Agricultural Marketing in India: Problems and Prospects

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Since the existing agricultural marketing system in India was developed in the context of a planned economy, a fresh approach to marketing is necessary in the liberalised and globalised atmosphere. The National Agriculture Policy also envisages the need for a new demand driven set up catering to domestic as well as export markets. The promotion of an efficient marketing system is, therefore, necessary for expediting agricultural growth in India. In this context, this study attempts to analyse the state of present marketing system, examine alternative marketing options and suggest ways to develop a vibrant agricultural marketing system in India to meet the emerging situation.

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Introduction

Agriculture has a vital place in the economic development of the country as it contributes about 22 per cent of the gross domestic product (GDP) and employs about 65 per cent of the workforce. In any design of economic development, the development of agriculture has to be an integral part. Marketing is as critical to better performance of agriculture as farming itself. Although a considerable progress has been achieved in technological improvements in agriculture by the use of irrigation facilities, high-yielding variety seeds, chemical fertilisers and plant protection measures, the rate of growth in farming has not attained the expected levels. This has been largely attributed to the fact that not enough attention has been paid to marketing facilities and services. Therefore, marketing reforms ought to be an integral part of the national policy for agricultural development. In this context, this study attempts to analyse the current state of existing agricultural marketing system and its efficiency, examine alternative marketing options and their suitability, and suggest ways and means to promote an effective, efficient and integrated agricultural marketing system in India.

The study has been organised into four sections. Section I presents an overview of agricultural marketing in India, while Section II analyses the current state of agricultural marketing system. Section III highlights emerging strategies including alternative marketing options and Section IV contains the concluding observations.

Section I Overview of Agricultural Marketing in India

Agricultural marketing, essentially being a sub-set of the overall marketing system, refers to all the activities, agencies and policies involved in the procurement of farm inputs by the farmers and the movement of agricultural produce from the farms to the consumers/ manufacturers/ exporters. An efficient marketing system minimises costs and maximises benefits to all the sections of the society. It ought to provide remunerative prices to the farmer, food of the required quality at reasonable prices to the consumers and adequate margins to the middlemen so that they remain in the trade.

In India, the importance of an efficient marketing system as a vital link between the farmer and the consumer was recognised way back in 1928 by the Royal Commission on Agriculture (Acharya, 1996). Since then, a good deal of progress has been made in organising agricultural marketing by adoption of various administrative and legislative measures from time to time. The establishment of the Directorate of Marketing and Inspection in 1935, the enactment of the Act for grading and marking of agricultural produce in 1937, the conduct of commodity market surveys and the establishment of regulated markets in the States under the Agricultural Produce Marketing Regulations Acts are some of the measures which were taken up before independence to improve the marketing situation.

After independence, three major sets of inter-dependent policies and programmes were pursued for the development of agricultural marketing in India. These were: the creation of infrastructure (both physical and institutional), the implementation of price stabilisation policy and the approach to foreign trade in agricultural products. Intervention through creation of infrastructure facilitates the performance of various marketing functions. For example, the Warehousing Corporations Act, 1962 and the National Grid of Rural Godowns Scheme of 1979 enabled the Central and State Warehousing Corporations to construct warehouses for storage of agricultural crops. The Cold Storage Order, 1980 helped in expanding cold storage facility for preserving perishable agricultural commodities such as fruits and vegetables. Similarly, Forward Contracts (Regulation) Act, 1952; Prevention of Food Adulteration Act, 1954; Essential Commodities Act, 1955; Export (Quality Control & Inspection) Act, 1963; Standards of Weights and Measures Act, 1976; Consumer Protection Act, 1986; and Bureau of Indian Standards Act, 1986 were enacted and a number of apex institutions and organisations such as Central Warehousing Corporation (CWC), Food Corporation of India (FCI), Agricultural Price Commission (later on renamed as Commission for Agricultural Costs and Prices), National Cooperative Development Corporation (NCDC), National Co-operative Marketing Federation (NAFED), State Trading Corporation STC), Agricultural and Processed Foods Export Development Authority (APEDA), Marine Products Export Development Authority (MPEDA), National Dairy Development Board (NDDB), National Horticulture Board (NHB), Spices Board, National Institute of Agricultural Marketing (NIAM), etc. were set up for facilitating various marketing functions. In pursuance of the price stabilisation policy, the State intervenes directly in the market through various State agencies for the purpose of procurement and distribution. In respect of 22 items, the Government announces the minimum support prices (MSP) at which the State agencies would make purchases (GOI, 2003). The Commission for Agricultural Costs and Prices (CACP), the FCI, States' Civil Supply Departments and fair price shops play a pivotal role in implementing the Government's price stabilisation policy.

As for the State's policy towards foreign trade in agriculture is concerned, two phases are visible. Till recently, as a component of inward looking strategy, agricultural policies were largely driven by the objective of achieving self-sufficiency in production and stabilisation of domestic prices. More recently, the emphasis has shifted on generation of surplus for exports in order to increase agricultural exports (GOI, 1995). The objective of the shift in policy stance is to increase farm income, reduce unemployment, earn foreign exchange and in general, to set the agricultural sector on a higher growth trajectory.

At present, the structure of Indian agricultural marketing system consists of: the Agricultural Co-operative Marketing Societies, the Regulated Markets, the Public Trading and the Futures Trading. Besides, there is private trading, which takes place out of these segments. The agricultural co-operative marketing societies generally undertake marketing of agricultural

produce on behalf of the members as also supply of agricultural inputs to them. Moreover, co-operatives have diversified their activities into other areas such as constructing warehouses, providing credit facilities, processing of agro-products, etc. The agricultural cooperative marketing is generally featured by a four-tiered structure: the primary marketing societies are at the base level, district/regional federations at the district level, State marketing federations at the State level and National Federation at the apex level. The National Agricultural Co-operative Marketing Federation (NAFED) is the apex co-operative marketing organisation. The regulated markets have been organised in most of the States to facilitate trading in an orderly manner in specified commodities at specified places at the least margin. For this purpose, comprehensive rules have been framed and market committees have been set up to enforce discipline among the participants under the respective State Agricultural Produce Marketing Regulations Acts. The objective of State trading is stabilisation of prices at levels that are regarded as remunerative to producers and reasonable to consumers. Under the present practice, the Government purchases specified commodities at notified procurement prices directly from producers and distributes the purchased items among consumers through a network of fair price shops at notified issue prices.

Futures trading has also been allowed to protect the market participants from the risk arising out of adverse price fluctuations. There is a three-tier regulatory structure for conduct of futures trading. At the base level, there are recognised/ registered commodity associations/ exchanges. At the middle level, there is Forward Markets Commission (FMC), which regulates the functioning of commodity exchanges and approves their constitution and bye-laws. The Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution, Government of India is at the top level, which oversees the overall functioning of the forward and futures markets.

Section II Current State of Agricultural Marketing System in India

To analyse the current state of agricultural marketing system in India, it is essential to examine the trends in agricultural production and marketed surplus, progress made by various marketing networks in handling the marketed surplus and the efforts made in improving their efficiency and increasing infrastructural facilities therein.

Agricultural Production and Marketed Surplus

In order to assess the adequacy of agricultural marketing infrastructure in the country, it is imperative to estimate the marketed surplus. Generally, there is a positive correlation between production and marketed surplus. In the past 30 years, while the production of foodgrains and non-foodgrains has approximately doubled, the production of vegetables, fruits, flowers and spices has risen even faster in response to the changing consumption pattern of the population. According to an estimate, the production of potatoes has multiplied by 12 times over the past three decades (Mohan, 2002). The marketed surplus has also gone up in tandem or even faster with the rise in production of foodgrains, non-foodgrains, vegetables, fruits, flowers and spices. For example, the procurement of rice and wheat by the public procurement agencies has increased by 5 times over the past 30 years. Marketed surplus indeed is a function of many factors - type of crop, nature of farming and size of holding. The marketed surplus is almost hundred per cent in respect of commercial crops such as cotton, jute, cashewnuts and black pepper. On the other hand, marketed surplus was as low as 18.2

per cent in respect of ragi (GOI, 1995a). This necessarily implies that the estimate of marketed surplus would have to be commodity-specific.

Projections of marketed surplus of various farm products for the year 2006-07 have been made on the basis of the estimates of marketed surplus - output ratio for the year 1999-2000 in order to examine the adequacy of marketing infrastructure for the future. The marketed surplus of all cereals taken together would rise from 89.90 million tonnes in 1999-2000 to 102.74 million tonnes in 2006-07. As regards pulses, the marketed surplus is expected to rise from 9.77 million tonnes in 1999-2000 to 15.20 million tonnes in 2006-07 (Kumar and Mathur, 1996 and GOI, 2001a). Similarly, the marketed surplus of non-foodgrains, fruits, vegetables, flowers and spices is also likely to go up substantially in 2006-07 from the production level in 1999-2000. The export and import of agricultural commodities are also expected to rise significantly as per the present indications. Thus the marketed surplus, which the marketing system would be required to handle in 2006-07, would be about 15-20 per cent larger as compared to the levels prevailing in 1999-2000. The existing marketing infrastructure is barely adequate to meet the present marketing requirements. Larger and better-equipped marketing infrastructure would therefore be required for handling larger quantum of market surplus in 2006-07.

Marketing Networks

In India, the formal marketing networks consist of agricultural co-operative marketing societies, regulated markets, State trading and futures trading as discussed earlier. The produce marketed through agricultural co-operative marketing societies accounts for about 8 to 10 per cent of the marketed surplus. The important commodities marketed by these societies are foodgrains, sugarcane, cotton, oilseeds, fruits, vegetables and plantation crops. The progress of co-operative marketing societies has varied from State to State and within each State from commodity to commodity. Maharashtra, Uttar Pradesh, Gujarat, Punjab, Haryana, Karnataka and Tamil Nadu together account for more than 80 per cent of the total agricultural produce marketed through co-operatives in the country. In Punjab, Maharashtra, Uttar Pradesh, Andhra Pradesh and Tamil Nadu, 75 per cent of the foodgrains are marketed by co-operative societies. In Maharashtra and Uttar Pradesh, 75 per cent of sugarcane, in Maharashtra and Gujarat, 75 per cent of cotton, and in Karnataka 84 per cent of plantation crops are marketed through the co-operative societies (Rangarajan, 1997).

The progress of co-operative marketing societies has been far from satisfactory in most of the States in the country because farmer members do not patronise these societies for the sale of their produce. Instead they use the services of commission agents in the regulated markets for various reasons such as easy access to commission agents, facility of advance loan, hassle free transactions and personalised services rendered by commission agents. State intervention through its nominated officials (Secretaries) and politicisation of these societies had also been responsible for their failure.

Though the establishment of regulated markets was started during 1930s, the programme got momentum only after independence. The number of regulated markets has risen from 236 in April 1951 to 7,161 in March 2001. Nearly 98 per cent of the wholesale markets are now functioning under this scheme. The country also has 27,294 rural periodical markets as on March 2001, about 15 per cent of which function under the ambit of regulated markets (GOI, 2001a). The progress of regulated markets is not uniform in all the States. There is appreciable growth in the number of regulated markets in the States of Andhra Pradesh,

Bihar, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamilnadu, Uttar Pradesh and West Bengal. The growth of regulated markets is moderate in the States of Assam, Goa, Himachal Pradesh and Tripura. Market regulation has not been enforced in eight States (Arunachal Pradesh, Jammu and Kashmir, Kerala, Manipur, Meghalaya, Mizoram, Nagaland and Sikkim). The average area served by a regulated market varies from State to State. It varies from 1200 sq. km. in Orissa to 76 sq. km. in Punjab (GOI, 2003). The number of commodities under regulation also varies from State to State, but they include almost all the important commodities such as foodgrains, oilseeds, fibre crops, commercial crops, fruits and vegetables. There are also variations across States in the development of infrastructural facilities as well as market fees charged in the regulated markets.

The number of regulated markets and the infrastructural facilities therein are by and large inadequate to meet the current marketing requirements. While regulated markets have helped in mitigating the market handicaps of the producers/sellers at the wholesale level, the rural periodic markets in general and the tribal markets in particular remained out of its developmental ambit. Thus, the institution of regulated market has achieved a limited success. The restrictive legal provisions did not augur well with competitive market structure. Funds meant for providing and maintaining marketing facilities have been siphoned off in many States from the Agricultural Marketing Board to the public ledger account. Consequently, the modernisation/ development of infrastructural facilities conducive to operational efficiency of the markets suffered heavily.

The price stablisation policy of the Government can be described as a well-conceived package, if we take the objectives, the instruments and terms of reference of the pricerecommending expert body, *i.e.*, CACP into consideration. The price components bear upon production (minimum support price), securing surpluses (procurement prices) and distribution or meeting the needs of consumers (issue prices). The procurement agencies, the fair price shops, buffer stock operations and imports, when necessary, back the implementation of the price stabilisation policy. Thus seen as a whole, these seem to be a well-set design of the price stabilisation policy. However, as for the achievement in terms of price stabilisation is concerned, the success has not been as expected. The short-term prices have been fluctuating because of random impact on supply. Generally, these are at the lowest at the time of harvest and the highest before the next crop is harvested. In case of rice, jowar, bajra and groundnut, a major proportion (55 to 74 per cent) is sold within six months of the harvest. Quite a substantial part of this consists of distress sale. In the case of certain crops like wheat, there is, however, moderation of fluctuations, partly because the producers being rich have holding power and access to credit/ storage facilities and partly because of the operations of the procurement agencies (Rangarajan, 1997). The increases in the minimum support price of wheat and rice have been pronounced, which led to increasing cultivation of wheat and rice and in turn contributed to the rise in the procurement of foodgrains. Annual procurement of rice and wheat had averaged 21.9 million tonnes during 1991-97 (GOI, 2002a). This has increased in every successive year since then from 25.4 million tonnes in 1997-98 to 35 million tonnes in 2000-01 and further to 42 million tonnes in 2001-02. The increasing procurement, coupled with declining off-take, had raised the level of food stocks to 65 million tonnes in 2001-02 as against the buffer stock norms of 16-24 million tonnes (GOI, 2003). The cost of operations of the procurement agencies has therefore gone up substantially and the open-ended procurement by these agencies has become unsustainable.

Till 1991, futures trading was permitted in only 6 commodities. The process of reform was set in motion with the setting up of Kabra Committee, which submitted its report in 1994. Since then, several measures have been initiated in a phased manner to promote futures markets in the country. But the pace of reforms has so far been slow and cautious. At present, futures trading is permitted in 42 commodities under the auspices of 19 commodity exchanges. In addition, 10 commodity exchanges have been granted in-principle approval. Further, two commodity exchanges *viz*. Online Commodity Exchange of India Ltd. (OCEIL), Ahmedabad and National Board of Trade (NBOT) have been identified as exchanges having "National Status", implying that these exchanges would be automatically permitted to conduct futures trading in all approved commodities, subject to clearance of bye-laws and contract specifications by the FMC. While OCEIL has been given final approval in this regard, NBOT has been accorded in-principal approval for setting up a nation-wide commodity exchange (GOI, 2003).

In general, the commodity exchanges are deficient in several aspects such as infrastructure, logistic, organisational structure, management, linkages with spot markets and financial markets, reliability and an efficient market information system. Of late, the number of active members and the volume of trade in most of the commodity exchanges had been shrinking. Setting up of screen-based online trading, warehouse receipt system, guarantee fund, electronic clearinghouse and settlement system, *etc.* has not found favour with most of the commodity exchanges so far. The resource crunch has, no doubt, been the major constraint facing most of the exchanges in undertaking these reforms. In a nutshell, the commodity futures markets in India continue to be underdeveloped and separated from spot markets.

Infrastructural Facilities

With the rise in agricultural production and marketed surplus, impressive growth was recorded in the development of infrastructural facilities for marketing as well. The transport sector had expanded fast. The road length, in particular modern surface roads, had increased at a fast rate. Similarly, the total covered storage capacity of the Food Corporation of India, Central Warehousing Corporation and the State Warehousing Corporations rose from 3.6 lakh tonnes in 1960-61 to 26.4 million tonnes in 2001. In addition, the storage capacity of around 25.3 million tonnes is available with public, private and co-operative sectors (GOI, 2001a). However, in the background of over 200 million tonnes of foodgrains production, the available storage capacity is quite inadequate. The cold storage capacity has multiplied by many times from 359 cold storage units with 3.1 lakh tonnes capacity in 1960 to 4,199 units with 153.85 lakh tonnes capacity by end-March 2001, but it is also inadequate to meet the present requirements. It is sufficient only for about 10 per cent of the total production of fruits, vegetables and other perishable commodities (GOI, 2001a). Grading and marking of agricultural products also went up substantially. During the year 2000-01, 163 agricultural commodities were graded and marked under AGMARK for export purposes. There are 23 laboratories and 43 offices spread across the country to keep check on the quality of certified products (GOI, 2002b). Processing, packaging, extension services, research and dissemination of market information have also registered impressive growth over the past few years. However, the infrastructural facilities developed so far are not adequate to meet the present marketing requirements. About half of the villages in the country are still not connected to the market place by all weather roads. The rail transport suffers from shortages of wagon capacity and congestion on trunk routes. The present storage capacity for foodgrains, non-foodgrains, fruits and vegetables is inadequate, resulting in lot of wastages every year. Processing of agricultural products especially perishable commodities forms only

a small percentage of the total production. In case of fruits and vegetables, only one per cent of the production is processed in India as against 83 per cent, 78 per cent and 70 per cent of the total production in countries like Malaysia, Philippines and Brazil, respectively (Rangarajan, 1997).

Marketing Efficiency

Marketing efficiency is essentially the degree of market performance. Broadly, one may look at efficiency of a market structure as to whether it fulfills the objectives assigned to it at minimum possible cost or maximises the fulfillment of objectives with a given level of resources. Thus the objectives assigned to the system are of critical importance in assessing the marketing efficiency. An ideal agricultural marketing system should ensure remunerative prices to the producers, uninterrupted supply of goods at cheaper prices to the consumers and the accumulation of surplus for further development (Subbarao, 1996). An efficient market should, therefore, ensure 'operational efficiency' as well as 'distributive efficiency'. Operational efficiency ensures the availability of the product at all places at the same price subject to adjustment for transport costs, storage costs and quality differences. Distributive efficiency is obtained when all the producers get the same price subject to the quality of the produce and all the buyers pay the same price subject, again, to the quality of the product.

Measurement of market efficiency at the national level is extremely difficult due to a variety of factors. To be meaningful, the concept has to be, in fact, crop-specific and locationspecific. The available evidence suggests that the degree of efficiency of the Indian foodgrain markets vary from location to location within the country. In respect of perishables, oilseeds and pulses, no tangible benefit had accrued to both producers and consumers. In general, the unit marketing costs of these items have remained stable and, at any rate, have not shown any tendency to decline. On the contrary, according to certain studies in some locations, the share of the intermediaries had risen (Swarup, et. al., 1985; Tilekar, 1980; Desai, 1985; Sinha, and Prasad, 1985; Prasad, et.al., 1985). In certain instances, the producers' share was lower at regulated markets as compared with that in unregulated markets Subbarao, 1986; Ajjan, 1986). There could be several reasons to account for this phenomenon: i) The active participation of State agencies in the procurement was found to be often not timely and usually limited; ii) The farmers were under compulsion to sell the products quickly in the open markets where monopolistic conditions were often found to be strong; and iii) The prevalence of high levy charges in regulated markets had also contributed to the sale of products by farmers at lower prices. According to another estimate, the farm-gate prices for vegetables and fruits range between 20-30 per cent of the eventual retail prices in India. In developed countries, such as the USA, the UK and Japan, the farm-gate prices for such products range between 40-55 per cent of retail prices (Mohan, 2002). This is because of various restrictions that currently inhibit farmers from selling their products freely. The consequence of the existing controls is proliferation of intermediaries between the farmer and the consumer, which in turn, results in higher transportation, storage and distribution costs of agricultural products.

To ensure uninterrupted supply of goods at reasonable prices to consumers, there should be stability in prices. Stability in prices would require that variations in prices between seasons and regions are minimal. As for inter-seasonal variations in prices, a Food and Agricultural Organisation (FAO) Study showed that, during 1968 to 1985, the differences in the prices that prevailed during the peak harvesting seasons and the lean months were very high in respect of both wheat and rice. The differences were so high that they could not be explained

by carrying costs. However, when a range was taken by using mean prices during the peak and lean seasons, the percentage variation was found to be less than that warranted by the carrying costs. This variation tended to decline after 1974-75 due probably to the creation of buffer stock by the Food Corporation of India. With regard to the inter-regional price dispersion, it was found to decline for both wheat and rice after 1974-75, but the trend was characterised by large year-to-year fluctuations (Bhalla, 1996). In the recent past, the public procurement agencies procured about 15-20 per cent of total production of wheat and 12-15 per cent of rice under their open-ended procurement policy. These buffer stock operations had the desired impact on the stability of prices of rice and wheat.

To ensure marketing efficiency, it is necessary that the cost of marketing should be minimal. Studies on the cost of marketing reveal that there is a large variation in the cost per unit. The factors which affect marketing costs are: perishability of the product, extent of loss in storage and transportation, volume of the product handled, regularity in the supply of the produce, extent of packaging, extent of adoption of grading, necessity of demand creation, bulkiness of the product, need for retailing, extent of price and demand risk, marketing facilities extended by the dealer to the consumers such as free home delivery, credit facility, *etc*. The cost of marketing of agricultural commodities is generally higher than that of manufactured products because of widely dispersed farms and small output per farm, bulkiness of agricultural products, difficulty in grading, irregular supply, greater need for storage and processing, long chain of middlemen, higher risk of price fluctuation, *etc*.

The marketing cost of foodgrains in India is lower than in developed countries. It is mainly because of two reasons: i) foodgrains are sold in a relatively unprocessed form in India, while in developed countries, consumers want them mostly in processed form; ii) human labour (a component of marketing cost) is relatively cheap in India than in the developed countries. However, over time, there has been an increase in the marketing cost in India too. Some of the factors which have been responsible for this increase are: shift from subsistence to commercialised farming, technological advances in preservation and storage, change in the form of consumer demand, multiplicity of taxes, poor infrastructure which increases costs and puts barriers to entry and competition, *etc*.

The most comprehensive study of the FCI's operations and its costs was made by Bureau of Industrial Costs and Prices (BICP) in 1991. More recently, in 2001, the Administrative Staff College of India (ASCI) has carried out a study on costs of acquisition and distribution of the FCI. BICP study found that FCI costs of procurement and distribution had increased more than the overall price level and much more than the purchase price of grains during 1980s. However, it also found that most of the excess cost increase was because of factors beyond FCI control, particularly statutory levies at the procurement stage and railway freight rates. Nonetheless, BICP identified several important areas in which controllable costs were excessive and could have been reduced. These were opening of procurement centers and staffing of these, excessive railway movement compared to purchase and final distribution, and storage practices which caused avoidable costs and storage losses. ASCI reports that though FCI's economic cost of wheat has declined as percentage of minimum support price during 1990s and this has remained roughly constant for rice, it is a failure of sorts that FCI has not reduced costs further given improved communication and transport and also that FCI's economic cost in 2000 was higher than market prices. ASCI has also identified areas for cost reduction, but almost all of these involve items beyond FCI control and require change in Government policy. The Committee on Long-Term Grain Policy has evaluated the BICP and ASCI conclusions in conjunction with other estimates of FCI's cost relative to the

private trade. There are some studies which show somewhat lower costs (5 to 20 per cent) of private trade than FCI in primary trade. This appears to be mainly on account of lower labour costs in private trade *vis-à-vis* FCI. However, a few studies available show higher storage losses in the private trade, which also incurs higher distribution costs, *i.e.*, transport costs and higher trading margins at various levels (GOI, 2002a). In a nutshell, there is scope to reduce the cost of operations of FCI by transferring some of its functions to other Central/ State agencies or the private sector in which it is less efficient than these agencies. For example, storage cost of foodgrains is lesser in case of Central Warehousing Corporation and State Warehousing Corporations than FCI.

Thus the strategies followed so far have undoubtedly helped in achieving self-sufficiency in foodgrains, increasing the production of oilseeds and other cash crops, reducing intra-year price fluctuations, stabilising returns to the farmers, improving market efficiency in some crops and building up a broad-based institutional infrastructure for marketing of agricultural produce. Notwithstanding these quantitative and qualitative improvements, several weaknesses in the agricultural marketing system, as discussed above, still persist. The restrictions on trading, storage, processing, pricing and movement of agricultural commodities still continue to hamper directly or indirectly the orderly growth of agricultural marketing in India. The end result is the imperfections in the marketing system, unmanageable State trading operations, seasonal variations in prices and stagnation in agricultural growth rates.

Section III Emerging Strategies

The economic reforms that are currently underway in India encompass the agricultural marketing system as well. The essence of these measures is to improve the efficiency and productivity of all institutions whose working is far from satisfactory. Against this background, it is necessary to see the lacunae that have arisen in the agricultural marketing system and initiate measures to correct the same. As the production technology and the post harvest technology change, there has to be a consequential change in the marketing technology as well. There cannot be a hiatus between the two. The agricultural production base is getting diversified and the process of commercialisation of agriculture will gather further momentum in the coming years. Apart from the production of foodgrains and commercial crops, horticulture and floriculture are emerging as important components. Production of fruits, vegetables and flowers will assume increasing importance in the production system. In case of fruits and vegetables because of their perishable nature, there will be a considerable loss unless the marketing technology is suitably modified. While in case of cereal, pulses and sugarcane, the loss by storage is estimated between 5-20 per cent, in the case of fruits and vegetables, it is estimated between 25-30 per cent (Rangarajan, 1997). Apart from the pricing policy, which has several macro economic implications, the evolving strategy for agricultural marketing must emphasise the following:

Integration of Domestic Markets with International Markets

The domestic markets, particularly for foodgrains, should be the whole country. This calls for dismantling of restrictions on pricing, trading, distribution and movement of agricultural products within the country. A review of all laws which regulate participation in market such as registration/licensing, laws affecting market place, laws relating to access to credit and capital, dispute resolution mechanism, *etc.* also needs to be undertaken in order to make them

conducive for free play of market forces. The Government of India has already reviewed the operation of the Essential Commodities Act, 1955, while the restrictive orders inhibiting storage, selling and movement of food and agricultural products are currently under review. To carry this process forward, the States should also initiate appropriate measures to remove all restrictions on agricultural marketing on similar lines. Further, India, being a signatory to the World Trade Organisation (WTO) Agreement, should do away with physical barriers, both for imports and exports, on various agricultural commodities. Simultaneously, it should reduce tariff barriers within a time frame. These steps could facilitate the integration of domestic markets with international markets in due course.

Strengthening Co-operative Marketing Societies

The progress made by co-operative marketing societies so far, though noteworthy, is not wholly satisfactory. Co-operatives have yet to cover a substantial part of the total agricultural produce. It is, therefore, essential that these co-operatives develop at a faster speed and along right lines. Marketing societies need to be more closely intertwined with other societies dealing with farming inputs, credit, *etc.* The best way to do so is to establish multipurpose societies to look after all the aspects of agricultural marketing. These societies, apart from organising the sale of agricultural produce, should undertake construction of their own storage capacity, provide for their own transport, arrange for the processing of produce, grade their goods, organise exports, *etc.* This will reduce their dependence on other sources and provide a total view of marketing services to the members.

Strengthening Regulated Market Structure

The management of regulated markets is entrusted to agricultural produce marketing committees (APMC) on which different interests are represented. There is an urgent need to make these market committees viable and managerially competent in keeping with liberalised trade atmosphere. The market committees should be headed either by professionals or the existing Secretaries should be trained in professional management of markets. The functions of market committees and marketing boards may also have to be remodeled accordingly. Further, the present number of regulated markets is not enough to meet the growing requirements of the country. It has been estimated that the country needs 12,000 to 14,000 additional market yards. Further, development of infrastructure within spot markets and other places is a huge task involving an estimated investment of Rs. 6,026 crore (GOI, 2001a). Since the States are not in position to mobilise resources of this order, the private sector investment backed up with suitable package of incentives needs to be encouraged. However, the public sector should continue playing its role in providing infrastructure in remote and difficult areas and overall market regulation.

There is also an urgent need to develop rural periodic markets in a phased manner with necessary infrastructural amenities to have a strong grass-root level link in the marketing chain. The investment requirement for developing these market places is estimated at Rs. 2,146 crore (GOI, 2001a). There is also a need for developing specialised markets for fruits and vegetables, flowers, cattle, *etc.* It has been assessed that there are at least 241 such places in the country where fruits and vegetables markets could be developed. The investment requirement for these markets is around Rs. 970 crore (GOI, 2001a). Besides, there is an urgent need to turn these markets into growth centers of farming community.

Re-framing Price Stabilisation Policy

With a view to provide remunerative price to the farmer, food at affordable price to the consumer and sustained growth of marketable surplus, all undesirable restrictions on agricultural trade has to be removed. Public procurement, storage and distribution of foodgrains need to be managed efficiently and on commercial lines. Once commodity futures markets become fully operational, the role and involvement of public procurement agencies should be minimised.

The current situation of open-ended procurement by Food Corporation of India at a high price and disposal at a heavily subsidised price is not sustainable. In this regard, the "Report on Long Term Grain Policy, 2002" recommends that India must continue to plan for cereals selfsufficiency. This is of strategic necessity since India accounts for 15 per cent of total world consumption of cereals and since world production and trade is highly distorted by policies of rich countries. These countries are subsidising grain production heavily at present, but may push up prices if they acquire monopoly in world trade. However, it is necessary to supplement the MSP policy with other measures to make it sustainable, *e.g.*, market-based insurance against price and income fluctuation and a system of negotiable warehouse receipts. Then there is considerable scope to improve FCI's performance to lower its costs of operations and most importantly to raise the quality of grains it supplies.

Further, the export and import policies for agricultural commodities need to be clear-cut and should remain stable over a sufficiently long period of time. Barring exceptional cases such as coping with emergencies, it is advisable to move towards a system wherein exports and imports of agricultural produce are freely allowed and any well-defined interest to be safeguarded is achieved by an appropriate import or export duty. These measures could go a long way in stabilising prices of agricultural produce.

Developing Efficient Commodity Futures Markets

Since the Government's acceptance of the recommendations of the Kabra Committee, 1994, efforts have been made to allow futures trading in more commodities, set up more commodity exchanges, improve the regulatory and supervisory systems, modernise clearinghouse operations, upgrade training facilities and establish an enabling legal framework to develop vibrant commodity futures market in India. But, the pace of reforms has been very cautious and slow. Much more concerted efforts need to be made to accomplish the task fully. Removal of a number of deficiencies that still persist is a formidable challenge before the Government, the FMC and the commodity exchanges. In this context, the removal of price and distribution controls, development of competitive cash markets, provision of an enabling legal framework, demutualisation and restructuring of the existing commodity exchanges, setting up of multi-commodity exchanges and strengthening the FMC should be accorded priority.

Promoting Direct Marketing

Promotion of direct marketing as one of the alternative marketing structures is beneficial for the farmers as well as the buyers as it enables the former to meet the specific requirements of the latter. Direct marketing enables farmers and buyers to economise on transportation costs, handling charges, market fees, *etc.*, to improve price realisation considerably. In direct marketing, the market will operate outside the purview of Agricultural Produce Marketing Act and will be owned by professional agencies, such as wholesalers, trade associations, farmers associations, companies, *etc.* in the private sector or through Self-Help Groups (SHGs), informal groups, cooperatives, Non-Government Organisations (NGOs), *etc.*, as nonprofit organisations free from Government intervention. As a first step in this direction, the State Governments should amend the Agricultural Produce Marketing Acts to enable farmers to sell directly to potential processors. As a second step, a common code of conduct and modalities with regard to ownership, operation and need-based infrastructure will have to be prepared and circulated to spread the concept of direct marketing. As a third step, the Government should support these organisations with schemes such as providing back-ended incentives for refrigerated and general transport, constructing godowns and cold storages, setting up grading and packaging houses, *etc.*

Improving Transport Infrastructure

The traditional rural transport system should be improved by encouraging use of pneumatic tyre in place of wooden and iron wheels and springs in the axle of the cart as also by the development of good all weather roads linking the villages to the markets. The investment requirement for this purpose has been estimated at Rs. 74,000 crore (GOI, 2001a). In this context, it may be noted that the Pradhan Mantri Gram Sadak Yojana (PMGSY) initiated to provide connectivity through all weather roads to all the villages is making some headway. A further allocation of Rs. 2,500 crore has been made for the year 2002-03 over and above Rs. 5,000 crore provided so far (GOI, 2002). To supplement the Centre's efforts, the State Governments, the local bodies and NGOs should also come forward to expedite the process. Improvement in the availability of railway wagons and decongestion at trunk routes is the other area of crucial importance. The Railway Ministry should take necessary and urgent steps in this direction. "Own your wagon" scheme need to be reviewed and modified to popularise it among the users. Development of coastal shipping and inland waterways is another area where lot of initiative and investment is called for.

Improving Storage facility

With the increase in marketed surplus, the need for increased storage facilities will also rise. The requirement of an additional storage capacity to be built during the next decade is estimated at about 20 million tonnes for which an additional investment requirement is estimated at Rs. 5,400 crore (GOI, 2001a). The private sector needs to be encouraged to enter the warehousing and storage in a big way by extending proper incentives to it. The experiment of the creation of decentralised rural godowns also needs to be pursued more vigorously. Village Panchavats, co-operatives, SHGs, farmers organisations, NGOs, etc., should also be encouraged to undertake warehousing activity under the scheme. In case of perishable commodities like fruits, vegetables and flowers, the complete cold chain comprising pre-cooling, grading, packaging, cold storage and refrigerated vans become necessary. Any break at any point may result in heavy loss to the producers. In the next 10 years, 15,000 cold storage units would need an investment of the order of Rs. 27,000 crore (GOI, 2001a). Again, the investment has to come from the private sector with the back up of a package of incentives. In 2000-01, the Government announced a Credit Linked Subsidy Scheme for construction of cold storages. Sanction has already been accorded for creation of 21 lakh tonnes capacity under this scheme. The Union Budget, 2002-03 proposed to allocate Rs. 70 crore of subsidy for 2002-03. The country also requires reefer containers/ vans for transport of perishable items for domestic and export purposes. At present, their availability in the country is negligible as compared to their requirement. At least, 3,000 such vehicles costing Rs. 600 crore will be required in the next decade (GOI, 2001a). Simultaneously, the

use of various preservation and temperature management technologies for perishables like irradiation, nitrogen-fill packaging, vacuum packaging, shrimp wrapping and others also need to be encouraged.

Providing Processing, Packaging and Grading Facilities

Considering the rising demand for value added and processed products, there is a need to enhance tshe capacity of the agro-processing sector. Though the Government of India have formulated several schemes of assistance, there is need to popularise these schemes by creating awareness about the beneficial effects of these schemes. Conscious efforts in the direction of creating infrastructure such as setting up of food laboratories for testing, training centers for skill upgradation, consultancy services for guidance, *etc.*, will augment the value addition and export potential. At present, value addition is estimated at only seven per cent and processing only two per cent of total production. Within next 10 years, there is a need to increase value addition to 35 per cent and processing to at least 10 per cent. Accordingly, the investment potential in value addition and food processing has been estimated at Rs. 1,50,000 crore (GOI, 2001a).

Proper cleaning, grading and packaging of primary products will need greater attention not only in the physical markets, but also in the villages from where produce is brought to the market for sale. Besides, there is need to educate the farmers for proper grading and packaging before they bring the produce to the market. In the changed context, new technologies of packing like tetra packs, ascetic packing, retortable pouches, *etc.* need to be introduced.

With a view to taking advantage of the liberalised international environment, there is need to encourage export of high value non-traditional products grown in various parts of the country. The Ministry of Commerce has launched a scheme of creating Export-Oriented Agri-Zones (EOAZ). While private entrepreneurs should make investment in the processing units, the Government should invest in common facilities such as roads, electricity, communication, warehousing, testing laboratories, quality certification, *etc.* An investment of Rs. 200 crore by the public sector and Rs. 400 crore by the private sector for 50 such EOAZs has been estimated (GOI, 2001a). In this context, it may be mentioned that EOAZs are presently being promoted in different States and 15 such Zones have been approved so far (GOI, 2002).

Making Available Credit for Marketing

Provision of credit by the organised financial system to support agricultural marketing has to grow further, though even now, the credit made available by the banking system for the public trading agencies such as Food Corporation of India, Jute Corporation of India, Cotton Corporation of India, *etc.* is considerable. The total food credit outstanding as on March 28, 2003 was of the order of Rs. 49,398 crore (RBI, 2003). Banks also disburse advances up to Rs. one lakh against pledge/ hypothecation of agricultural produce for a period not exceeding six months to those farmers who have availed crop loans for raising their produce. As compared to this, the credit facility available to private traders and processors for storage of agricultural commodities has remained limited. As the role of the private sector in agricultural marketing is envisaged to increase in the liberalised environment, there is a need to streamline the procedures and systems for collaterals. In this context, certified warehouses and a system of negotiable warehouse receipts could lead to improved credit delivery, better

loan recovery and convenience in asset management. The institutionalisation of the warehouse receipt system through the commodity exchanges can yield the best results, in particular, through a national system of electronic warehouse receipts. Moreover, all the credit flows to agricultural marketing should be reckoned as priority sector lending, including banks' financing to wholesalers/ traders in agricultural commodities and inputs in order to provide further incentives to the banking system to lend to this segment.

Improving Market Information System

In India, both official and non-official agencies collect market information. Among nonofficial agencies, dealers in inputs and trade associations are prominent ones, but their role is limited. The main official agencies collecting market information are the State Marketing Department, the State Agricultural Marketing Boards, the Food Department and the Directorate of Economics and Statistics of the State and Central Governments. Weekly data on market arrivals, sales, prices, etc. are collected regularly from a large number of reporting agencies. Data on retail prices are also collected by the Government agencies. Besides, daily prices of important agricultural commodities are broadcasted from all regional stations of All-India Radio and displayed on 'Agmarknet' portal on the official web-site of the Government of India. The 'Agmarknet' or 'Agricultural Marketing Information Network' portal has been set up by the Directorate of Marketing and Inspection (DMI) by providing computer connectivity to important markets in the country. Newspapers also publish commodity prices in major markets. Thus there have been considerable improvements in collection of market information during the past few decades. But, the collected information has no meaning until it is comprehensible and up to date. There should be a standardised system of quoting the prices of different varieties of a commodity per unit, so that the prices may be compared over time and space. The prices announced on All India Radio and TV Channels should be in the local language and should cover more local markets of the area rather than secondary and terminal markets located far from the area. A correct and intelligent interpretation of market information should be made along with the market information. Further, the use of information technology in agri-marketing needs to be encouraged in order to generate and host useful portals, websites, databases, information packages, etc., generic as well as customise for both spot and futures markets.

Promoting Agricultural Marketing Research

There is an urgent need to set up linkages amongst the agricultural research institutions. Regional and other Centres of Indian Council of Agricultural Research (ICAR) and State agricultural universities should be given a mandate for applied research in agricultural marketing. Marketing organisations also need to be encouraged to set apart a certain percentage of their profits/ turnover for marketing research. The probable areas for research and training could be agri-business management, post-harvest management, grading, standardisation, quality assurance, export promotion and information technology. The National Institute of Agricultural Marketing (NIAM) should be further strengthened to undertake applied and operational research in agricultural marketing, impart training to market functionaries and provide consultancy services to the public as well as private organisations engaged in agricultural marketing. It should also co-ordinate and promote regional institutions engaged in agricultural marketing research and training.

Further, conferences, seminars, and workshops should be conducted from time to time on current and relevant issues to facilitate exchange of views among various market functionaries. Researchers should also be enthused and assisted to undertake research on issues of topical interest to agricultural marketing.

Section IV Conclusion

The agricultural marketing system stands today at a critical stage of its evolution. It needs to meet the growing requirements of farmers, consumers, industry and exports as also of agriculture, which is becoming input-intensive and getting diversified. At the same time, the requirements of the small farmers and poorer sections have also to be met. The National Agriculture Policy, 2000 has postulated an increase in agricultural production of the order of 4 per cent per annum during the Tenth Plan. The scope for exports of agricultural commodities will also expand in the changing world trade environment. If the country is to take full benefit of the expanding domestic and external markets, agricultural marketing must receive adequate emphasis. The long chain of marketing from the producing centres to the ultimate consumers needs improvement at every stage. Efficient marketing can ensure better income for the producers and improved satisfaction to the consumers. In order to improve the efficiency of the marketing system: i) the Government needs to examine all existing laws, regulations, rules, policies and programmes with a view to remove all legal provisions inhibiting free play of market forces in agricultural commodities; ii) the operations of cooperative marketing societies have to be linked with credit, processing and other farming societies either through promoting multi-purpose co-operative societies or through proper coordination among the activities of different societies; iii) the regulated markets need to be professionally managed, their number to be appropriately increased and all modern marketing facilities to be provided in the market yards; iv) futures markets in as many commodities as economically feasible and socially desirable have to be made fully functional and the spot markets to be linked with them to get price signals and manage market and price risks; v) direct marketing has to be encouraged as an alternative structure of marketing as it will benefit the farmers as well as the consumers; and vi) the role of the State in agricultural marketing has to be confined to the promotion and regulation of market networks aiming at improving their efficiency.

Further, the development of market infrastructure like all weather link roads, warehouses, godowns, cold storage units, refrigerated vans, grading units, processing and packaging facilities, testing laboratories and market information system is another important area where lot of work has to be done. To improve upon the prevailing situation, it is therefore necessary to take action on three main lines: i) more investments for further additions to the infrastructural facilities; ii) proper maintenance and upgradation of the existing facilities through repair, replacements and technological modernisation; and iii) fuller and more efficient use of the existing facilities. The overall investment requirements for strengthening agricultural marketing infrastructure have been estimated at Rs. 2,68,742 crore for the next decade (GOI, 2001a). The Central and State Governments alone would not be able to mobilise resources of this order. Most of these investments would, therefore, need to come from the private sector. However, complementary investment by the Centre and the States, subsidising a few activities to enable private sector initiatives to attain viability and an active stance by the Central Government in taking some important initiatives for creating a conducive and favourable environment would be required. Simultaneously, adequate institutional credit flow to agricultural marketing, particularly to the private sector, has to be ensured from the banking sector. Moreover, the development of peoples' participatory institutions has to be encouraged for the management and sustainable growth of market

infrastructure. In effect, we need to make all concerted efforts to put in place an efficient agricultural marketing system, which can cater to the needs of all segments of society and also contribute in raising sufficient marketable surplus for faster economic development of the country.

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