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Supply Chain Management in Vegetables

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ABSTRACT

India is the world largest producer of many fruits and vegetables. More than 70 types of vegetables are grown in our country , higher emphasis for marketing and processing of vegetables. There is a gargantuan waste during post-harvest storage and handling due to improper bagging without crating, lack of temperature controlled vehicles, no cold chain facilities for preserving the produce, coupled with significant processing of the agricultural produce resulting in enormous losses to the nation. Hence a proper supply chain management in vegetables has to be improved in all the stages of the supply by adopting global best practices in storage, packaging, handling, transportation, value added service etc.

KEYWORDS Supply Chain Management, Vegetable marketing, post harvest loss

Introduction

India is the world's largest producer of many fresh fruits and vegetables, milk, major spices, fresh meat, few fibrous crops such as jute, several staples such as millets, castor oil seed etc. and ranked amongst the world's five largest producers of over 80% agricultural produce items, including many cash crops such as coffee and cotton. (National Horticultural Board, 2011). India's vast geographical area coupled with varied climate conditions facilitates to grow a variety of fruits and vegetables. India produced around 146.55 MTs of vegetables which accounts for nearly 14.0% of country's share in the world production of vegetables. Although, more than 70 types of vegetables are grown in our country, higher emphasis is given to more popular vegetables like tomato, brinjal, chilli, cauliflower, cabbage, peas, potatoes, onions and few common cucurbits and leafy vegetables. These also generate high income and employment, particularly for small farmers. Among the vegetables, potato is cultivated over large area followed by onion, tomato and brinjal whereas, in the case of production potato ranks first followed by tomato, onion and brinjal (National horticulture database 2011). Though India has lot many positives in the vegetable production and marketing sector, it has several disadvantages too. The country lacks an efficient supply chain for the distribution of the fruits and vegetables.

Mitul Deliya & etal (2008) tells that the present supply chain that connects the farmers to both the organized, as well as the unorganized retail, is highly inefficient with several intermediaries and manual handling. The result is lots of wastages as much as nearly 30% and also less remuneration for the farmers. There is a colossal waste during the post-harvest storage and handling due to improper bagging without crating, lack of temperature controlled vehicles, no cold chain facilities for preserving the produce, coupled with significant processing of the agricultural produce resulting in enormous losses to the nation. Given the characteristics of fruits and vegetables such as perishability, seasonality, bulkiness and delicate nature of the products coupled with inadequate storage and transport facilities, the supply chain can be made efficient by reducing the length of the chain improving cold chain facilities. The supply chain management in vegetables has to be improved in all the stages of the supply by adopting global best practices in storage, packaging, handling, transportation, value added service etc. And also by disintermediation and participation of organized players i.e., modern supply chain with a view to benefit both farmers as well as ultimate consumers.

SUPPLY CHAIN MANAGEMENT

Supply Chain Management represents the management of the entire set of production, manufacturing / transformations, distribution and marketing activities by which a consumer is supplied with a desired product. Supply chain management encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management. It also includes coordination and collaboration with channel partners, which may be suppliers, intermediaries, third-party service providers, or customers. Supply chain management integrates supply and demand management within and across companies.

NEED FOR A SUPPLY CHAIN IN VEGETABLE MARKETING:

Sudarshan naidu (2008) says supply chain development not only benefits the private sector but also creates spin-offs that stimulate social, economical and environmental sustainable development in the region (employment generation, added value, minimization of product losses etc).The specific gains are:

- Reduction of product losses in transportation and storage.
- Increasing of sales.
- Dissemination of technology, capital and knowledge among the chain partners.
- Better information about the flow of products, markets and technologies.
- Transparency of the supply chain.
- Tracking and tracing to the source.
- Better control of product safety and quality.
- Large investments and risks are shared among partners in the chain.
- Productivity Improvement
- High customer satisfaction
- Increased profit
- On time delivery

PROBLEMS IN INDIAN FOOD SUPPLY CHAIN

India has a huge opportunity to become a leading global food supplier if only it has an agile, adaptive, responsive and efficient supply chain. Some of the problems that are to be mentioned in Indian food supply chain are:

- Numerous stake holders working in isolation: The food supply chain is complex with perishable goods and numerous small stake holders. In India, the infrastructure connecting these partners is very weak.
- Lack of demand estimation: Demand forecasting is totally absent and the farmers try to push whatever they produce into the market.
- Lack of technology applications: Cold chain logistic supply chains should take advantage of technology improvements in data capture and processing, product tracking and tracing, synchronized freight transport transmit times for time compression along the supply chain and supply-demand matching.
- Lack of system integration: The supply chain needs to be designed and built as a whole in an integrated manner. The process of new product development, procurement and order to delivery processes should be well designed and well supported with the help of IT tools and software.
- Presence of large number of unorganised retailers: At present the unorganized retailers are linked with farmers through wholesalers or commission agents. The commission agents and wholesalers redundant supply chain practices make unorganized further inefficient.

CONCLUSION

Though there are all these problems in the Indian food supply chain several initiatives should be taken to overcome the challenges in the supply chain.

a) The two golden rules for successful development of this sector are to ensure consistency in supply and to provide recorded and demonstrated traceability of products.
b) By creating vegetable supply chain and thus linking together farmers, vegetable vendors, farmer's self-help groups and women vegetable vendors ensures its consumers quality produce at competitive price, at a convenient time and place.
c) By allowing more organised retailers to enter into retail market. This would results in benefitting the farmers with good remunerative price and consumers with good quality produce.
d) Set of basic production factors, an optimal crop management system, developing a post-harvest infrastructure, entrepreneurial management and expertise and logistical infrastructure.
e) Improving post-harvest operations related to handling, storage, and marketing of fresh and processed produce will reduce the losses incurred due to poor post-harvest management and thereby ensuring adequate supply to the consumers.

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