

# PROBLEMS AND PROSPECTS OF CASH CROP PRODUCTION AND MARKETING IN BIHAR

## (A CASE STUDY OF SAMASTIPUR DISTRICT )

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**Abstract:** Vegetables are an item of daily consumption, they are essential in human diet but they are very perishable in nature. Therefore, the cultivation of vegetables is generally concentrated around towns and cities. The spread of vegetable cultivation in rural areas has created new problems, particularly of transport, handling, packing and storage which are still in their formative stage. There is also regional specialization in growing some vegetables. It is not enough just to produce a vegetable, it must be produced efficiently and marketed successfully. The system of vegetables marketing in Pusa Block of Samastipur has not proved to be adequate and efficient. Farmers are not getting surplus and they face widespread distress sales, particularly by marginal and small farm households. The vegetable markets is suffering certain structural weaknesses, like existence of unorganized small famers/producers weak storage capacity of the small producers, and the absence of good infrastructure, grading, cold storage and processing units.. More than 90 per cent of the vegetable growers sell their produce in daily mandis, weekly mandis and also take vegetables in bicycles to villages and from door to door, mainly to itinerant traders, at much lower prices than the procurement price of the respective agricultural commodities.

**Key words:** vegetable, cultivation, rural, areas, problems, and transport.,

### INTRODUCTION

Vegetables have significant importance in providing vitamins and minerals in the diet, besides protein and energy. They play significant role in overcoming the common disorders like nutritional anemia, caused by the iron and folic acid deficiencies. Vegetables play a key role in neutralizing the acids produced during digestion of proteins and fatty foods and providing valuable roughages, which promotes digestion and help in preventing constipation. Other than these as we know that vegetables are short duration. All taken together, India's share of the world's vegetable market is 17 per cent. Presently, the horticultural crops cover 13.6 million hectares, i.e. roughly 7 per cent of the gross cropped area and contributes 18-20 per cent of the gross value of India's agricultural output. India is the second largest producer of fruits and Vegetables in the world next only to China and accounts for about 16% of the world's production of vegetables and 10% of world's fruits production. But we are still lagging behind in actual exports of these produce. For example, India produces 65 per cent and 11 per cent of world mango and banana respectively, ranking first in the production of both the crops. Our country is gifted with a wide range of agro-climatic conditions which enables the production of vegetables throughout the year in one part of the country or the other and then maintaining a continuous supply of fresh vegetables. These off season vegetables are in great demand in home market as well as in the neighboring Gulf countries. Bihar is considered destination for second Green Revolution in the country.

Bihar is a major fruit and vegetable growing state. Total vegetable production in Bihar is about 156.29 lakh tons. Potato, Onion, Tomato, Brinjal, Okra and 7 Cauliflower is the major vegetable crop of the state. Bihar is known all over India for its litchi and mango. The four most important fruit crops in Bihar are mango, guava, litchi and banana. In 2013-14, their production levels were mango (12.74 lakh tones), guava (2.39 lakh tones), litchi (2.34 lakh tons) and banana (14.36 lakh tones). Flower production in Bihar has increased recently, providing immense opportunity of employment and income in rural areas of Bihar. In 2013- 14, about 99 tons of rose, 6799 tons of marigold, 317 tons of jasmine (Bela) and 536 tons of the tuberose were produced in Bihar. Fruits and vegetables play an important role in the economy of Bihar. Despite their utility, the cultivation, consumption and marketing aspects of fruits and vegetables are generally neglected. This is mainly due to severe handicaps associated with the production and marketing of fruits and vegetables. The cultivation of fruits and vegetables in the district is distorted by many factors like low yield and poor quality. The farmers get poor returns and a very little incentive to improve their farm management.

State agriculture faces multifaceted challenges that emanate both from within the system and also from outside. Low productivity across all the enterprises, crop, horticulture, milk, meat, egg and fishes has traditionally described the state agriculture. The low productivity has consequential effects on low income and high poverty of its population.

#### **REVIW OF LITERATURE:**

**Dastagiri, M.B, Chand, Immanuelraj, R, Hanumanthaiah, T.K, Paramsivam , C.V, Sidhu and R.S (2013)** Marketing of vegetable crops is quite complex and risky due to the perishable nature of the produce, seasonal production and bulkiness. The spectrum of prices from producer to consumer, which is an outcome of demand and supply of transactions between various intermediaries at different levels in the marketing system, is also unique for vegetables. Moreover, the marketing arrangements at different stages also play an important role in price levels at various stages viz. from farm gate to the ultimate user. Similar results found in [2].

**Dhurvey, C.B, Choudhary ,V.K, Ravi, S.(2018)** vegetable cultivation in India is still an unorganized sector with farmers following traditional practices. Besides, the vegetable growers are not as well served by the agriculture extension system as the farmers growing foodgrains; and due to this productivity and production efficiency remains low.

**Dhurvey, C.B, Choudhary ,V.K, Ravi, S.(2018)** Major vegetables grown in the state are potato, cauliflower, tomato, onion, brinjal, pea, cabbage and okra. Total area of vegetable production in Kumaon region is 17,609.25 Ha and 20842.42 Ha in Garhwal Region.

#### **PROBLEMS FACED BY CASH CROP FARMERS:**

Vegetables are an item of daily consumption, they are essential in human diet but they are very perishable in nature. Therefore, the cultivation of vegetables is generally concentrated around towns and cities, so that they can be harvested and transported to the market immediately and in fresh form. With the increase in transport and communication facilities, vegetable cultivation has spread in interior areas where irrigation facilities are available. This is because growing vegetable crops is more profitable than any other seasonal crop particularly the food grain crop. The spread of vegetable cultivation in rural areas has created new problems, particularly of transport, handling, packing and storage which are still in their formative stage. There is also regional specialization in growing some vegetables. It is not enough just to produce a vegetable, it must be produced efficiently and marketed successfully. It is necessary to improve the marketing systems to aid development for two reasons, firstly, additional produce does not fetch additional revenue in the market, it may work as a disincentive to increased production, secondary, if the market does not supply produce to consumer reasonable prices and at the time and place needed, then increased production has no meaning in welfare society. Vegetable marketing is a process which begins with the decision to produce a saleable commodity and involves all aspects of market structure, functional and institutional, based on technical and economic consideration. It also includes pre and post-harvest operations assembling, grading, storage, transportation and distribution. They are grown in one area but marketed in other areas for creating wider market and also to fulfill the demand of some people, who have liking for them. This also involves long distance transport. For this purpose, good roads in the interior villages are necessary. Fortunately there are good state and national highways, but there are no good roads in rural areas and this stands as a major constraints in vegetable marketing for both farmers (producers) and vendors.

**Production Constraints:** The extent of production related constraints vary inversely with the farm size. Smaller farms face production related constraints more as compared to the larger ones. The most common production related constraints found to be long gestation period of the crop, followed by low profit margin of the producer, damage to crop due to diseases, wind, etc. As a result, the overall production level is not satisfactory. The production related constraints are discussed below:

**Traditional Methods of Cultivation:** The advanced agricultural practices like soil testing, seed testing, appropriate time of sowing, timely irrigation, proper time of harvesting, etc. are not adopted by the farmers because they are not aware of them. As a result, there is no significant improvement in the yield of fruit and vegetable crops.

**Use of Traditional Varieties of Seeds:** Good returns cannot be obtained from the poor quality of raw material. Almost 90 per cent of the farmers use traditional varieties of seeds that are responsible for low yield of fruits and vegetables. They are ignorant regarding the latest varieties of seeds such as hybrid, easy adaptability to climate, early ripening and disease resistant varieties.

**Higher Input Costs:** The other major constraint faced by the farmers at the production level is the lack of application of recommended fertilizers and plant protection chemicals during the development stage. Besides this, the fungicides/pesticides like Bavistin, Karathene, etc. used by the farmers are also duplicate. Because of substandard fertilizers and pesticides, these crops are prone to many diseases. Moreover, the charges paid to the labour for cleaning, plucking, loading and unloading are also found high. All these factors increase their cost of production. But, as compared to production, the prices received by them from the sale of their produce are quite less.

**Lack of Technological Advancement:** The production technology of fruits and vegetables is not adequate. The farmers do not adopt the advanced and protected production technologies like net house and poly-house technologies. The net-house technology not only increases the productivity of vegetables but also helps in the improvement of their quality. But, the farmers of Bhagalpur district grow the crops on open fields and as a result due to temperature changes, heavy rains, etc. the yield of these crops is low. There are two agricultural universities, five agricultural colleges, one horticulture college, one agriculture engineering college, one dairy technology college and one veterinary college in the state. All the 38 districts have a functional Krishi Vigyan Kendra (KVK). ICAR has also a presence with eastern states regional headquarter at Patna. Besides, National Research Centre for Litchi and Makhana are established in state. However, State productivity remains low because of the slow adoption of modern technologies by the farmers. Dominance of cereals in cropping pattern reflects on the subsistence nature of state agriculture. Institutional extension system faces the challenge to take latest technologies to farmers field.

**The Size of Farm Holdings:** The size of farm holdings has a direct effect on the output of fruit and vegetable crops. Subdivisions and fragmentation of the farms lead to uneconomic holdings and result in lower output. So far as fruits and vegetables are concerned, it has been identified that 70 per cent of the farmers in Bihar have uneconomic holdings. They cannot efficiently use the farm management practices like planting the trees at an appropriate distance, spray of insecticides, etc. Therefore, the production is very less.

**Marketing Constraints :** An efficient marketing is an important means of raising the income level of farmers and the level of satisfaction of the consumer. In Bihar, the marketing system of fruits and vegetables is not efficient and lacks proper infrastructure. Fruit and vegetable growers are considered to be bad marketers not only because of their ignorance of modern methods of marketing but also due to the peculiar structure of marketing over which they have no control. The main problems faced by the producers and sellers during the marketing of fruits and vegetables in the study are as follows:

**Transport Difficulties:** Another major problem is the non-availability of adequate transport facility. Although the roads are pucca in the selected villages but the means of transport that growers and sellers hire are very much costly. The whole transportation is done through cantor, tempo and tractor-trolley in Bihar. The rent of these hired means of transport is found to be high. Moreover, during rainy season, it becomes more difficult to transport the produce.

**Faulty Method of Sale:** The general method of sale is that produce of the farmer is sold by auction in the market. Auction is done under the supervision of market committee by the commission agents who act as wholesalers. No doubt, auction/bid is done under the supervision of market committee, but the market committee does not work honestly. It favours the commission agents/wholesalers who act as big traders. Further, because of the collusion of these commission agents with traders (retailers), the farmers do not get remunerative price of their produce. Generally, each producer sells the produce to the particular commission agent because of previous contacts or loan taken. Also, most of regular retailers have contacts with a particular commission agent. Sometimes the produce is not even accompanied by the producer and sent to the commission agent with whom the producer has a regular contact. The commission agents take advantage of this practice and after keeping their due share, they sell the produce to the retailers at low price.

**Inadequate Marketing Intelligence:** Price information helps the farmers to take decisions about when and where to sell the produce so that a better price may be obtained. But, they are not aware about the prices prevailing in the nearby markets. Moreover, the awareness about the prices of the distant markets through the government agencies is negligible. Only one or two large farmers observed to have knowledge about the prices in the distant markets and it is through their personal contacts. But, majority of the farmers do not have any source to get information about the market prices of fruits and vegetables in the nearby markets of the district as well as in the distant markets.

Therefore, they are compelled to sell the produce at throw away prices in the local market. Marketing and processing infrastructure are not adequate affecting farmer's income.

**Lack of Infrastructure Facilities:** Another problem faced by the fruit and vegetable growers in Bihar is related to infrastructural facilities for the quick disposal of the produce. The infrastructural facilities like cold stores, processing industries, cheap transportation charges, etc. are necessary in the case of fruits and vegetables as these are of perishable nature and cannot be store usual conditions. But in Bihar, the market system is deprived of infrastructure for post-harvest handling of fresh produce. Because of this, the small growers cannot afford to send their produce to distant markets for better returns. Road connectivity, storage godown and power availability to agriculture sector is inadequate to usher accelerated agriculture development in the state.

**Financial Difficulties:** There is no adequate credit facility to the farmers by the agencies in the study area. These people are usually dependent upon commission agents (money lenders) for finance. More than 95 per cent of the farmers take loan from these money lenders to fulfil the requirements related to the production of these crops. But, these people charge a very high rate of interest from producers and compel the farmers to sell their produce through them. Slow pace of implementation of kisan credit card leave large number of farmers dependant on high cost non institutional lending sources seriously impeding use of modern agri inputs and adoption of modern technology.

**Lack of Cold Storage Facility:** Because of seasonal and perishable nature of fruits and vegetables, these get spoiled easily. So, the farmers cannot retain them for longer periods to reap more benefits. Therefore, the cold storage facility to store the fresh produce at the time of low price offered in the market is necessary.

**Lack of Processing Industry:** The horticulture development is not possible without the establishment of processing industries. Fruits and vegetables are processed into very useful products such as jams, jellies, sauce, squash, syrup, etc. These industries play an important role in generating the income of the farmers. But in Bihar, there is no such processing industry, which uses fresh fruits and vegetables as raw materials to make the useful by-products.

**No Grading and Standardization:** The grading should be regularly practiced before the produce is marketed so that the producers can sell the produce at premium price. In Bihar, grading is not done on standardized basis. Moreover, there is a lack of grading facilities in the market. It has also been brought out that the grading is voluntary except for export in the case of few commodities like potato and peas. Traders for some commodities practice informal grading based on size, freshness and appearance of the produce at different levels of marketing. Most of the cultivators fear that if the produce is graded and sold, it may become difficult to dispose of the low graded produce.

**High Cost of Packaging Material:** As regards packaging, the present method of packaging of horticulture produce has resulted in post-harvest losses. For packaging the produce, containers like wooden boxes, plastic crates and gunny bags are used by the farmers. The rent of empty plastic crate was found to be Rs.5 and gunny bags also cost Rs. 2-3 to the producer. Additionally, the farmers do not have much information regarding the comparative costs of present packing material used and improved ones like corrugated fibre board boxes. Moreover, the farmers are not aware of ethylene absorbent papers to prevent losses due to spoilage.

**Malpractices Adopted by the Middlemen:** The malpractices adopted by the middlemen in the marketing of the produce. The malpractices adopted by the middlemen during the auction of the produce and in price fixation are under weightment, low prices through collusion, and refusal to purchase the low graded produce, etc. The cultivators face the risk of being cheated by the middlemen because of illegal deductions such as market fee.

**Lack of Approach to Distant Market:** The farmers cannot approach distant/desired markets to sell their produce at better prices. The reasons responsible for this are the low volume of the produce, high transportation cost and lack of awareness regarding desired distant markets. The other reasons being that the farmers are dependent upon commission agents for their financial requirements. The commission agents in turn compel them to sell their produce to them as the farmers have taken loan from them. The commission agents thus exploit the farmers by giving them low price for their produce.

**Land Issues:** More than 91 percent of all holdings fall in the category of marginal holdings with farm size less than 1 hectare. Each such holding is again fragmented in small parcels. Land records are

obsolete, making any institutional investment virtually impossible. Small farm agriculture creates serious problems for economy of scale.

**Rainfed agriculture:** State agriculture still heavily depends on monsoon. In the last 5 years, there has been drought or drought like situation in four consecutive years. Kharif crops are almost a gamble leaving little prospect for investments in costly inputs. Canal Irrigation is scanty. Irrigation is majorly (70 percent) dependent on diesel based tube wells. High cost of diesel based irrigation makes it a very difficult input for even Rabi crops.

**Flood & Drought:** State agriculture is dependent on Monsoon. A heavy rainfall lead to flood and a deficient rainfall could lead to drought. The paradox of flood and drought occur simultaneously almost every year making agriculture highly vulnerable and unstable.

The agro-climatic environment of Bihar is favorable for about all types of Crops. The land holding pattern in Bihar is scatter and more than 70% of farmer community belongs to marginal land holding segment. Bihar has established a milestone in the production of staple crops like Rice, Wheat, and Maize along with horticultural crops like Vegetables, Fruits (Like- Banana, Mango, Litchi, and Papaya), flowers and aromatic plants. This study aims to find out the major constraints faced by the farmers and cash crop marketing vendors of samastipur district of certain selected villages.

#### **OBJECTIVE OF THE STUDY :**

The main objective of the study :

- To examine the problems faced by the cash crop farmers, vendors and consumers.
- To evaluate the prospects of income and employment in this sector.

#### **METHODOLOGY :**

##### **Data collection**

The sample consisted of 120 farmers selected from three villages of Kalyanpur block. Namely Akbarpur, Bakhri and Balapur cash crop growing farmers were selected. Data was collected from the respondents with the help of well- structured interview schedule. The collected data were then classified and tabulated and subjected to statistical analysis to arrive at logical conclusions. The primary data for the study was collected.

#### **RESULT AND DISCUSSION :**

The study was conducted on 120 farmers, which include small, marginal and medium and were selected from three different villages of Pusa block . The analysis was done on a 3 point scale, the constraints has been marked according to the intensity of the problem faced by respondents of each village. The 3 point ranking was given as, mark -3to 2 for highly intensive issue, mark-2 to 1 for intensive issue and mark – for less intensive issue .

**Table: 1.1**  
**Area Wise Response of Constraints faced by Vegetables growers**

<b>Constraints</b>	<b>Akbarpur,</b>	<b>Bakhri</b>	<b>Balapur</b>
Perishability of product	1.2	1	2
Seasonality of production	0.9	1.1	1
Bulkiness of products	0.7	0.8	0.5
Lack of cold storage place	2.1	2.3	2.4
Higher cost of stora	2.5	2.9	2.9
Lack of marketing channel	2.8	2.8	2
Lack of regulated market	2.8	2.8	2.2

Price gap between procurement and selling	1.0	2	1.2
lack of schemes for small land holding farmers	2.2	2.6	2.9
Large input cost	2.9	2.4	2.7
Larger cost of labor and un availability of labor	2.5	2.1	
Lack of irrigation facility	2.9	2.5	3
Higher cost of irrigation	3	2.8	3

The problem faced by the vegetable growers of all the three village are almost same, since the farmers are having a maximum of 5-10 katha of vegetable cultivation or some have nearly 1 acre land under which the farmers cultivate vegetables and cereals crops along with pulses, Since all the farmers are small and marginal in type, they are not supported by any subsidies or schemes, the input cost and cost for irrigation is too high. Even though the farmers suffer all the pains by taking loans and from money lenders and banks, after harvest they are again disappointed because they don't receive good price for the produce, perishability of the produce, lack of cold storage and regulated market which provides to lack of cold storage facility. The farmers of Balapur responded that price gap between the procurement price and selling price is a main constraint faced by them due to lack of a good marketing channel.

Table 1.2

**Area wise constraints faced by vendors**

<b>Constraints</b>	<b>Akbarpur</b>	<b>Bakhri</b>	<b>Balapur</b>
Perishability of commodity	3	3	3
Seasonality of produce	2	2.3	2.1
Lack of infrastructure(storage/warehouse)	3	2.9	3
Lack of cold storage	0.8	0.9	0.6
Various players in market/intermediaries	1	1.1	1.4
Market fluctuation	2.3	2.6	2.7
Financial issues	0.4	0.9	0.5

local vegetable vendors in all the three villages had similar constraints, the highly intensive problem faced by the vendors in Akbarpur, Bakhri, Balapur are perishability of commodity, lack of good storage and warehousing facility so that the produce can be stored and sold in the peak season, now they have to sell the commodities directly after the harvest and the next level of intensive constraints are seasonality of the vegetables, market fluctuations and various players or commission agents. The least intensive constraint as the vendors responded was that lack of cold storage facility and financial issues.

**FININDINGS OF THE STUDY**

- The highly intensive problems faced by vegetable growers are lack of irrigation facility, higher cost of irrigation, higher cost of storage, lack of marketing channel, lack of regulated market large input cost to small land holding farmers.
- There are very less supports available to small land holding farmers.
- Even though the Pusa block is surrounded by rivers and water bodies, during summer (starting o of March till July) the farmer suffer big problem of irrigation.
- The vegetables have to be irrigated from seedling to harvesting up to 8-10 times, the cost for irrigation ranges from Rs.100-150 for diesel motor for 1 hour for 1 katha and Rs.80-120 fir electric or solar pumps.
- The major constraints faced by the vegetable sellers are perishability of vegetables, lack of good infrastructural facility of storage of the vegetables, grading and sorting. The market price fluctuations are also big issues to vendors.
- The storage and transportation are the major constraints faced by the vendors. The vegetable due to the perishable nature have to be harvested at the right time and should be marketed, so the vendors need good transportation facility in which the produces will not be destroyed.

**CONCLUSION**

The other constrains include faced perishability of vegetables, lack of good infrastructural facility of storage of the vegetables, grading and sorting. The market price fluctuations are also big issues to vendors. Thus, the system of vegetables marketing in Pusa Block of Samastipur has not proved to be adequate and efficient. Farmers are not getting surplus and they face widespread distress sales, particularly by marginal and small farm households. The vegetable markets is suffering certain structural weaknesses, like existence of unorganized small famers/producers weak storage capacity of the small producers, and the absence of good infrastructure, grading, cold storage and processing units.. More than 90 per cent of the vegetable growers sell their produce in daily mandis, weekly mandis and also take vegetables in bicycles to villages and from door to door, mainly to itinerant traders, at much lower prices than the procurement price of the respective agricultural commodities.

**RECOMMENDATIONS & SUGGESTIONS :**

- Training on modern methods of production should be provided to the farmers before vegetable sowing/Propagation of appropriate practices suited to small & marginal farms.
- Timely supply of the quality inputs, irrigation facility especially seeds and fertilizer.
- Promotion of contract farming through vertical integration with large marketing and vegetable processing firms.
- Strengthening of the marketing infrastructure by increasing the number of market places, upgrading the facilities at the designated marketplaces, constructing rural god owns and cold storages.

**Reference :**

1. Acharya, S. S. (1994). Marketing environment for farm product: Emerging issues and challenges. *Journal of Agricultural Marketing*, 8 (2).
2. Acharya. S. S. (1998). Agricultural marketing in India: Some facts and emerging issues, keynote paper. *Indian Journal of Agricultural Economics*, 53(3),pp. 311-32.
3. Borate, A., Zala Y. C., Darji, V.B., & Yadav, K.S. (2011). Analysis of marketable and marketed surplus of red gram in Vadodara district of Gujarat. *Legume Research and International Journal*, 34(4),pp.267-272.
4. Dastagiri, M.B, Chand, Immanuelraj, R, Hanumanthaiah, T.K, Paramshivam , C.V, Sidhu and R.S (2013) Indian vegetables: Production trends, marketing efficiency and export competitiveness. *American Journal of Agriculture and Forestry*,1(1):pp.1-11
5. Dhurvey, C.B, Choudhary ,V.K, Ravi, S.(2018) Constraints perceived by farmers in production of Soybean in Kabirdham district of Chhattisgarh. *International Research Journal of Agricultural Economics and Statistics*,9(1):pp.181- 183.
6. Dhurvey, C.B, Choudhary ,V.K, Ravi, S.(2018) Factors influencing entrepreneurial behaviour of vegetable growers. *Indian Res J Ext Edu*. 3(1)pp.:16-19.