

Agribusiness in India

The journey started in December 2012. Since then, this is the second Winter Special Issue of this scholarly magazine focusing on a very pertinent, but less discussed topic, agribusiness. Its potential, quite often, is not commonly understood, too. Given the wide variety of products and markets coming under the ambit of agribusiness, this issue, within its limited scope, makes a humble effort to uncover some realities about a few sectors in agribusiness.

As per the UNIDO Report on agribusiness development (2013), it is observed that less attention is paid to the value chains through which agricultural products reach end users while a large portion of resources are employed to meet the demand for agricultural products through technology improvements mostly in seeds, fertilizers and irrigation. While in high-income countries 98% of agricultural production undergoes industrial processing, in developing countries, merely 30% is processed. Yet, agro-processing industries in developing countries generate 40 to 60% of manufacturing value added.

The first write-up is a short note on agribusiness in India, prepared by Rajashri Chatterjee, on behalf of the editorial team of *IMI Konnect*. The article aims at introducing the reader to the world of agribusiness in India by providing a crisp overview.

The journey of **Amul**, the success story of the milk co-operative, the mystery of sustaining the popularity of the Amul butter girl for so long, are detailed in an interactive article with **Mr. R S Sodhi**, Managing Director, Gujarat Cooperative Milk Marketing Federation Ltd. From the challenges faced by the industry to the implication of competition – the team is candid about this age-old company.

In another article, **Mr. S. R. Chaudhary**, Director, SAMETI has discussed the scope of the food processing industry as well as the problems and prospects of agribusiness in India.

In an interview with us, **Mr. N. Dharmaraj**, Director & Chief Executive, SBU A, Harrisons Malayalam Limited, has expressed his views on corporate farming and the potential of organic business.

Dr. Kingshuk Sarkar, Fellow, V V Giri National Labour Institute, discusses the fall from grace of Indian tea over the years. In his article, he elaborately provides explanations for this and the current scenario of the tea industry in India.

Another less known sector, Sericulture is in focus of the article penned by **Mr. Chandan Roy** of Kaliyaganj College. A detailed account of the challenges faced by the farmers in this sector and the prospects of this sector especially in West Bengal is vividly described in this article.

I am really hopeful that the readers will like the articles and interviews dealing with sectors not frequently discussed. In fact, many more sectors are not covered and we intend to have some more issues on the topic in the days to come.

I take this opportunity to make an announcement. During the last one year, we have introduced some new sections covering the views of the practitioners as well as young scholars. Now, in its fourth year, the magazine is planning to have a new look from its fifth volume. It will contain more articles in an issue and each issue will be more focused on a broad theme. There will be six issues in a year. We intend to accommodate more scholarly articles in future.

My sincere thanks to the readers for their continuous interest in *IMI Konnect*. With the aspiration of an all new volume of *IMI Konnect*, I wish the readers a very happy and prosperous new year ahead!

Paramita Mukherjee
Editor, IMI Konnect

Agribusiness in India: A Note

*Prepared by Rajashri Chatterjee**

In India, the agribusiness sector covers four sub-sectors, viz. agricultural inputs, agricultural production, agro-processing and marketing and trade¹. Factors like changing demographics, expansion of the consumer base, changing consumer preferences, growing urbanization, increase in the income level and increase in energy and raw material needs have created unprecedented demand for agricultural products worldwide in recent times. The UNDESA report (2015) projected that world population could increase to 9.7 billion by 2050. FAO in 2009 had estimated that feeding such a population would require increase in overall food production by around 70% between 2005/07 and 2050.

There is a need to go forward with the agribusiness mode keeping in view the ever increasing size of the market and the farmers' market linkages. Private trade has not quite been able to invest in marketing infrastructure as the market is mostly unorganized and are subject to excessive regulations.

Cultivation, processing and marketing of agricultural commodities is crucial for food security, employment generation, poverty alleviation and economic growth of an emerging country like India. Extensive commercial farming and processing of a range of commodities create value for the investors, the consumers and the society as a whole. Agribusiness is significant due to the number of people it employs, for food security reasons, for providing raw materials to other industries and for inflation.² It focuses on enhancing agricultural productivity or reduction of yield gaps thereby aiming at fostering commercially oriented globally competitive and sustainable agricultural sector.

Scope for Agribusiness in India

Since time immemorial agriculture has played a significant role in India's economy. Over 58% of the rural households depend on agriculture as their principal means of livelihood.³ According to the estimates by the Central Statistics Office (CSO), the share of

agriculture and allied sectors (including agriculture, livestock, forestry and fishery) was 16.1% of the Gross Value Added (GVA) during 2014–15 at 2011–12 prices. The nation has the 2nd largest agricultural land in the world and it is among the fifteen leading exporters of agricultural products.

India is a country having diverse agro-climatic regions, which facilitates production of vast range of agricultural commodities. With the largest youth population in the world, growing urbanization, changing lifestyles and food patterns, rise in incomes, India possesses huge potential in agribusiness. Many agricultural developmental projects have failed at various parts of the world due to the inability to categorize agro-climatic conditions suitably. The erstwhile Planning Commission had therefore recognized a number of diverse agro climatic regions in the country to draw up region specific research and development plans and policies based on techno-agro-climatic considerations.

Factors like changing demographics, expansion of the consumer base, changing consumer preferences, growing urbanization, increase in the income level and increase in energy and raw material needs have created unprecedented demand for agricultural products worldwide in recent times.

Fast growing domestic market coupled with increasing acceptability of Indian food products in the global market underpins the rise of agribusiness. There is rising demand for agricultural inputs in the country.⁴ Biotechnology applications in this field of business have vast scope in production of seed, bio-control agents, industrial harnessing of microbes for bakery products. Export in the sector can be a major source of economic growth. Organic farming can be harnessed to a large scale for growth in the sector. The increase in productivity offer opportunities for employment in marketing, transport, cold storage and warehousing facilities, credit, insurance and logistic support services.

Financing of Agribusiness

There lies an impressive scope in the country in this business for the so-called new genre of entrepreneurs, the Agripreneurs. The gaps in productivity and expanding market size provide potential for agriculture start-ups. The Private Equity and Venture Capital firms have found agribusiness to be an attractive venture in the emerging

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¹S.S. Acharya (2007). Agribusiness in India: Some Facts and Emerging Issues. Agricultural Economics Research Review, Vol. 20 (Conference Issue) pp 409-424

²Iyer & Singhi (2012). Indian Agribusiness: Cultivating Future Opportunities. The Boston Consulting Group Report

³India Brand Equity Foundation (2015). Indian Agriculture Industry: An Overview

⁴Agricultural marketing and Agribusiness (2015), TNAU Agritech Portal

http://agritech.tnau.ac.in/agricultural_marketing/agrimark_Agribusiness.html

economies. The Dutch financial services provider Rabobank-promoted PE fund Rabo Equity Advisors, raised US\$ 100 million for the India Agri Business Fund II in 2014 and has plans to invest US\$ 15–17 million in 10–12 companies. Oman India Joint Investment Fund, a joint venture between the State Bank of India and State General Reserve Fund has invested a lump sum amount in GSP Crop Science, a Gujarat-based agrochemicals company.

Recent Development and Initiatives

A number of developments have taken place over the last couple of decades to create a favourable milieu for the development of agribusiness. Several marketing-related restrictions have either been withdrawn, relaxed or replaced. Certain Acts dealing with agricultural produce and marketing are amended to ease setting up of private markets, direct purchases of farmers' produce. Concessions have been announced by the government and several agri export zones have been set up. There is a growing focus on the development of organized retail to bring in new technical knowhow in marketing and reduce wastages in the supply chain. The Central Government and some state governments have emphasized on engaging the corporate sector in agriculture through contract farming for improved access to inputs, extension services, and credit from agribusiness companies along with avoidance of high transaction costs and elimination and/or reduction of market and price risks faced by the farmers. Post-liberalization there has been a surge in contract farming system in the country. A well-organized system can help small holders to move from traditional mode of agriculture to production of high-value or export oriented products and assist in the farmers' linkages to the market.

The Government of India in 2015 has planned several initiatives to be taken up for the sustainable growth of agriculture. Various schemes have been put in place to improve soil fertility, support organic farming, improve access to irrigation, increase water efficiency and create an integrated market nationally to increase the income of farmers. The state governments have been asked to allocate adequate funds and take various measures towards the development of the sector.

The Ministry of Agriculture has signed MOUs/agreements with numerous countries including the US to ensure better agricultural facilities in areas such as research and development, capacity building, germ-plasm exchange, post-harvest management, value addition/food processing, plant protection, animal husbandry, dairy and fisheries. These partnerships would also assist in boosting bilateral trade. As the agribusiness sector is closely linked with the growth of the country, the government has allocated hefty sums to various funds and schemes like rural credit fund, Pradhan Mantri Krishi Sinchai Yojana etc to ensure continuous development.

National Bank for Agriculture and Rural Development (NABARD) and the government also lend support to private incubators. The government support during initial stages of functioning is vital when such businesses lack much capital or investment.

Challenges Faced in Indian Agribusiness

The growing pressure on land availability is threatening India's food security and agribusiness as a whole. Absence of adequate and sophisticated marketing infrastructure and lack of proper handling at the farm gate, in terms of cleaning, sorting, grading and packaging, lead to much of the agricultural products being spoiled or wasted before reaching the ultimate consumers. Rural India lacks proper infrastructure in terms of roads, electricity availability etc. The rural populace also remains financially excluded to a great extent due to factors like financial illiteracy, weak regulatory framework, high transaction costs etc. Excessive middlemen interventions in selling and marketing agro-products need to be taken care of too.

The development of the sector involves significant risks like huge water withdrawals for irrigation, deforestation and degradation of local ecosystem, greenhouse gas emission, conflicts related to large scale land acquisition and human displacement, complexities due to the change in climatic conditions etc. Labour practices are often criticized and technology penetration in the sector also has been very low.

The Indian government has to be cautious in promoting exports of agricultural commodities as exports may come in conflict with domestic requirement. The progress and paradigm shifts in the nature of agribusiness have called for more skilled and dynamic persons in the sector.

Conclusion

A thorough understanding of the players in the agribusiness sector of the global practices, technologies, food safety norms, international market linkages along with an in-depth knowledge of the local practices is necessary to harness the full potential in the country. Policymakers, incubators, agricultural universities, CSIR (Council of Scientific and Industrial Research) labs, globally acclaimed International Food Policy Research Institute (IFPRI), engineering institutions, chemical and biotechnology laboratories with their knowledge based approach and expertise need to collaborate more for the sustainability of the agribusiness sector. Proper understanding of these associated risks by all players in the value chain and adoption of sustainable practices in terms of enhancement of farm yields, reduction of supply chain wastages helps in creation of significant opportunities across the sector.

A Vision that Led to Revolution

R S Sodhi

Managing Director, Gujarat Cooperative Milk Marketing Federation Ltd (GCMMF)

In conversation with the Editorial Team of IMI Konnect

Amul, the dairy cooperative based at Anand in Gujarat, India, was established in 1946. Amul cooperative model spurred India's White Revolution that made the nation the world's largest producer of milk and milk products. The cooperative that commenced milk pasteurizing in 1948 with a handful of farmers in only two village co-operative societies producing about 250 litres milk a day today has expanded to 18536 village cooperatives producing 20 million litres per day.

IMI Konnect: *Founded prior to the Indian independence, what have been the factors leading to the birth of Amul as a dairy cooperative in the country?*

RS: The genesis of Amul can be traced back to the pre-independence era in India as an offshoot of its struggle against the unfair trade practices of the British. During 1940s India was a milk deficit country. There was no structured scheme for the milk collected at the villages to reach the cities for consumption. Pre independence Kaira District in Gujarat was rich in milk production. The Polson dairy dominated the dairy sector during the period. Polson procured milk from the district. Numerous contractors went to the villages and collected the milk, which was then transported to Bombay. Under this framework, as milk is a highly perishable commodity, farmers were compelled to sell their milk for whatever they were offered by the contractors. The farmers received a very low price from Polson. The middlemen also made an impressive profit under the active support and encouragement from the British government.

Exploited and infuriated by such unfair trade practices, the farmers of Kaira approached Shri Sardar Vallabhbhai Patel under the guidance of local farmer leader Tribhuvandas K. Patel. He advised the farmers to take the control over the entire value chain with respect to milk production, processing and marketing. The farmers planned to form a cooperative. As the British Government did not provide support to the whole concept, they started wasting milk while refusing to sell their milk to middlemen. The farmers ultimately went on a strike during 1945-46 in spite of various threats from the government regarding closure of their operations. Finally the Kaira District Milk Producer's Union Ltd was registered in 1946.

IMI Konnect: *How has the journey been so far with respect to the changes in the political, socio-economic environment in the country through the decades?*

RS: The union was further developed under the guidance of Dr. Verghese Kurien and Shri H.M. Dalaya. Dr. Kurien, who had studied abroad on a scholarship, was posted in a small dairy at Anand. Subsequently he got deeply involved with the cooperative, which was greatly benefitted from his technical expertise and advice. He pioneered the technology of producing milk powder from buffalo milk for the first time in world as much of the milk would go waste in the absence of any know-how to convert liquid milk to a product that can be stored.

Subsequently the milk products of the union were popularized under the brand Amul established since 1955. The name tried to capture an Indian savour as it originated from "Amulya" meaning 'Priceless' and focused on Quality Assurance. The brand revolutionized the dairy segment and the operation of cooperative model. Shri Lal Bahadur Shastri, the then Prime Minister of India visited Anand in 1964 and spent a night with the farmers of Kaira. Through his discussions he expressed his willingness of replicating the Amul cooperative model all across the nation to bring a drastic change in the socio-economic condition of the people. Consequently in 1965 the National Dairy Development Board (NDDB) was set up at

Anand and by 1969-70 NDDB came out with the largest dairy development programme ever implemented in the world, popularly known as "Operation Flood". These initiatives helped India to emerge as the largest milk producing country in the world since 1998. The success of Amul can be termed to be a combined effort of the wisdom and vision of the farmers and the technical expertise of a few specialists and professionals in the nation. The Gujarat Cooperative Milk Marketing Federation Ltd (GCMMF) is the apex marketing organisation for Amul products and it is India's largest food product marketing organisation at present, jointly owned by 3.6 million milk producers in Gujarat.



IMI Konnect: *How has the Amul Cooperative Model transformed the dairy segment in India?*

RS: The Amul Cooperative Model is a three-tier organization. It comprises of a dairy cooperative society at the village level affiliated to a milk union at the district level which in turn is federated into a milk federation at the state level. Milk production and collection is carried out at the village level. The farmers supply surplus milk into the cooperative. The milk is then transported and processing is done at the District Milk Union while finally the marketing and distribution of the milk products is done and managed by the state milk federation. Currently there are 18,536 village milk cooperative societies and 17 district level milk unions. Amul always strives to give the best price to the farmers helping in their socio-economic upliftment.

IMI Konnect: *What are the supply-chain challenges involved in the dairy sector in India at present?*

RS: Milk being a highly perishable product the nation's poor road and communication network, logistical complexities, dearth of investment in cold chain infrastructure have challenged the dairy industry for long. Proper storage and cooling of milk and milk products is crucial for the producers and other members in the value chain. The different milk products like cheese, ghee, ice cream, butter etc. need different temperature for their preservation and storage before distribution. The sector, being unorganized to a great extent, also often suffers from lack of technical expertise on the part of the members.

IMI Konnect: *The Amul mascot has now been there for generations. What was the concept behind its portrayal?*

RS: The Amul butter girl was conceived during 1966 by Mr. Sylvester da Cunha, who was then the managing director of Advertising and Sales Promotion (ASP), an agency entrusted with commercializing the brand. The campaign was launched to generate awareness of and promote the brand to compete with the popular Polson butter. The concept behind creating a bubbly little girl was to portray a brand that is young, fresh and vibrant ever.

IMI Konnect: *The advertisements using the mascot are very contemporary in nature and even comically depict the major current affairs. Do you possess any conscious plans to deal with any unforeseen challenges around the same especially*

with regard to your branding strategies?

RS: The advertising agencies are trusted in the sense that for so many years they have tried to depict contemporary issues comically in a subtle manner. However the brand has definitely faced controversies at times while dealing with such affairs. The strategy has always been to deal with those in the right spirit and in an amicable way.

IMI Konnect: *How do you strategize to face competition in the dairy segment in India?*

RS: Competition is always beneficial and desirable. We operate in a free market economy and it is ultimately the consumer who decides which brand to go for. Amul is not driven by profit motive and has never abused its dominant position. Rather it always endeavours to be socially responsible. The success of Amul is defined from the consumer's enormous trust on and preference for the brand and its fair practices.

IMI Konnect: *What are the future plans of Amul with respect to diversification and further expansion of the brand portfolio?*

RS: Amul believes in the three Es i.e. a) Expansion in milk collection and procurement by way of working and cooperating with the farmers and enhancing the yield of milk; b) Expansion in the processing of the milk through the use of new technology, machineries; and finally c) Expansion in marketing and distribution through the adoption of strategies to reach more and more consumers.

The dairy sector is mostly unorganized till date. So steps are taken to increase the share of the organized sector. India is the second most populous country in the world with the largest youth populace. Life expectancy of the people is also on the rise. These factors along with growing urbanization demand food security. Milk and milk products supply some of the vital nutrients since the birth of an individual. As major portion of India's economy is based on agriculture and animal

husbandry, milk production plays vital role, though partially in the context of food security. Amul is not a profit-driven organization and it places high priority on fresh liquid milk. It has already forayed into every nook and corner of the nation, even to the remotest villages. The brand is prominent in US, Dubai, Singapore, Australia. However there is still always an emphasis to broaden its reach to the masses across the globe.

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Agribusiness: Challenges and the Way Ahead

S. R. Chaudhary

Director, SAMETI & State Nodal Officer, ATMA, Gandhinagar

Agriculture does not represent mere farming anymore, it is now a generic term that encompasses businesses involved in food production. It includes farming, seed supply, agrichemicals, farm machinery, wholesaling and distribution, processing, marketing, trade and retailing. The landscape of this business has changed and it requires an incessant stream of enthusiastic and open-minded professionals. This breed of agribusiness managers with their special skill sets is capable of bringing in another wave of revolution in India.

Agribusiness has the potential to create huge opportunities in India. Agriculture in the country is undergoing transformation in its practices. As young and charged-up entrepreneurs are foraying into the field, commodities are being turned into value-added products and premium prices can be demanded from various retail outlets. With the available/accessible resources, young entrepreneurs are modifying their business-models and trying to take advantage of market opportunities for scaling up. This is not only assisting the entrepreneur but also encouraging farmers to achieve better standard of living.

Future outcomes of an endeavour depend on the current decisions. Although arbitrariness and uncertainty associated with the future are involved in the sector to a great extent, one is able to increase the probability of a favourable outcome by planning well in advance. For those who operate their own venture, planning becomes significant because the personal and professional aspects become more difficult to disentangle. In agricultural businesses, planning becomes even more essential due to the inherent risks viz. production risk, price risk, financial (or interest rate) risk, and changes in government policies and programmes. Entrepreneurship development in agricultural sector and business planning for agricultural firms - from input suppliers to producers to processors are extremely important.

Our nation has the second largest arable land in the world and is

gifted with diverse agro-climatic zones across the country. This implies tremendous advantages in agriculture and huge potential to cultivate a vast array of agricultural products. These strengths provide a large and varied raw material base for food processing and if leveraged optimally, can help India to become a principal food supplier to the world. However, the rising pressure on land availability is often leading to shortfall in food supply in many crops, which in turn is detrimental to India's food security. This can only be resolved through the increase in farm yields, reduction of wastage across the supply chain through better storage and warehousing facilities, post-harvest infrastructure and improved logistics.

Both the fast growing domestic market and the increasing acceptability of Indian food products worldwide supports the commercialization of agriculture into agribusiness. India has a population of over 1.25 billion which is growing at about 1.6% per annum. Hence the country has a vast and growing market for food products, which are the only largest constituent of private consumption expenditure. With India's demographic profile shifting in favour of the younger population, rising surplus incomes, growing urbanization and changing lifestyles, food consumption patterns are gradually changing towards packaged or branded food products, convenient kitchen solutions and health foods. All these have also led to growth in organized food retail and food service with consumers looking for a superior shopping experience. More often they display an eagerness to try out different cuisines from across the world.

The Indian Food & Agriculture sector is still mostly unorganized. Proficiency, competence in this field of business along with patience are the prerequisites to educate promoters, interpret abnormal state of affairs and structure complex investments. The sector is evolving with significant investment opportunities along with several industry-specific risks.



With the available/accessible resources, young entrepreneurs are modifying their business-models and trying to take advantage of market opportunities for scaling up and the betterment of their lifestyles.

“Make in India” must be Supplemented with “Grow in India”

N. Dharmaraj

Director & Chief Executive, SBU A, Harrisons Malayalam Limited

In conversation with the Editorial Team of IMI Konnect

Harrisons Malayalam Limited (HML) is the most successful integrated agricultural operation in South India. A part of RPG enterprises, which is one of India's largest and revered business conglomerates, the company's history dates back to over hundred and fifty years. It has been a pioneer in corporate farming and has established and run plantations for tea, rubber, cocoa, coffee and a wide variety of spices. The company also produces a variety of other exotic horticultural crops.

IMI Konnect: *With a history that goes back over hundred and fifty years, how has the journey been for Harrison Malayalam Limited through the decades?*

ND: Harrisons Malayalam Ltd is a plantation company having both Tea and Rubber crops besides minor crops like Pineapple, Cardamom, Pepper and other Spices. It has a workforce of around 6000 employees and is the largest employer in Kerala after the Kerala Government. This is an industry in which wage costs are 60% of the cost of production. HML has seen various ups and downs due to the commodity price cycles and wage increase, but has been able to drive through the tough times due to our perseverance, concerted efforts and good agricultural practices.

IMI Konnect: *As agribusiness is a vast and complex industry encompassing various commodities and range of activities, how would you like to define your core competencies in this industry?*

ND: Our core competency is our agronomic expertise, ability to manage large work force and discipline, especially when we operate over large geographical areas involving multiple activities.

IMI Konnect: *What do you think are the present challenges and the opportunities involved in the agricultural commodity business in the Indian and the global marketplace?*

ND: The main challenge is the lack of control over the commodities prices, followed by the ever increasing cost of wage. We need to insulate ourselves by moving up the value chain through product and quality differentiation. We must also learn to run the business with lesser and lesser numbers.

IMI Konnect: *What are your current plans for diversification and expansion?*

ND: Increase in exports, new product development, private labels etc are some plans for diversifications. HML believes that its products, which are a combination of superior quality and high standards in product safety backed by traceability and ensuring production under ethical sustainable conditions will contribute to product differentiation and value creation in future.

Even in our natural rubber business we are gaining ground in new product development with a great degree of product differentiation. HML is already positioning itself as a “green” company. This is the route we will follow in our product and value differentiation goal.

IMI Konnect: *In the context of the recent globalization trends, what do you think are the current threats from the perspective of the multinationals operating in this sector?*

ND: FDI is now permitted in all plantation crops. This throws open opportunities for joint ventures with front end marketeers and manufacturers, especially since product traceability is becoming increasingly important.

IMI Konnect: *According to you what are the factors which might help India to harness the full potential in agribusiness?*

ND: Fragmentation is the biggest bane of Indian agriculture. Corporatization in agriculture will bring in the apparent benefits of scale.

IMI Konnect: *What type of supply chain challenges do you face in your operations?*

ND: As a primary producer, we are at the lowest end of the supply chain. Land is our primary asset. Our challenge, therefore is to move up the value chain to harness greater share of value, whilst remaining rooted in our primary production activities where the land asset is the core strength.



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Export Competitiveness and Internal Consumption: The Case of Indian Tea

Kingshuk Sarkar

Deputy Labour Commissioner, Govt. of West Bengal

Fellow, V. V. Giri National Labour Institute, Noida

India is one of the major tea producing and exporting countries of the world. During the last three decades, Indian tea experienced a secular decline in the share of the world tea market. Notably, share of export out of total production also underwent steady decline while domestic production and consumption of tea recorded an increasing growth. This gradual decline of exports points to the issue of export competitiveness of Indian tea, which is intrinsically linked to increasing domestic consumption.

Export Scenario

The export share in the total production of tea in India was 39.19% in 1980, which gradually went down to 32.72% in 1986, 20.73% in 1996, 20.71% in 2008 to only 18% in 2012. This is very low given that tea production of India has grown at a CAGR of 1.5% till 2008.

India's share in the global tea market was 26% in 1980 which plummeted to 20.86% in 1986, 14.51% in 1996, 13.77% in 2006 and finally to 12% in 2012. From 1980 to 2012 India lost a significant 15% share in the global tea market.

During the last five years total world export averages 41% of world tea production and 84% of exports accounted for by six major tea producing countries like India, Sri Lanka, China, Kenya, Indonesia and Vietnam. The largest tea producing countries, India and China, consume most of their own production and have relatively lesser share of world tea export market. Sri Lanka and Kenya have 7% and 5% share of world tea growing area but their market share in world tea market are 23% and 20% respectively.

It is observed that the export shares of

the major tea producing countries like Kenya, Vietnam, Argentina, China and even Nepal have increased considerably. Between 1980 and 2008, Kenyan export share has increased from 8.71% to 23.26%, Chinese share from 12.57% to 18.01%, despite



tea consumption in China is very high like India. However, during the same period the export share of Sri Lanka, Indonesia, Malawi and Bangladesh in the global tea market fell, although their fall was significantly less than that of India.

The export competitiveness of India along with China, Bangladesh and Vietnam has been declining over the period 1996-2008. Relatively recent entrants to the world tea market like Kenya, Sri Lanka and Nepal have gained at the expense of these traditional dominant countries in terms of RCA index. Nepal, who exhibited

remarkable increase in the index have reaped the benefit of similarity of its tea with India's famous Darjeeling tea. There are several causes for the fall in export share in world tea market. One of the important reason is rising domestic consumption. Table 1 represents a detailed picture of India's tea export over the years.

Table 1 shows that the volume of Indian tea export in absolute terms during the period 1950-51 to 2012-13 remained almost the same. But during this period production increased significantly (307 million kgs in 1950-51 to 1200 million kgs in 2012-13). This explains the fall in the share of exports in total production. Value

of exports increased remarkably essentially due to rise in tea prices in international markets. In terms of share in world tea market, India suffered consistent decline over the years (Fig.1). In

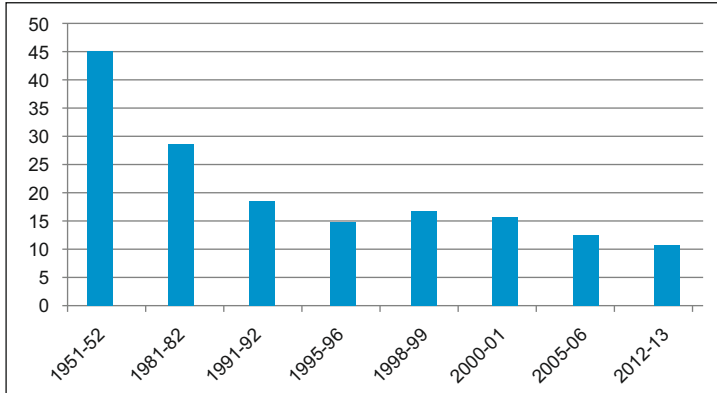
Table 1: Quantity and Value: Indian Tea Export (1950-51 to 2012-13)

Year	1950-51	1960-61	1970-71	1980-81	1990-91	1995-96	2000-01	2005-06	2012-13
Export (m. kg)	200.78	193.06	202.33	224.78	210.02	163.74	206.81	199.05	216.23
Value (Rs Crore)	80.42	119.98	149.54	432.54	1113.35	1191.19	1898.61	1830.97	4005.93

Source: Tea Statistics 2005-06, Tea Board of India

1951-52 India had 45% share in the world tea market which came down to only 17% in 1998-99.

Fig.1: Share of Indian Tea Exports in World Market in Different Periods



Source: Tea Board of India

Domestic Market

Demand-supply situation in domestic market is adversely affecting the export performance of the Indian tea. The domestic demand for tea in India is a significant factor in inhibiting export efforts. Internal availability of tea has been increasing steadily over the years. Internal consumption can be represented as domestic availability since data related to internal consumption of tea is not available in an aggregative manner. Domestic availability is total production minus total export. The growth rates in domestic availability vis-à-vis production are shown in Table 2.

Table 2: Growth of Production and Domestic Availability of Indian Tea

Period	Compound Growth Rate (%)	
	Production	Domestic Availability
1951-61	2.19	6.73
1961-71	2.08	4.67
1971-81	2.55	5.00
1981-91	3.02	3.74
1991-01	2.46	5.03
2001-11	2.32	5.62

Source: Various Issues of Tea Statistics, Tea Board

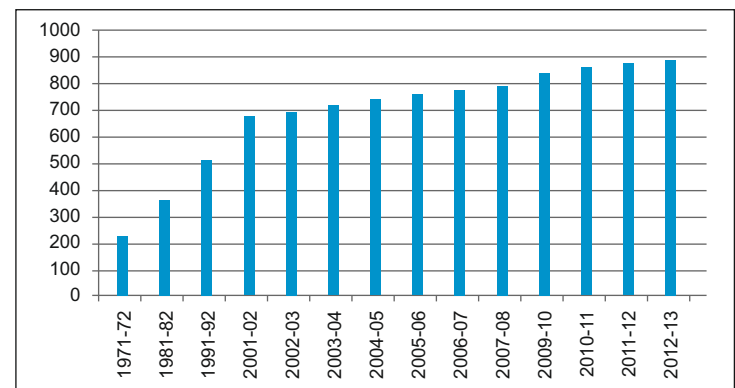
In recent years growth of production of tea in India is depressed (Tea Board, 2005). But domestic availability is increasing each year implying increase in domestic demand. In such situations producers are mostly interested to sell their output in the domestic market resulting to little surplus for exports. India's domestic market is the largest single tea market in the world. Growing internal availability of tea since 1971-72 is depicted in Fig.2. Internal availability of tea in India has recorded a uniform rising

trend over the years. However, stagnancy in export did not affect the producers and sellers of tea in a significant way due to expanding domestic market. Buoyant prices in the domestic market further enhanced the trend.

The growing population and rising standard of living are boosting domestic demand for tea, which is expected to rise further in the years to come. It is therefore essential to design the production plan in such a manner that it can meet the growing demand of both the external and internal markets.

Initially when tea was introduced in India by colonial ruler, the objective was to develop it as an export item. Even after independence, this was the focus till 1980s. However, since late 1980s, domestic consumption started increasing and export became stagnant in absolute terms. This is entirely different from

Fig.2: Internal Availability of Tea in India (in million kgs) in Different Periods



Source: Tea Digest 2007-2008

the situation of Sri Lanka and Kenya who are India's strong competitors in world export market. The size of the domestic market is relatively smaller in Sri Lanka and Kenya. But, India's domestic market is so huge that producers can always fall back upon the internal market for absorption of entire produce.

Conclusion

In the process, tea as a product has lost its position as leading foreign exchange earner in agribusiness. Tea Board of India (TBI) aggressively promoted Indian tea in world tea market in earlier times. Its priority seems to have changed also as it is concentrating more on facilitating small tea growers and promoting tea consumption within the country. However, Indian tea still is considered as a sought after commodity in the world and there is no trade-off between increasing domestic consumption and export. India should try to regain some of the lost ground in world market and at the same time support the growing domestic consumption.

Problems & Prospects of Sericulture Practices in West Bengal

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Introduction

Sericulture is a highly labour and land intensive activity ideally suited for the vastly over-populated, agro-based economy like India. Throughout its vertical process of production (i.e., from silkworm rearing to production of silk goods) it spreads its welfare raising distributive impact both in rural and urban sector. While farmers in the rural areas practise sericulture activities, silk weaving and production of silk goods are concentrated in the urban areas. Thus silk and sericulture interlink both agrarian as well as cottage based industrial economy and thereby has a wide spread distributive impact in terms of employment and income generation. Moreover, there is a substantial involvement of women in this industry and thus it helps in reducing the gender-bias in employment. At the end of the 11th Plan period, the employment generation in Indian sericulture sector has reached 7.56 millions, compared to 6.12 millions during 2007-08. It has been estimated by National Productivity Council that 0.165 man year employment could be generated from 1 kg of mulberry finished products.

In 2011, India produced 17.54% of global raw silk, while China's share of production was 79.10%. India is the only country that manufactures all the four types of commercially known varieties of silk, namely, Mulberry, Eri, Munga and Tasar. In 2012-13, out of total raw silk production, 79% was mulberry raw silk, while Eri was 13%, Tasar 7% and Muga 1%.

The basic edifice of the silk-industry in India has been built on its strong home demand. The pattern of export of silk products in India appears to be the horizontal extension of its existing industrial culture. Domestic demand for silk in India has risen from 28079 MT to 28801 MT during 2008-09 to 2012-13. The domestic demand-supply gap has led the country to rely more on imported silk.

However the gap has been declining, evident from declining trend in import of silk and silk good from 9709 MT to 5122 MT during 2008-09 to 2012-13.

The silk export occupied only 1.2% share in total exports and 4.4% share in total textile exports of the country in 2000-01. In 2010-11, the share of silk exports in total export basket further declined to 0.25%. The primary reason for this declining rate was the low value items in our export basket. However, the removal of quota regime under the MFA (Multi-Fiber Agreement) is also responsible for this. India became a non-significant supplier to the major textile importing countries like European Union, US, and Canada.



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Sericulture is traditionally being practised in five major states of India. Karnataka is the largest raw silk producing state in India, followed by Andhra Pradesh and West Bengal. Karnataka vests largest amount of land for sericulture followed by Andhra Pradesh. Tamil Nadu and Jammu and Kashmir are other states producing silk.

Problems of Sericulture Practices in West Bengal

The major impediments in sericulture development across West Bengal can be identified as lack of suitable region specific silkworm breeding technology, small land holding of the mulberry cultivators, poor socio-economic condition of artisans, extreme climatic condition, under-developed post cocoon sector which includes reeling and spinning sector, ill-developed powerloom division etc.

The supply chain in this agro-industry (See Fig: 1) can be categorized into four stages- (i) Mulberry cultivation; (ii) Silkworm rearing; (iii) Reeling, Spinning & Twisting; (iv) Silk Weaving. Farmers and artisans connected with each phase of this supply-chain face several problems, some of which are general and

the rest are region specific.

Problems Faced by the Mulberry Farmers

Most of the mulberry cultivators possess fragmented mulberry lands which raise its operational costs. Closer proximity of mulberry lands to the residential area opens up the possibility of infiltration by domestic cattle and enhances protection cost. Large numbers of silk worm rearers do not have adequate land and irrigation facilities. They purchase mulberry-leaves from the market. Some proportion of land is low lying and flooded every year and stagnation of water is harmful for mulberry cuttings. Mulberry leaf productivity is gradually diminishing as the local variety is more susceptible to the diseases. Despite efforts of the Technical Service Centres, transfer of modern technology to the farmers is substantially low due to their intrinsic backwardness coupled with illiteracy.

Problems of the Silkworm Rearers

Silkworm rearers are bound to purchase eggs of inferior quality from local non-licensed grainages and that affects quality of silkworms. Due to poor economic backgrounds, most of the silkworm rearers do not have separate silkworm rearing house with modern equipments like open window, net, fan, air, cooler, heater etc. This leads to low productivity in silk.

Financial insolvency of the rearers is another concern. Silkworm cocoons are sold within 5-6 days of harvesting and reach silk weaving centres through various intermediaries. The cocoons are sold and reeled within 10 days and therefore most of the time rearers make distress sale.

Problems of the Silk Reelers

Silk reeling equipments can be broadly classified into four units – Traditional Unit or Charka, Cottage Basins, Multi-end Reeling Machines and Filature. Barring

the last two, all other types using elementary technology restrict the scope of reeling quality silk. West Bengal presently possesses 2 state run filatures and 4 state run multi-reeling machines in 2011-12 while comparatively large number of charka units (10400 numbers) and cottage basins (8556 numbers) are available under private ownership.

The optimum production rate of state run filature is about 800 to 850 grams of silk yarn per day (De Sarkar et al., 2013); but the volume of cocoons the government agency could procure can hardly satisfy 20-25% requirement of these reeling units to run the filature. Reelers of West Bengal procure a sizeable quantum of dry cocoons from

outside market viz, Maharashtra and Jammu & Kashmir and this raises the transaction cost. It should be noted that the forward linkage sector, i.e., the weaving sector is underdeveloped in West Bengal. The reelers largely look forward to the southern states and, Benaras and Bhagalpur for the disposal of processed yarn.

Problems of the Silk Fabric Weavers

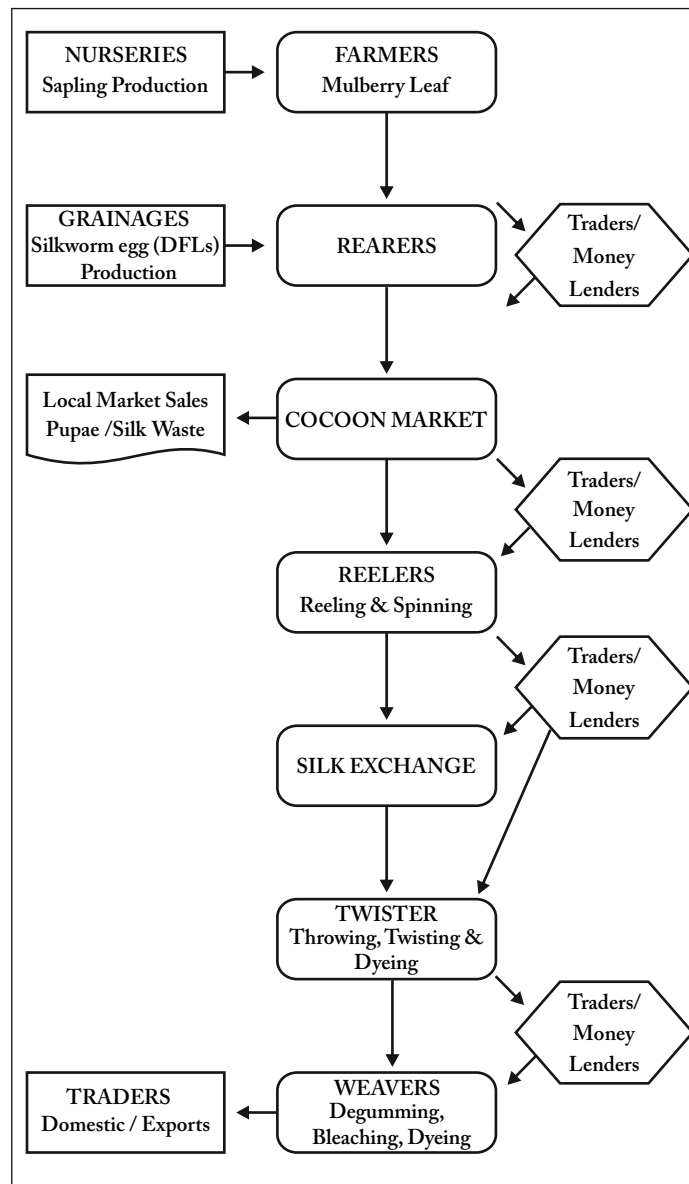
Weavers collect raw materials through societies while independent weavers in West Bengal are free to mobilize yarn from the market. But the private silk merchants on whom they depend, claim unusual share in the value added. Most of the silk weavers are using pit looms which are dangerous as in the monsoon these are dwelling places of poisonous snakes. But, the frame looms are too expensive for the poor artisans.

Way Forward

Sericulture provides employment to more than 1 lakh families in the rural areas of West Bengal but it is facing several challenges. Dadani Mahajan utilizes the poor artisans and extracts a major part of the pay-off intruding into the supply chain of the industry. In the

absence of institutional apathy and well-linked credit system in these remote rural areas, any transformation is far reached.

Fig 1: Supply Chain of Sericulture in West Bengal



Continued from Page -7

IMI Konnect: *How do you think agribusiness can assist in the growth of the emerging countries like India?*

ND: There is a great opportunity here. "Make in India" must be supplemented with "Grow in India". Companies like HML with a huge experience and expertise in agriculture can play a big role here.

IMI Konnect: *What are the emerging trends specific to organic agribusiness in the country?*

ND: The growth in organic business is strong. But the market size is still small. What is gaining greater relevance now is safe products produced under ethical and sustainable conditions. HML is the first plantation in India to attain a host of certifications, such as Rain Forest Alliance, Trust Tea, UTZ, ETP besides being a regular winner of the Golden Leaf India awards. This is already giving us an edge in the marketplace especially in exports.

IMI Konnect: *How do the changing EXIM policies in India affect your business?*

ND: Exports in tea in particular will be an important part of our diversified marketing portfolio. We are growing well in this space. One has not seen any particular support from the government in terms of EXIM policy to support agribusiness export.

IMI Konnect: *With the changes in business environment, which approach viz. proactive vs. reactive, do you feel works best for you?*

ND: Proactive, of course. Plantation business is perhaps delinquent of being reactive. We are correcting this in every aspect of our business.

IMI Konnect: *What would be your note of advice for professionals planning to enter this sector?*

ND: Agribusiness professionals should see a great opportunity in this sector, especially as it is shaping to change business models, in the wake of the current business realities and stiff international competition.



CONFERENCE

Sino-India Forum with IMI at China

The two day Sino India Forum 2015 on 'Sino-Indian Relation: Change and Development' hosted by the Sichuan Academy of Social Sciences (SASS) and jointly sponsored by the Western China (Sichuan) Import Expo & International Investment Fair was recently concluded at the Chengdu city in Southwest China. Held from 26th to 27th October 2015, the conference witnessed a phenomenal response in terms of participation from the academia-industry of China and India. Like ISEC, IMI was also featured as another intellectual partner from India for the conference.

The conference kicked off with a remarkable inauguration session with addresses by Mr. Luo Zhiping, Deputy Secretary-General from Sichuan Provincial Government; Mr. Y. K. Sailas Thanga, Consul General of India in Guangzhou; Mr. Li Xiaojun, Deputy Director of News Office of Sichuan Provincial Government; Prof. Li Houqiang, Secretary of Party Committee of SASS; Prof. Hou Shuiping, President of SASS;



Prof. Arindam Banik, Director, IMI-Kolkata and Prof. Durgam Rajasekhar from the Centre for Decentralization and Development, ISEC. A total of 46 selected papers were presented at the conference by scholars and academicians from India and China. The 13-member team from IMI including Dr. Arindam Banik, Dr. Paramita Mukherjee, Dr. Tirthankar Nag, Dr. Rachana Chattopadhyay, Dr.

Rituparna Basu and Dr. Chanchal Chatterjee of IMI Kolkata presented papers in the conference.

The conference closed on a high note of hope around the prospects of collaboration and cooperation between the two Asian giants in terms of mutually rewarding industry-academia partnerships and exchanges. The warmth, hospitality and organizational excellence of the Chinese institutions in managing such a large scale conference were acknowledged by the visiting delegation from India. The conference also received a wide coverage by the popular media in China.

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