

Agri Produce Management

An option for alleviating rural poverty

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With a majority of its population (83.3 cr) living in villages, poverty is a major problem in rural India. Most of the people from rural areas pursue agriculture and allied activities. But lately, they are quitting farming and improper management of agri produce is one of the major causes. Due to the lack of efficient infrastructure and food processing industry about 30-35 % of all foods produced in India are wasted. Farmers face problems such as lack of adequate and scientific storage, inadequate knowledge and facilities for processing, faulty marketing system, strict government policies for contract farming, etc. These problems can be managed through various management practices discussed under the topic.

Keywords: Agriculture, Agri produce, Development, Infrastructure, Investment, Marketing

AGRICULTURE has been the backbone of the Indian economy. India is the world's third largest producer of food grains, the second-largest producer of fruits and vegetables and the largest producer of milk as well as livestock products. Rural India has a population of 83.3 crore spreading across 6,38,000 villages and about 56.4% of people pursue agriculture and allied activities. But this antediluvian thought needs to be amended. As per a report, 1 lakh farmers quit agriculture in 5 years in Maharashtra and this is the scenario of all the states in India where the farmers abandon their age-old practice. A lot of reasons could be cited in this context but one of the main reasons is less profit due to poor marketing of the output i.e. the agricultural produce. There are multiple incidents of throwing of milk, vegetables, food, etc. by farmers all over India. In 2017, farmers of Keonjhar district of Odisha dumped quintals of vegetables on road outside the district collectorate alleging the traders being reluctant to give even ₹ 1 per kg, which is very meagre.

Recently, in Srikakulam and Vizianagaram districts of Andhra Pradesh, farmers are being forced to sell their hard grown crop at throwaway prices to middleman as they feared damage to the stock. This is a wakeup call for the whole India to avoid the doom of the rising nation.

For strengthening agricultural production and productivity for farmers and the economy, the governments had taken various initiatives, most of which were on the production side to ensure food security in the country. As a result, agricultural production in India experienced remarkable growth after the mid 1960s with the adoption of Green Revolution technologies. This growth certainty led the country from being a food deficit country to food surplus country. The other crucial problem that constrains the growth of the agricultural sector is that public investment in agriculture as a percentage of GDP has been declining gradually. A policy analysis of the agricultural system shows that there is multiplicity and duplicity of

rules and regulations dealing with various components of a supply chain in agriculture. Lack of coordination among these, again, leads to the poor alliance and collaboration supply chain, which in turn leads to inefficient product and information flow. A brief analysis of the above case interprets the problems faced by the farmers and a number of management practices could be suggested regarding and are provided in this section.

Processes involved in Agri produce management

Storage

Due to the lack of adequate and scientific storage, a lot of farmers suffer even after surpassing the optimum level of production. At low temperature, perishability is considerably reduced and the shelf life is increased and thus cold storage or refrigeration is important. A cold chain is a temperature-controlled supply chain cold storage and distribution in which agricultural products are preserved afresh and

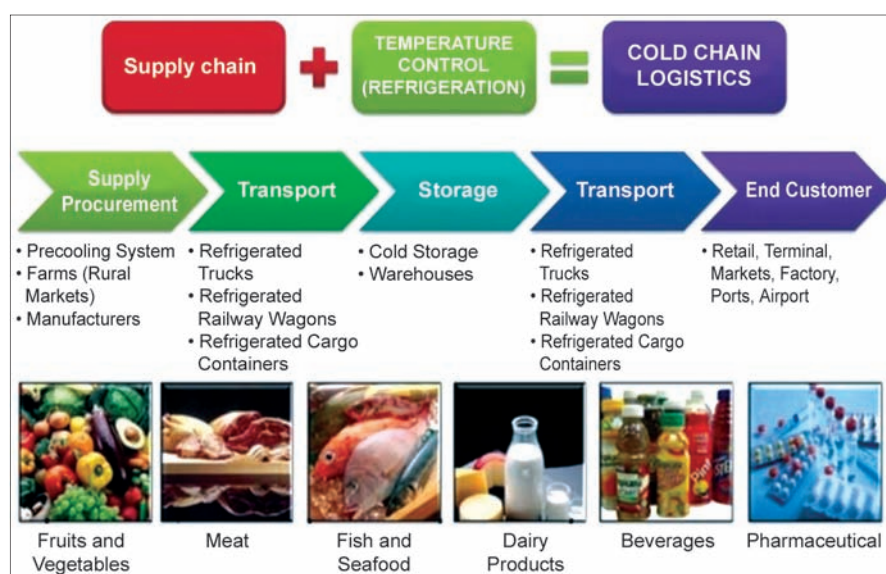


Fig. 1. Cold storage supply chain

shelf-life is extended for a longer period of time. With increasing food demand and changing lifestyle, the cold chain has become the focal point for the government and investors. The farmers in many developing countries including India usually come across many challenges in identifying and accessing the economical ways of diminishing the risks to their produces and stand in the match with the big food producers who can produce in moderate quantity. Such a jeopardy condition leads to an increased requirement for the efficient supply chain management. Cold Chain Supply is the best possible option to fulfil this requirement (Fig. 1).

The cold chain supply has proved to be suitable and uninterrupted storage as well as a distribution model for the food safety concern of the country. Every year, a huge quantity of perishable goods like food, vegetables, flowers, meat, fruits, and medical drug or vaccines, etc. gets wasted only because of the unavailability of on-time storage and distribution capability in India. Cold Chain Management or Supply (CCM/CCS) has a significant impact on farmers, and the companies working in the food industry. Currently, India has 6,300 cold storage facilities with an installed capacity of 30.11 million metric tonnes unevenly spread across the country with more than 50% concentrated in Uttar Pradesh and

West Bengal. While other states still face a challenge with investments from the government and private operators. But initiatives are being taken by the government like providing 25 to 33.3% subsidies on the cold storage project cost, establishment of Nation Centre for Cold Chain Development, *etc.* Hopefully, these initiatives become fruitful because a cold storage facility is accessible to them to help in removing the risk of distress sale to ensure better returns.

Value-addition

Value addition is one of the important components of nutritional security. Sometimes surplus production is the cause of lower price

of products in the market. Thus, crop diversification and value addition are two important techniques of profit maximization and important pillars of nutritional security. The most important problem facing the country today is providing remunerative price to the farmers for their produce. This problem could be solved largely in the surplus production of cereals, vegetables, fruits, milk, fish, meat, poultry etc. which are processed and marketed aggressively both inside and outside the country. The value addition coupled with marketing has enormous potential of solving the basic problems of agricultural surplus and product wastage. Value-added agriculture may also refer to increase the economic value of a commodity through a particular production process, eg. Organic produce or through regionally branded products that consumer appeal and willingness to pay a premium over similar and differentiated products. Value-added agriculture is regarded by some, a significant rural development strategy. Small scale processing unit, organic food processing, non-traditional crop production, agri-tourism and bio-fuel development are examples of various value-added projects that have created new jobs in some rural areas.

FPO (Farmer Producer Organization) organizes training programs to the selected farmers on the value-addition products. They are

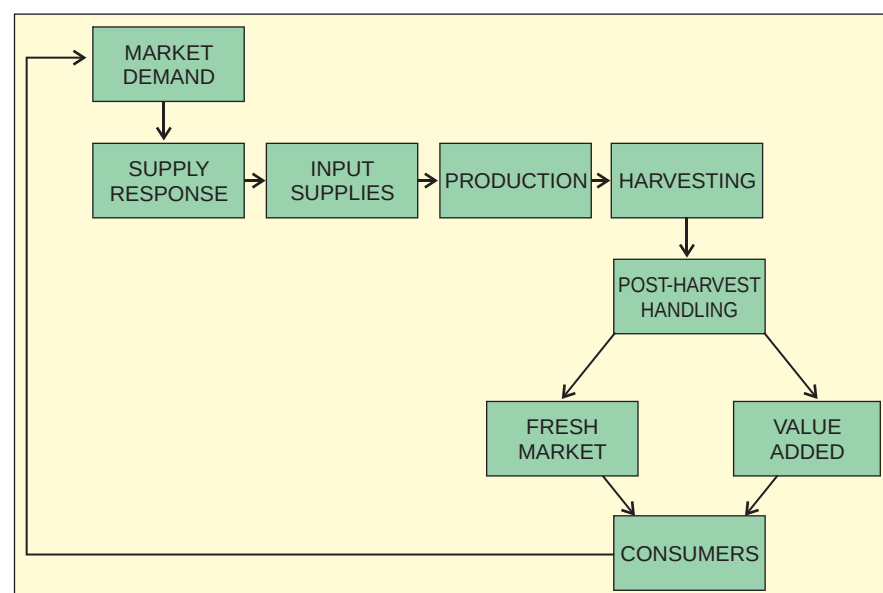


Fig. 2. Value Chain through Farmer Producer Organization

conducting regular meetings and supporting women through generating self-employment. The basic actor *viz.*, farmers were involved only in the production function while the FPO activities include input supply to the farmers, technical guidance, procurement of the produce and wholesaling the value-added products (Fig. 2). The retailers were procuring the produce from FPO and retailing it to the consumers. Such type of training is also given by Krishi Vigyan Kendras, CFTRI, Skill development Institutes, Institute of Industrial development (IID), DDU-GKY, RSETI, etc. to minimize the gap.

Contract Farming

The process of Contract Farming in the India Rural Economy is a new concept. Under contract farming, agricultural production (including food grains, horticultural produce, tuber crops, livestock and poultry) can be carried out based on a pre-harvest agreement between buyers (such as food processing units and exporters), and producers (farmers or farmer organizations). The producer can sell the agricultural produce at a specific price in the future to the buyer as per the agreement. The role of contract farming in India rural economy is becoming more and more important since the organized farming practice has become the need of the hour in the world of rapid industrialization. The rapid industrialization process in India has created a shortage of farmland, which in turn has necessitated organized farming practice in India. Moreover, today more and more established business houses are taking interest in the business of contract farming in India. This has happened as a result of the rapid growth of retail industry in India. Growth of the retail industry in India has propelled the growth of farm retail in India, which caters fresh vegetables and fruits from the farms to the Indian mass. The role of Contract Farming in Indian Rural Economy involves government and private participation along with the rural workers. Further, it engages a good number of farmers and other rural workers to discharge other

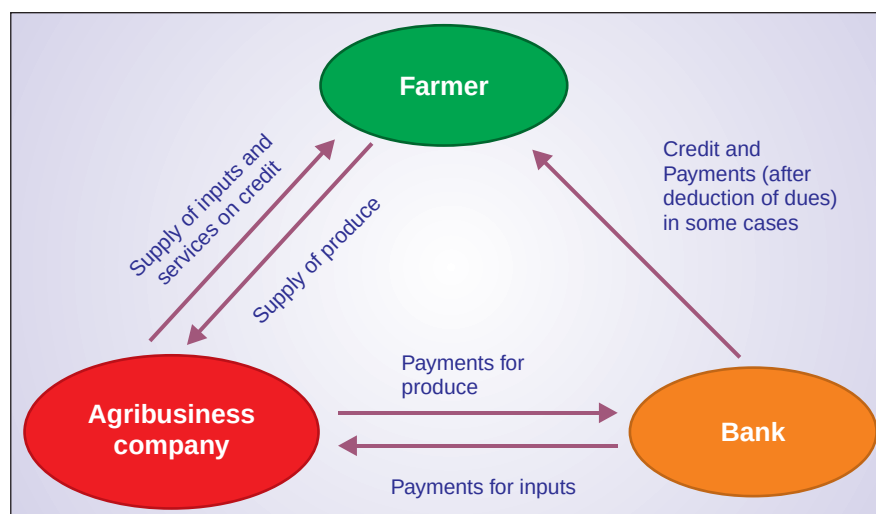


Fig. 3. Process of Contract farming

agriculture related activities. The farmers of rural India can achieve immense benefits by adopting contract farming. Hence this approach should be adapted in all the villages for different crops basing on the agro climatic zones.

With a view to integrate farmers with bulk purchasers including exporters, agro-industries etc. for better price realization through mitigation of market and price risks to the farmers and ensuring smooth agro raw material supply to the agro-industries, a “Model Contract Farming Act” has been prepared by the Ministry of Agriculture & Farmers Welfare for circulation to the States for its adoption. Farmer’s producer organizations (FPO’s) have a major role in promoting Contract Farming and Services Contract. Under the Model Act, the producer can get support from the buyer for improving production through inputs (such as technology, pre-harvest and post-harvest infrastructure) as per the agreement. However, the buyer cannot raise a permanent structure on the producer’s land. Rights or title ownership of the producer’s land cannot be transferred to the buyer. In addition to contract farming, services contracts all along the value chain including pre-production, production and post-production have been included. The Indian institutes like Karnataka State Agricultural Marketing Board, Orissa State Agricultural Marketing Board, Bhubaneswar, Domestic & Export Market Intelligence Cell, etc. are

engaged in marketing agricultural products under contract marketing. One of the examples of contract farming is Suguna Poultry Farm Ltd, which has emerged as one of the leading integrated broiler producers in the country, with contract farming. Contract poultry farming managed to free the small farmers from the worries of production and market planning of the poultry products.

Marketing

Agricultural marketing comprises all the activities involved in the supply of farm inputs and output – including all those operations which are related to the procurement, collecting, grading, storing, food and agro-processing, transportation, financing and selling of the agricultural produce. Rural marketing is as old as civilization. Surplus of agro-produce is exchanged in earlier days in the barter system. The introduction of currency, transport and communication has increased the scope of the rural market. The rural market is mostly dominated by the middlemen from whom the actual farmer gets a meagre amount of profit. The Government is playing an important role in strengthening the agricultural marketing system in the country. *Mandi* price information is disseminated through DD Kisan channel and Kisan Call Centers. New innovations have been introduced for the dissemination of market data through Agrimarket and Kisan Suvidha Mobile apps and SMS by IFFCO Kisan Sanchar Ltd. etc. at the

grass root level.

The Agrimarket portal and National Agricultural Market Atlas portals have been revamped and hosted with a better look and user-friendly format. ITC e-Choupal is a virtual market place where farmers can transact directly with a processor and can realize a better price for their produce. Geographical distances do not restrict participation in the e-Choupal. The main disadvantage of the conventional market is that information asymmetry is inherent in the market whereas e-Choupal provides for transparent transactions. The main attractiveness of e-Choupal is that it can be used for connecting large producers/small producers and small users/large users, thereby eliminating the need for a hierarchy of brokers. Internet is used as a low transaction cost backbone

for communication. Hindustan Lever Ltd (HLL), Rallis and ICICI jointly promote contract farming in wheat in Madhya Pradesh. Under the system, Rallis supplies agri-inputs, ICICI provide farm credit to the farmers and HLL buys back the farm output. In this model, farmers benefit through the assured market for their produce in addition to timely, adequate and quality input supply including free technical knowledge; HLL benefits through supply-chain efficiency; while Rallis and ICICI benefit through assured clientele for their products and services. The model can be extended by including insurance firms, warehouses and manufacturers of equipments and machinery.

SUMMARY

The demand for agriculture and agriproduce is at sky-high. The industry sector, service sector, etc. are obtaining huge benefits from the

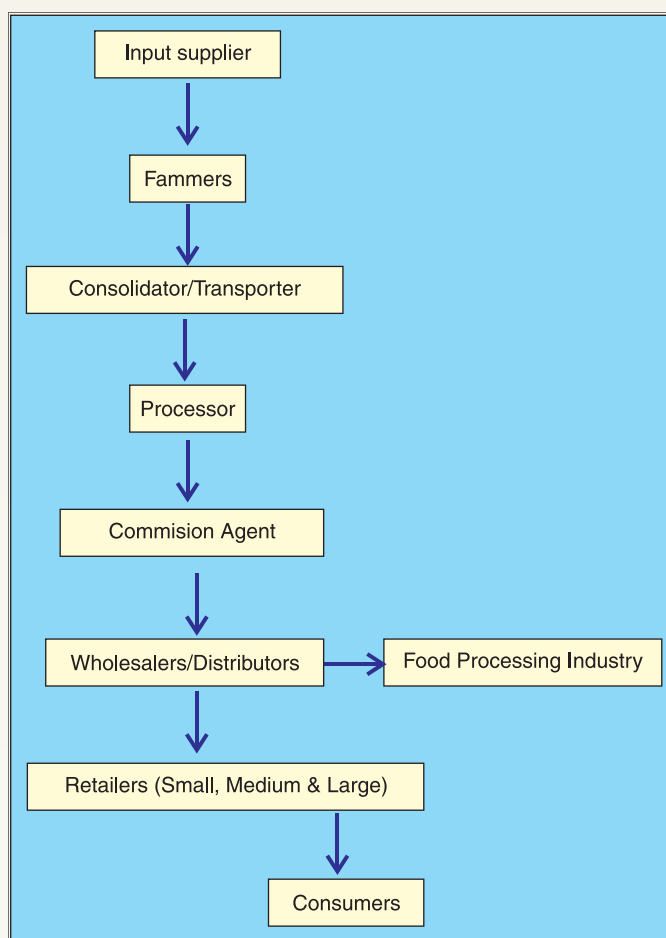


Fig. 4. Agri rural market chain

agriculture of our country but the farmer due to whom everything is possible stays behind the screens. The scenario of Agriculture is changing so the farmers should change accordingly. There are lots of opportunities for the farmers to raise their income and synchronise their steps with the pace of development of our country. Special emphasis was given by Prime Minister Shri Narendra Modi on reforms in agriculture marketing, management of marketable surplus, access of farmers to institutional credit and freeing the agriculture sector of various restrictions with appropriate backing of the statute. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a flagship programme of the government of India which has two views among the farmers and labour in rural areas i.e., pessimistic and optimistic respectively. The farmers have adopted various strategies to

overcome labour shortage in agriculture such as the use of family labour, increased use of machinery and hired labour from outside the village. As MGNREGA is a labour bank in the rural areas, these labour should involve in agricultural work in the field of farmers that the best strategy to overcome labour shortage in agriculture.

ATMA (Agricultural Technology Management Agency) is a registered society responsible for technology dissemination at the district level. It is a focal point for integrating research extension and marketing among all the line department research organizations, non-governmental organizations and organizations associated with agricultural development in the districts. The usefulness of ICT is well established in

improving productivity of the agricultural sector and this needs to address by authorities. State Department of Agriculture under Public Private Partnership (PPP) plays a major role in contract farming through the supply of credit-linked quality inputs to the farmers enrolled under the project which will be organized through the agricultural extension centers. It would also receive incentive support from various State and Central Government schemes. Further, the genuine intention of upgrading agriculture should spontaneously emerge from everyone so that no farmer shall dare to throw his earnings which definitely could be a small but effective step in alleviating the poverty in rural India.

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