bhaisey* (large rhizome) and *Majhauley* (mid size rhizome). While the fibrous rhizome has a good demand in the Middle East, the less fibrous ones are more in demand in the West. The quantum of ginger going out of Sikkim is estimated at roughly 25,000 tonnes. About 30 per cent of the produce is retained as seed. Most exports that currently occur from the state are indirectly through the Delhi market. Chinese ginger has been ruling the international markets for a long time. However, there have now been cases of residual heavy metals being traced even in organic gingers exported from China. This has opened up a window of opportunity for exports of organic ginger from Sikkim and needs to be cashed in. Ginger from Sikkim is sold entirely as fresh produce and even within that, there is no formal value addition either in terms of mechanised sorting, grading or waxing. The Government of Sikkim has recently sanctioned a ginger processing unit with a capacity to process 7.5 MT/day. This will help in better price realisation and increased shelf life of the product and also encourage undertaking direct exports from the state to international markets. In order to promote exports, high value low volume processed forms such as essential oils and

oleoresins of ginger need to be extracted which entails establishment of a processing unit. Ginger oil produced from fresh ginger in Sikkim has a high market value due to presence of various aroma chemicals. Considering that India also exports ginger oil and oleoresins to eastern countries like Japan, South Korea and Australia, the possibility of setting up a processing plant in Sikkim exclusively for export to these countries is commercially viable.

Mandarin Orange

Mandarin orange has a good potential for exports from Sikkim. This is even more so considering that exports of mandarins from China are expected to drop 40 percent due to a fruit fly outbreak in Sichuan Province, opening up a window of opportunity for Sikkim which can endeavour to fill this void in global supply. Mandarin is the most important commercial fruit of Sikkim and its cultivation has witnessed a consistent increase. While area under mandarin plantation in Sikkim has increased from 5,220 ha to 5,818 ha during 2004-05 to 2007-08, production has witnessed an increase from 8,350 tonnes to 9,672 tonnes thereby recording an annual average growth of 5.1 percent. A more promising fact is that the yield has increased continuously upto 2006-07. However, orchards in Sikkim are aged, some even 40 years old, lack vigour and are prone to disease and pest attack. Rejuvenation of orchards about 20 years of age, gradual replanting of the older ones, soil reclamation and manuring around the tree, and planting of new orchards with saplings from certified nursery can go a long way in helping realisation of the untapped potential of mandarin orange. Further, setting up an autonomous board for mandarin growers which could act as a nodal point for extension work, help in farmer education and improve farm management practices and quality of produce could provide impetus to exports. The board can also help with credit, marketing, and information on the market. Processing of mandarins in the form of juices, squash, marmalade and jam is critical as it results in increased shelf life and a far higher per unit value realisation and also lends itself to easy transportation thereby facilitating its exports. A

processing facility therefore needs to be established which could be used simultaneously for other products as well, so as to achieve optimal utilisation of the unit. This would entail creating an enabling environment for private sector investments in the state.

Honey

India, with a share of 3.6 percent, was the eighth largest producer of honey in the world in 2006. Estimated figures for 2007 indicate that Chinese production has slipped dramatically from 305 thousand tonnes to 6 thousand tonnes. This has impacted the global production levels negatively, estimated to have declined to 1.07 mn tonnes from 1.44 mn tonnes in 2006. This is an area which the country in general and Sikkim in particular needs to leverage upon so as to cater to the increasing international demand for natural honey. Considering that Sikkim honey is by and large organic, there is immense potential for its exports, especially to the discernible markets of the West where demand for anything organic has been rising at an appreciable rate. Imports from China and Argentina, the two largest exporters, are now being avoided due to quality issues and many countries are turning towards exporters like India. Price, supply, purity and service are the major determinants in the honey industry. However, in June, 2008, a report that antibiotics and lead were found in Indian honey led to talk of a ban on Indian honey in Europe and other international markets. This clearly indicates that export of honey from Sikkim needs to be encouraged in light of their negligible insecticide and pesticide content. Honey industry in the state can well become a major foreign exchange earner if appropriate strategies are adopted. This could include establishing bee-keeping nurseries for multiplication of colonies along with setting up of a composite training-cum-demonstration unit for rendering training to prospective entrepreneurs and endeavouring to get a Fairtrade certification to facilitate better pricing and global recognition. That honey produced from high altitude flora is considered to be of better quality along with the fact that honey produced in Sikkim has medicinal properties, needs to be appropriately leveraged upon.

Medicinal Plants

Most of the 48 medicinal plants exported from India are found in Sikkim. Corresponding to the different vegetation zones found in the state, the flora of Sikkim is extremely diverse, carrying nearly a quarter of all India's species of flowering plants in an area only a fraction of the total. The state is rich in agro-biodiversity - 425 species of medicinal plants have been documented as being used by 20 local tribal groups. As a response to the ever increasing danger of extinction, the state government established a State Medicinal Plants Board, (SMPB) for collection and transit of medicinal and aromatic plants from Sikkim. After establishment of SMPB, the main emphasis has been to encourage progressive farmers to undertake cultivation of medicinal plants. Prior to 2000, the collectors from the state used to sell their herbal products collected from the wild to the local traders. Since the ban, the traders have been approaching SMPB for supply of germplasm. With medicinal plants being used extensively in traditional Chinese medicine, the potential for exports from Sikkim is high and can be realised if they are grown on a sustainable basis. The government should undertake a project to ascertain the commercial viability of select high value medicinal plants and subsequently set up extraction units in order to move up the value chain. Further, the government should form a cooperative structure in villages for promoting cultivation of the identified medicinal plants so as to ensure sustainability. The development of medicinal plants sector with a view to utilize it on commercial lines on sustainable basis in a state like Sikkim is neither feasible nor viable without massive public involvement and support. This process also ensures protection of natural habitat by local communities and its accelerated coverage on their lands as alternative cash crops.

Handicrafts

The handicraft sector in Sikkim is said to be the biggest industry after tourism. More importantly, major art and handicraft and handloom products produced in Sikkim include primarily those that have shown maximum potential for exports according to

the analysis carried out in the study. These products include Thangka paintings, handmade carpets, cane and bamboo products including furniture and wood carvings. It is estimated that about US\$ 10 mn worth of handicraft products are exported from Sikkim each year. Handloom products in Sikkim are mainly characterised by the Lepcha weave, being produced by succeeding generations of weavers. Another product that has good potential for exports from Sikkim is carpet. Sikkim carpets are hand woven in fixed vertical looms by women and have traditional designs. There lies great potential for developing all these aforementioned handicraft forms provided the processes to improve the quality and quantity of these products are put in place. The main pillar on which the strategy for export promotion of handicrafts from the state should be based is that of design enhancement through introduction of motifs which reflect the essence of Sikkim as for instance abstract illustrations of cymbidium orchids, the red panda etc. This would call for organising focussed workshops and training programmes on the design requirements from an international perspective. The state government could tie up with international agencies like the Centre for Promotion of Imports from Developing Countries, Netherlands in conducting training modules which would provide deeper insights into the tastes and demand prevailing in the EU market. Initiating a dialogue with international retail chains like Carrefour, Giants and Wal-Mart in order to get export orders could also be undertaken. This would entail formation of either various artisan producer groups with their own brands or one umbrella group having a single brand for the entire state of Sikkim (Brand Sikkim). The producer groups would help in ensuring that there are no supply bottlenecks and that international quality standards and delivery time schedules are met with precision. The possibility of acquiring GI for Lepcha weaving and Thangka paintings so that their authenticity is ascertained also needs to be explored.

Case for Gherkins Production

Gherkin is a creeper with a 90-day cycle, which can start yielding from about 35th day and goes on yielding for another 35-40 days.

Average productivity in India is approximately 7.5 tonnes per acre. Given that gherkin is a short-duration labour-intensive and highly profitable crop, extension of area under cultivation would serve to enhance its exports from India. With a wide range of agro-climatic zones in Sikkim, cultivation of gherkins could be undertaken on a wide scale. As gherkins crop can be economically cultivated on small plots of even 0.25 acre, it lends itself to easy cultivation in Sikkim where most landholding is marginal. Further, two major features that are in favour of Sikkim becoming one of the successful producers of gherkins include availability of suitable climate and soil type and existence of a relatively robust apiculture sector.

Strategies and Policy Interventions

Role of the State Government: Some of the initiatives that the Government could undertake include alternate connectivity channels to the state and expanding the current highway network linking Sikkim to the rest of the country; enhancing the list of products that can be traded through the Nathu la pass, particularly in light of China becoming one of India's largest trading partners; intervening in the land market by acquiring land so as to form a land pool and then leasing it to prospective investors, if possible on attractive terms; commitment on continuous and uninterrupted power supply to industries; organising at least one facility of getting export license within Sikkim; organising various training programmes and workshops on export related areas; encouraging local entrepreneurship; creating a centralised umbrella public private partnership body which exclusively works on the development of "Brand Sikkim"; direct involvement in agriculture extension services; shifting its role to that of a facilitator for promoting private sector activities in horticulture and floriculture such as setting up a feed and fodder plant to alleviate supply problems, cold storage and processing factories.

Strategies at the Production Level: Strategies at production level could include developing disease-free quality planting materials of high yielding varieties through development of certified nurseries, identification of planting varieties according to the demands of the importing countries, development of integrated pests, diseases and nutrient management schedules which are environment friendly and ecologically sound and ensuring a smooth transfer of the planting material from lab to land. Establishment of an agriculture university in Sikkim, better utilisation of informal markets by organic producers and creation of select zones to be exclusively organic, with the objective of catering primarily to international demand could be other strategies at production level to promote exports from the state.

Strategies at the Processing Stage: Creation of processing units in the private sector should be one of the main thrust areas. Thus for instance, Fruit Preservation Factory at Singtam could be operated by a major food processing chain or a large corporation, which will work closely with farmers to improve yields, invest in specific infrastructure to reduce wastage and in research to develop specific varieties of fresh and processed produce for export, and improve quality through better packaging and storing technology. However, at a broader level, focus should be on creation of small scale processing units for fruits like mandarin and passion fruit. Moving up the value chain through setting up of processing plants, especially for products like large cardamom and ginger for extraction of derivatives like oleoresins, is particularly important considering that these will fetch a far higher unit price in the international market and are amenable to transportation in relatively less volumes. Promotion of co-operative farming in the state could lead to economies of scale and supplement direct government involvement in a host of areas such as input and credit supplies as well as marketing networks.

Post-Harvest Management and Marketing: Strategies under this category could include greater focus on marketing arrangements, including encouragement to private sector involvement in marketing; encouraging downstream food processing and research linked to marketing requirements for diversifying into horticulture and floriculture products; encouraging private transporters with adequate credit support through the financial institutions to purchase and operate light commercial multi atmospheric chamber vehicles; setting up more marketing outlets for marketing of flowers and processed products; developing ropeways for improving accessibility in difficult terrains to facilitate movement of produce from production sites to market outlets; creating an apex institution under the Commerce Department to exclusively promote exports from Sikkim; and adopting two-tiered approach for export promotion, viz. exports of fresh produce in the short-term and value-added processed products in the medium to long term to achieve desired export orientation.

The contents of the publication are based on information available with Export-Import Bank of India and on primary and desk research through published information of various agencies. Due care has been taken to ensure that the information provided in the publication is correct. However, Export-Import Bank of India accepts no responsibility for the authenticity, accuracy or completeness of such information.

Note: Indian Rupee are referred in crore and lakhs:

1 crore : 10 million

1 lakh : 100 thousand

Publication is available with:

Dharmendra Sachan

Chief Knowledge Officer

EXPORT-IMPORT BANK OF INDIA

Centre One Building, Floor 21,

World Trade Centre Complex,

Cuffe Parade, Mumbai - 400 005, India.

Phone : +91 22 2218 0379

Fax : +91 22 2218 3070

E-mail : dharmendra@eximbankindia.in

Website : www.eximbankindia.in

Contact Numbers : Ahmedabad : 2657 6852, Bangalore : 2558 5755, Chennai : 2522 4714, Guwahati : 246 2951, Hyderabad : 2330 7816 , Kolkata: 2283 3419, Mumbai: 2282 3320, New Delhi: 2332 6625, Pune: 2645 8599
Dakar : (221) 338232849, Dubai : (971) 43637462, Durban: (2731) 5846118, London : (44) 2073538830, Singapore : (65) 653 26464, Washington D.C.: (1) 2022233238