CHAPTER

6

AGRICULTURE SECTOR

6.1 'WHY' IS AGRICULTURE SECTOR IMPORTANT FOR INDIA?

In the previous section, we had dealt about agriculture sector which has about 60 per cent plus population-dependence, an aspect which has been there since Independence. This sector provides us with food security and raw material for manufacturing sector.

Each and every country would like to be self-sufficient for its requirements of food grains, pulses, sugar, edible oils, milk, fruits and vegetables.

India has the largest number of villages of over 6,00,000. Majority of our population resides in villages. No other country has so many villages.

India's agricultural sector is characterized by traditional, subsistence and livelihood, rain fed farming, food grain oriented, lacking in diversification and commercialization. Over 80 per cent of the farmers are landless, small and marginal farmers with cultivation for consumption and little diversification. Agricultural finance is informal with reliance on the money lenders. It is said about India that majority of our economic issues are primarily of poverty and unemployment and both the problems and their resolution lie in the agricultural sector.

There is enough literature available on agriculture in standard text books on Indian Economy. It would be suffice to say here that the key issues in agriculture are to increase production through distinct improved productivity.

'Why' is Productivity Important?

In the earlier years, production could be increased by bringing in more and more land under cultivation without addressing productivity. However, today all available arable land is already under cultivation which means production can be increased only through increased productivity.

With the increasing population, increased incomes especially of the poor in the future would increase the demand for agricultural products manifold. What would happen if productivity does not increase? It would mean 'supply' not sufficient for 'demand' which would result in increased prices of food items, as it happened in 2009–2010 with food

inflation climbing ove
inflation will hurt all t

Agriculture sector i
will only keep on incr
factors and others like

Realizing the impor
the 'Green Revolution'
wheat and other cereals
(HYV) seeds. This wa
measured applications o
The success story was r
assured/adequate water
Western Uttar Pradesh.

However, it was mo
of wheat. Much of the
Our attempts with othe
and their relative impo

- White Revolution
- Yellow Revolution
- Blue Revolution (m
- Golden Revolution
- Golden Fibre Revol
- Silver Fibre Revolut
- Brown Revolution

More recently, Rainbow
floriculture, plantation

India is one among t
under cultivation and pr
major crops which is not
prices. It is not sufficient
ginger, turmeric, pepper,
rice, wheat, ground nut,
domestic demand and pr

India is blessed with
its agricultural productio
differentiator between In

Another concern is th
since Independence has
domestic needs. Food gr
tonnes of which wheat ha
is an urgent requirement
increased productivity.

inflation climbing over 15 per cent in a short period. As everyone will be aware that food inflation will hurt all but the poor will be hit much harder.

Agriculture sector is considered as very vulnerable because it is one sector where demand will only keep on increasing and supply will always be volatile with so many structural factors and others like monsoon dependence as only 40 per cent land is irrigated.

Realizing the importance of food grains way back in the sixties, the government ushered in the 'Green Revolution' pioneered by Dr M. S. Swaminathan, to improve the productivity of wheat and other cereals, through researched improved seeds known as high yielding varieties (HYV) seeds. This was the first time where a scientific approach was adopted and with measured applications of fertilizers, insecticides/pesticides, productivity of wheat quadrupled. The success story was made possible only by creating the right model of optimal land size, assured/adequate water supply, soil conduciveness in the areas such as Punjab, Haryana and Western Uttar Pradesh.

However, it was more of an experiment to see how to improve productivity especially of wheat. Much of the self-sufficiency in wheat can be attributed to the Green Revolution. Our attempts with other revolutions in the agriculture sector were centred around products and their relative importance such as:

- White Revolution (milk and milk products).
- Yellow Revolution (oil seeds).
- Blue Revolution (marine products).
- Golden Revolution (Honey).
- Golden Fibre Revolution (Jute).
- Silver Fibre Revolution (Cotton).
- Brown Revolution (Cocoa).

More recently, Rainbow Revolution (includes horticulture comprising of fruits, vegetables, floriculture, plantation crops, spices, etc.).

India is one among the largest producers of various agricultural goods in terms of area under cultivation and production; however, it clearly lags behind in the productivity in all major crops which is not sufficient for the domestic market as is evident in their increasing prices. It is not sufficient enough to be satisfied as the largest producer of pulses, coconut, ginger, turmeric, pepper, milk or even the fact that India is the second largest producer of rice, wheat, ground nut, fruits and vegetables. It has to be seen in relation to the relative domestic demand and productivity rather than only production.

India is blessed with large land area whereas, China has lesser arable land than us but its agricultural production is double than that of India. Clearly, productivity is the chief differentiator between India and China.

Another concern is that the average annual growth of agricultural production right since Independence has been only 2.5 per cent. This is very low keeping in view the domestic needs. Food grains output has been trapped between 175 and 200 million tonnes of which wheat has stagnated around 70 million tonnes in the last few years. There is an urgent requirement to increase the production which can happen only with the increased productivity.

Growth in agricultural production is seen as a multiplier for the rest of the economy as it helps in augmenting supply of food products thereby cooling prices. It also increases income of the farmers and thus greater demand for non-agricultural goods giving incentive to the industrial sector to produce more and provide an upward spiral in growth.

6.2 NEW AGRICULTURAL POLICY 2000

The government realizing the importance of the agriculture sector formulated the New Agricultural Policy during 2000, which has tried to give a new direction to the agriculture sector which has the following salient features:

- Agriculture sector has to grow at an average annual growth of a minimum 4 per cent over the next few decades.
- Greater focus has to be given on horticulture, animal husbandry, poultry, dairy, aquaculture given their potential and their twin ability to raise the plank of growth and increase purchasing power.
- Need to provide food and nutrition security.
- There is a requirement for greater biotechnology use, newer plant varieties and their protection through suitable legislation, greater thrust on scientific farming, dissemination of technology advancements.
- Focus on agro and social forestry for maintaining ecological imbalances.
- Regular supply of price protection to farmers through the minimum support price system.
- Dismantling restrictions on movements of agricultural commodities.
- Increase public investment in agriculture sector especially rural electrification, irrigation projects, watershed development, etc.
- Create off-farm employment opportunities through promotion of agro-processing units.
- Land reforms to be provided a decisive thrust for better land distribution, consolidation and re-distribution of surplus land to landless farmers.
- National Agriculture Insurance Corporation should provide insurance cover in case of crop failure, droughts, etc.
- Allowing private sector participation through contract farming.

The new agricultural policy of the central government is only indicative in nature as agriculture being in the state list falls within the domain of respective state governments which would have the responsibility to implement the policy. Many experts including Prime Minister Manmohan Singh feel that India's agriculture sector requires a 'Green Revolution II'.

6.3 RAINBOW REVOLUTION

The earlier Green Revolution was centred on wheat and now what is required is a comprehensive revolution, which covers the entire agriculture sector known as Rainbow Revolution and it essentially means the following:

- Agricultural activities to change from subsistence and livelihood activities to as a commercial venture with focus on productivity and profitability.

- Crop diversification, commercialization, moving up the value addition chain.
- Intensification of research and should ensure their effective dissemination amongst farmers.
- Agricultural extension service, which is transmission of appropriate technology from lab to land, has virtually collapsed in India. Less than 1 per cent of farmers make use of the extension services (Krishi Vigyan Kendra). Block level extension services are not equipped with the latest advancements in technology. There is an urgent requirement of their integration in the agriculture sector to close the knowledge gap.
- Allowing modern science, biotechnology, organic farming to be blended within the agriculture sector.
- Farmers to move away from two-crop cycle to shorter duration crops allowing for multiple cropping.
- Stress on completion of irrigation projects to get more and more land under irrigation.
- Increase both on and off farm employment.
- Focusing on rural transportation.
- The farmer should become the fulcrum and efforts made to improve his standards of living and in his prosperity, lies the prosperity of the agriculture sector and the Indian Economy.

Dr M. S. Swaminathan, an agricultural economist, however, feels that India needs 'Ever Green Revolution' for long-term sustainability. It cannot be achieved in one shot but continuous shots at improving production and productivity, suitable blend of the traditional with modern, focused on locally renewable sources of energy, organic farming and making inputs and credit available to the farmers, as fundamentally more important today.

Agriculture sector right since Independence has been a thrust area, with increased investments in each successive five-year plans, but problems have not only remained unresolved but only accentuated over a period of time with large-scale rural poverty.

6.4 MINIMUM SUPPORT PRICE (MSP)

The government announces the minimum support price (MSP) for twenty-four crops including rice, wheat, pulses, sugarcane prior to harvest which is to say that the minimum price of crops in the market would not be less than the MSP announced for the crop. Of the MSP announced for various crops, the government through Food Corporation of India, as discussed in an earlier chapter, directly procures wheat and rice for meeting buffer stock requirements and also to channelize the food grains to the poor through various government sponsored schemes. For the remaining crops, the government would ensure a price which is higher than the MSP in the market.

Fruits and vegetables are sold to the agriculture produce marketing cooperatives (APMC) of the respective state governments, which also fix the price keeping in view their relative cost and also ensure the farmer obtains a fair price.

The delivery channel has a number of middle men, who serve as bottlenecks and also responsible for increased prices, large-scale hoardings and also prevents the farmer from getting benefits of increased prices.

The MSP allows a farmer knowing the price which he would get for the produce in the market especially for the food grains, but it is also believed that the benefits largely go to the bigger farmers, besides the MSP has prevented diversification of the agriculture sector. Many critics have favored discontinuation of the MSP, but the large scale small and marginal farmers do benefit, even though a larger chunk of the benefit is reaped by the affluent farmers. Further it may be too pre mature for India, presently to move towards a market pricing for food grains.

6.5 INDIAN AGRICULTURE—TEN NEW THOUGHTS

Agriculture sector in India requires an out-of-box thinking keeping in mind the criticality of this sector.

At first, the scientific/modern genetic engineered farming today is crucial for India's future.

Secondly, the markets for the farmers are distorted, not enabling them to get the best prices and there is a need to connect the farmer directly with the markets what is referred as F(Farmer) • F(firm) • F(fork).

At present, selling of agricultural commodities is under the APMCs of the respective state government. Today, technology/internet provides not only for domestic access but also for global access.

Farmers would need to be sensitized towards accessing those markets which get them a better pricing. This would also do away with the inefficient middle men syndrome, which are intermediaries with no contribution and on the contrary are largely responsible for distorting, hoardings and other such malpractices.

Third, is contract farming which also allows for direct contact of the farmer with the market. Under this, the land is with the farmer except that production of a crop is under a 'contract' with a buyer directly who also has the responsibility of providing necessary inputs and also picking up the produce whenever ready.

This will however require two critical supports from the government:

- Amendments to the respective APMC of different state governments.
- Enacting legislations to ensure that interest of the farmers is adequately protected.

Fourthly, a serious thought would have to be afforded to corporate farming which allows private sector players to enter into agricultural activities. It is not true that this step would lead to greater marginalization and exploitation of the small and marginal farmers.

There is a larger take away in the form of increased productivity, commercialization, diversification, greater value-addition, greater and efficient use of land, building an efficient supply chain, increased investment and readily absorbed modern technologies. Almost 40 per cent of food products are wasted and destroyed in the absence of supply chain which can easily be plugged by the large corporates resulting in increased supply of food products and this would lead to lower prices in the markets.

Fifthly, what is required today is complete mapping of soils across the length and breadth of the country, superimposed with historical data of the climate, rainfall, crop

suitability and th
available to allow
historical-based c

Sixthly, need
economic zones,
land available for

In terms of '
land under non-
cent presently. T
'Must'.

Seventhly, the
non-viable and u
by selling the lan
large land area as

Herein, lies th
agricultural activ

Eighth, is the
but little has bee
the state governm
as the 'Bhoomi
Project in Assam
landless people
operations. This
landless farmers

Ninthly, curr
per cent of GDP
power and publi

Finally, today
unit which is the
be prioritized an

What the ag
revolution but a

6.6 FOOD F
OPPOR

India's Agraria

India produces 2
producers of wh
and vegetables,
the country is le
largest producer
cooperative mov

suitability and then decide on the cropping pattern. Today, technology information is available to allow for soil, climate-based cropping pattern and not on traditional and historical-based cropping pattern.

Sixthly, need of growth will start to encroach upon land for setting up the special economic zones, setting up power plants, building roads, etc., which means in future the land available for agriculture would gradually be reduced.

In terms of The National Bureau of Soil Survey and Land, Government of India, land under non-agriculture has increased from 3 per cent in 1950–51 to over 11 per cent presently. This makes increasing productivity not only important but an absolute 'Must'.

Seventhly, there is an increasing trend amongst farmers in the belief of agriculture as non-viable and unprofitable provided, the increasing cost of production and they exiting by selling the land for industrial activities. In recent times, the government is also declaring large land area as non-agriculture to support industrial growth.

Herein, lies the challenges of balancing both but larger challenge would be to reestablish agricultural activities as not only viable but also as a profitable commercial proposition.

Eighth, is the land reforms which have been an avowed objective since Independence but little has been done and still lesser achieved. There is a need for this to be prioritized by the state governments. Further efforts should be made to computerize land records such as the 'Bhoomi Project in Karnataka' and web-based land records under the 'Dharitree Project in Assam'. India also has large waste land area which could be given to rural landless people on ownership basis at free of cost for integrated farming-cum-forestry operations. This would serve the objective of utilization of waste land besides giving the landless farmers a source of livelihood.

Ninthly, current agriculture sector is starved of investment and it receives as little as 0.3 per cent of GDP. There is an urgent need to step up public investment in irrigation, roads, power and public health.

Finally, today strategy for agriculture sector would have to be broken down to the last unit which is the village or at best district level. Issues at each district level would need to be prioritized and then efforts should be made for their resolution.

What the agriculture sector needs is not another green or rainbow or evergreen revolution but a renaissance which is rebuilding the agriculture sector.

6.6 FOOD PROCESSING INDUSTRY—AN OVERVIEW, OPPORTUNITIES AND CHALLENGES

India's Agrarian Strength

India produces 200 million tonnes of food grains of which it is one among the largest producers of wheat and rice. It is the second largest producer of groundnuts, fruits and vegetables, which accounts for 10 per cent of the world's fruits production and the country is leading in the production of mangoes and bananas. India is the world's largest producer of milk owing to the strong business models which are formed through cooperative movements in the country. Meat and poultry has also gained popularity

due to the emergence of producers that have integrated breeding, feed milling, contract growing and marketing facilities which results in improved productivity. Meat, fish and poultry are in rural areas as they are easily affordable and provide necessary nutrients.

In recent years, there has been a shift from conventional farming of food grains to horticulture which includes fruits, vegetables, ornamental crops, medicinal and aromatic plants, spices and plantation crops including coconut, cashew nuts and cocoa and allied activities.

Nascent Food Processing

Despite the agrarian strength of production in India, food processing industry is still in a nascent stage but holds tremendous potential to grow, considering the wide-ranging and large raw material base that the country offers, along with a consumer base of over one billion people. This industry holds tremendous opportunities for large investments and an untapped market. Even though India's agricultural production base is reasonably strong, it has low productivity and is largely a livelihood activity. It is also characterized by high levels of wastage of over 35 per cent especially in fruits and vegetables.

Processing of fruits and vegetables is low 2 per cent, around 35 per cent in milk, 21 per cent in meat and 6 per cent in poultry products. By international comparison, these levels are significantly low—processing of agricultural produce is around 40 per cent in China, 30 per cent in Thailand, 70 per cent in Brazil, 78 per cent in the Philippines and 80 per cent in Malaysia. Value addition in agriculture produce in India is hardly 20 per cent.

The other important aspect is organized sector which has very little presence and largely dominated by the unorganized sector. For example, in fruits and vegetables segment over 90 per cent is by the unorganized sector.

The food processing industry in India has a very small share of 1.5 per cent in the total GDP of the country and as a part of total manufacturing accounts for around 9 per cent. India's share in world trade in respect of processed food is only about 1.6 per cent.

Potential of the Food Processing Industry

This industry has to be seen in the larger context of the industry witnessing an exponential growth and the market growing from US $190 billion likely to go up to US $300 billion by 2015 and further to US $350 billion by 2025. Such a huge market cannot be handled by the unorganized sector and has to be taken care as a sound business proposition both in terms of the potential and also harnessing this potential.

According to the Confederation of Indian Industry (CII) the food processing sector has the potential to attract US $33 billion of investment in 10 years and can generate employment of 9 million person-days.

Government Initiatives

Realizing the importance of food processing and its potential in India, the government has set up a separate Ministry for Food Processing Industries during 1998, with the following under its purview:

- Fruit and vegetable processing (including freezing and dehydration).
- Grain processing.
- Processing of fish (including canning and freezing).
- Processing and refrigeration of certain agricultural products, dairy products, poultry and eggs, meat and meat products.
- Industries that are related to bread, oilseeds, meals (edible), breakfast foods, biscuits, confectionery, malt extract, protein isolate, high protein food, weaning food and extruded food products (including other ready-to-eat foods).
- Beer, including non-alcoholic beer.
- Alcoholic drinks from non-molasses base.
- Aerated water and soft drinks.

The vision 2015 for the food processing sector aims at the following:

- Enhancing and stabilizing the income level of the farmers.
- Providing choice to consumers in terms of wide variety and taste including traditional ethnic food.
- Providing greater assurance in terms of safety and quality of food to consumers.
- On promoting a dynamic food processing industry.
- Enhancing the competitiveness of food processing industry in both domestic as well as international markets.
- To establish the food processing sector attractive for both domestic and foreign investors.
- Achieving integration of the food processing infrastructure from farm to market.
- Having a transparent and industry friendly regulatory regime.
- Arranging in place a transparent system of standards based on science.

The following specific targets have been set out for the year 2015:

- Increase in the level of processing of perishables from 6 to 20 per cent.
- Increase in value addition from 20 to 35 per cent.
- Share in global food trade to increase from 1.5 to 3 per cent.

An estimated investment of ₹100,000 crores is required to achieve the vision, of which ₹45,000 crores is expected to come from the private sector, ₹45,000 crores from financial institutions and ₹10,000 crores from government.

The government seeks to create an appropriate environment for entrepreneurs to set up food processing industries through the following:

- Fiscal initiatives and interventions such as rationalization of tax structure on fresh foods as well as processed foods and machinery used for the production of processed foods.

- A concerted promotion campaign to create market for processed foods by providing financial assistance to industry associations, NGOs/cooperatives, private sector units, state government organization for undertaking generic market promotion.
- Harmonization and simplification of food laws by an appropriate enactment to cover all provisions relating to food products so that the existing system of multiple laws is replaced and also covering issues concerning standards such as nutrition, merit goods, futures marketing, equalization fund, etc.
- Efforts to expand the availability of the right kind and the quality of raw material round the year by increasing production and improving productivity.
- Strengthening of database and market intelligence system through studies and surveys are to be conducted in various states to enable planned investment in the appropriate sector matching with the availability of raw material and marketability of processed products.
- Strengthening extension services and to the farmers and co-operatives in the areas of post harvest management of agro-produce to encourage the creation of pre-processing facilities near the farms such as washing, fumigation, packaging, etc.
- Efforts to encourage setting up of agro-processing facilities as close to the area of production as possible to avoid wastage and reduce transportation cost.
- Promotion of investments, both foreign as well as domestic.
- Simplification of documentation and procedures under taxation laws to avoid unnecessary harassment arising out of mere technicalities.
- Establishment of cold chain, low cost pre-cooling facilities near farms, cold stores and grading, sorting, packing facilities to reduce wastage, improve quality and shelf life of products.
- Application of biotechnology, remote sensing technology, energy saving technologies and technologies for environmental protection.
- Building up a strong infrastructural base for production of value added products with special emphasis on food safety and quality matching international standards.
- Development of packaging technologies for individual products, especially cut-fruits and vegetables, so as to increase their shelf life and improve consumer acceptance both in the domestic and international markets.
- Development of new technologies in food processing and packaging and also to provide for the mechanism to facilitate quick transfer of technologies to field through a network of R&D institutions having a central institute at the national level with satellite institutions located strategically in various regions to cover up the whole country and to make available the required testing facilities. This could be done by establishing a new institution or by strengthening an existing one.
- Development of area-specific agro food parks dedicated to processing of predominant produce of the area e.g., apple in J&K, pineapple in North East, lichi in Bihar, mango in Maharashtra and Andhra Pradesh, etc.
- Development of anchor industrial centre and/or linkage with anchor industrial units having network of small processing units.
- Development of agro-industrial multi-products units capable of processing a cluster of trans-seasonal produces.

- Establishment of processors based infrastructure of
- Mechanism to re final price paid b
- Development of processors ensuri raw material to t
- Setting up of an particular price l eventuality of lo
- Establishment of economies by eli
- Establishment o of processed pro
- Development of in order to prom also to undertak

Given the trends in th it is imperative for t following:

- Exploitation of
- Opportunities d disintermediatio and farm techno
- Value addition staples and edibl
- Exploitation of would pave the
- Investment in su wastage.
- Investment in b food and beverag
- Exploration of a rooted traditions
- Taking advantage this provides the sector and poses
- Exploitation of disposable incom
- Opportunities f outbound this w new technologies

- Establishment of a sustained and lasting linkage between the farmers and the processors based on mutual trust, understanding and benefits by utilizing the existing infrastructure of cooperative, village panchayats and such other institutions.
- Mechanism to reduce the gap between the farm gate price of agro-produce and the final price paid by the consumer.
- Development of futures market in the best interest of both the farmers and the processors ensuring minimum price stability to the farmer and a sustained supply of raw material to the processor.
- Setting up of an equalization fund to ensure sustained supply of raw material at a particular price level and at the same time to plough back the savings occurring in the eventuality of lower price to make the fund self-regenerative.
- Establishment of a strong linkage between the processor and the market to effect cost economies by elimination of avoidable intermediaries.
- Establishment of marketing network with an apex body to ensure proper marketing of processed products.
- Development of marketing capabilities both with regard to infrastructure and quality in order to promote competitive capabilities to face not only the WTO challenge but also to undertake exports in a great way.

Given the trends in the Indian food and beverage sector including key industry consideration, it is imperative for the Indian industry to leverage the emerging opportunities through the following:

- Exploitation of the huge untapped potential in processed foods.
- Opportunities demonstrated by contract farming, captive supplies of raw materials, disintermediation and direct access to farmers, availability of new and improved seeds and farm technology.
- Value addition to unprocessed categories of food such as dairy, fruits and vegetable, staples and edible oils.
- Exploitation of increasing health and safety awareness of the Indian consumer—this would pave the way for value added products on a health platform.
- Investment in supply chain in order to improve costs, tighten supplies and minimize wastage.
- Investment in better packaging and cold chain infrastructure will aid the processed food and beverage sector as these would aid in processing of fruits and vegetables.
- Exploration of appropriate regional branding strategies in order to appeal to the deep rooted traditions, values and customs of the consumer.
- Taking advantage of the inherent ethnic tastes and food habits of the Indian consumer—this provides the local food players a distinct advantage over foreign entrants into the sector and poses an entry barrier for the latter.
- Exploitation of the increasing consumerism fuelled by new job opportunities, larger disposable incomes and the emerging boom in modern retail trade.
- Opportunities for growth through the inorganic route, both domestically and outbound this would provide access to new product categories, brands, markets and new technologies.

- The SEZ/AEZ opportunity would also provide players an added incentive to develop green field projects within these zones and enjoy additional fiscal benefits.
- The Indian foods and beverage industry is poised for a significant leap forward—these are interesting times and continued success will depend on a proper understanding of the landscape and challenges therein, quickly exploiting emerging opportunities, skillful execution of strategic mergers and acquisitions and effecting a seamless organization to evolve into truly global players.

Mega Food Park Scheme

Highest priority has been accorded by the government for the development of infrastructure. The government has already taken several initiatives on this front which include developing of food parks, packaging centres, modernized abattoirs, integrated cold chain facilities, irradiation facilities and value added centres.

The initiative to develop food parks was taken primarily in order to assist the small and medium enterprises which are unable to invest in capital intensive activities. So far, twenty-two food parks have come into operation which provide common facilities such as cold storage, food testing and analysis labs.

The primary objective of the MFPS is to provide adequate/excellent infrastructure facilities for food processing along the value chain from the farm to market. It will include creation of infrastructure near the farm, transportation, logistics and centralized processing centres.

The main feature of the scheme is a cluster-based approach. The scheme will be demand-driven; pre-marketed and would facilitate food processing units to meet environmental, safety and social standards. The expected outcome results in increased realization for farmers, creation of high quality rural processing infrastructure, reduction in wastage, capacity building of the producers and processors and creation of an efficient supply chain along with significant direct and indirect employment generation.

The scheme aims to facilitate the establishment of a strong food processing industry backed by an efficient supply chain, which would include collection centres, primary processing centres and cold chain infrastructure. The food processing units, under the scheme, would be located at a central processing centre (CPC) with requirements based on common infrastructure which are required for processing, packaging, environmental protection systems, quality control labs, trade facilitation centres, etc.

Urgency of Such Initiatives—Reasons

As mentioned earlier, it is because of the growing market largely because of increased income of people, rapid urbanization, changing demographics, movement away from joint families to nuclear families and increasing number of working women. The changing pace of life has marked a preference for processed food.

These have resulted in shift in consumption driven by the processed food market, which is increasing and presently accounts for 32 per cent of the total food market and is likely to grow further only. The food processing industry is growing and has become one

of the largest indu
export and expect
Consumption
of cereal product
oil and meat pro
meat and dairy p
that there is also
consumption pr
This shift in
evolution of the
sources and sug
for prepared me
shift towards fu
have given an in

Some Structu

Farmers have a
local 'Mandis',
farmers can on
processing. As
also have limit
their limited k
The supply
lacks transpare
commission ch
absence of sto
wastage, which
There is vi
technology in
for agricultura
hygiene aspect
responsibility.

Remedial M

The governme
Despite the o
are dealt at le
structural issu
of the supply
chains and w
to the food p
sector in the

of the largest industries in India—it is ranked fifth in terms of production, consumption, export and expected growth.

Consumption patterns in India have been undergoing a visible shift. Earlier, the share of cereal products was the highest, followed by milk and milk products, vegetables, edible oil and meat products. However, in recent years, the growth rates for fruits, vegetables, meat and dairy products have been higher than cereals and pulses. This shift in turn implies that there is also a need to diversify the food production base to match the changing consumption preferences.

This shift in consumption follows the pattern observed in developed countries in the evolution of the global food demand. There is a shift from carbohydrate staples to animal sources and sugar. On following this pattern, in future, there will be increasing demand for prepared meals, snack foods and convenience foods and further on the demand would shift towards functional, organic and diet foods. These are post-liberalization trends that have given an impetus to the sector.

Some Structural Issues

Farmers have a limited market for their agricultural produce, which are confined to the local 'Mandis', and are governed by APMC under the respective state government; and the farmers can only sell to them. They cannot sell directly to the private parties for further processing. As a result, they are denied better prices and also prevent food processing. They also have limited information about the market(s), prevailing prices and operate within their limited knowledge, based on their own wisdom.

The supply chain of agricultural produce from the farmer to the ultimate consumer lacks transparency and passes through a number of middlemen raising cost through commission charges, resulting in higher prices without any value addition. Further, the absence of storage/warehousing facilities and an inefficient transport system results in wastage, which only add up to higher prices.

There is virtual no use made of even the available technology let alone leveraging technology in the entire supply chain. There is no quality control and testing mechanism for agricultural produce which reaches the consumer. The extent of use of fertilizers, hygiene aspects and whether they are safe for human consumption is not seen as anyone's responsibility.

Remedial Measures

The government has taken the first step, by allowing the FDI in multi-brand retailing. Despite the opposition by various vested groups, it is a step in the right direction (which are dealt at length in the section on foreign investment). This will address most of the structural issues, especially back end activities. This will lead to an organized development of the supply chain bring in transparency and the investment in development of cold chains and warehousing facilities. It will also lead to a technology infusion and a boost to the food processing industry. This will also ensure a larger participation of the private sector in the entire chain.

However, this step will require a critical enabler, that of, amending to the respective APMC act of the respective state governments. This amendment will allow farmers to sell directly to those interested in food processing, which allow private sector to set up back yards for picking up produce from the farmers. It will also open up the supply chain.

It is for this reason the central government has permitted the FDI subject to consent of state governments.

In recent times, there has been a biotechnology revolution and now is the time for 'food revolution' around food processing industry and this is the reason why this industry is known as a 'sunrise industry' in view of its potentiality. India besides meeting its own food needs in terms of quality, diversified and value added products is also capable of expanding to global markets. The food market can never have a down turn like other markets as it is driven as a basic necessity and the demand will always be there for the same. The real challenge will be from the supply side or the ability to feed this growing market.

The food processing industry in India has only become to evolve and has the capability of becoming the fastest growing sector in the future, with tremendous opportunity and potential, but also at the same time a challenge in overcoming the structural issues, improvements in supply chain and transforming from an informal to a formal sector business activity.