

Onion Cultivation And It's Marketing Channel In Bankura District Of West Bengal, India

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Abstract:

Background: Present study was carried throughout the year 2018-19 to determine the economics of onion cultivation, price spread, marketing channels and marketing efficiency in Bankura district of the state of West Bengal, India. The district covers an area of 6,882 Km², i.e.7.75 % of total area in the State. The study has conducted in western part of the district in blocks of Chhatna, Gangajalghati, Mejia and Saltora.

Material and Methods: A sample of 100 onion growers was selected randomly from 20 villages in four blocks. The selected cultivators were based on land holding size of more or less one acre. Primary data were collected by survey method with the help of pre-tested schedule of questionnaire through personal interview. An attempt has been made to study the profitability and resource productivity in onion production and to find ways in which the existing market challenges can be overcome, by reviewing the current state of marketing situation and supply chain of onion, using technology and experience.

Results: It is evident that percentage share of the total variable cost is Rupees 33,000 (i.e.76.75%) and fixed cost of production is Rs.10, 000 (i.e.23.25 %) to total cost of production per acre. The average net returns obtained by onion growers amounted to Rs.65, 000 per acre with gross returns of Rs. 108,000 per acre. The average yield per acre onion production is 135 quintal. The comes cost of production onion per quintal Rs.319 and net profit per quintal Rs.481. The Cost Benefit Ratio comes to about 1:2.51. It is definitely an encouraging return to the farmers only within five months.

Conclusion: Large amount of profit share is going to whole sale and retail market and small amount of in producer level. Government should take necessary steps to check high price difference in different marketing channel for the betterment of farmer as well as consumer.

Keywords: Cultivation, Production, Marketing

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I. Introduction

India stands second larger producer of onion in the world, next only to China. At least 175 countries grow onions. It is used either in raw form or in dehydrated form to add flavour and taste to Indian dishes. Since onion has medicinal value, it is used in some pharmaceutical preparation and in folk remedies. Onion bulb is rich in minerals like phosphorous, calcium and carbohydrate. It also contains proteins and vitamin C. The area under onion in India was 804.600 thousand hectare and its production was 82 lack MetricTonnes in 2010-11. Presently, India has produced 19,415,425 tonnes of onion per year; harvested area is 1,199,850 hectare; and yield 16,182 kg of onion per hectare. It is grown in Rabi season of the year in West Bengal. The major onion productions are Maharashtra, Gujarat, Uttar Pradesh, Rajasthan, Orissa, Karnataka, Tamil Nadu, Madhya Pradesh and Bihar. Maharashtra ranks first in onion production with a share of (18%) in terms of productivity. Thakur (1971) conducted a study to assess the marketing supply and prices of onion in Ludhiana and Panipat markets of Punjab and Haryana. Subranmanyam (1996) studied post-harvest losses in horticultural crop in India. Barkadeet al. (2011) studied economics and marketing pattern of onion in Satara district of Maharashtra. Maity and Sharangi (2013) studied the supply chain management of onion in India. Mehedi et al. (2014) analysed the marketing channels and post-harvest practices of onion in Bangladesh. However, those are not meticulous and thematic to this experimental observation.

Objective to study

To study economics of the production of onion; ensuring quantifiable improvement in production and maximum returns to the farmers by marketing pattern from onion cultivation is the objective of study herewith.

Justification of Research

December 12, 2019, when the price of onion has reached a record high Rs.140 per kg.in Kolkata in both wholesale and retail market (Datta2019), Bankura district is all set to supply 300 tonnes of the vegetable to

the market within a fortnight. Farmers have been able to cultivate onion in 12 blocks of the district and the price is expected to slide down a bit as soon as the produce hits the market. The domestic annual demand for onion in Bengal is 5.5 lakh metric tonnes. The price of the vegetable was hovering around Rs 100 per kg. However, the government has chipped in with subsidy to sell onions at Rs 59 per kg. in various markets across the state. The district had produced 1,500 tonnes of onion. The blocks that have grown good quantity of onion are Chhatna, Mejia, Gangajalghati, Saltora, Bankura I and Bankura II to name a few. In 2011, the state's onion produce catered only to 20 percent of the state's demand. Now, the state is able to meet nearly 50 percent of the demand, while the rest needs to be imported from Nasik, parts of Andhra Pradesh, parts of Karnataka and Bihar. Therefore, it is justified to study the cultivation, production and marketing management of onion in the district of Bankura.

II. Material and Methods

Area of Study

The district of Bankura is located in western part of the state of West Bengal in India. It is situated between 22° 38' - 23° 38' north Latitude and between 86° 36' - 87° 47' east Longitude. Damodar, Dwarakeswar and Kangsabati River along with their tributaries of which Gandheswari, Silai and Kumari deserve separate mention drain it. The district lies in sub-humid zone having total annual rainfall of 1423 mm. Bankura district in West Bengal was purposely chosen for the present study. Four backward blocks like Chhatna, Gangajalghati, Mejia and Saltora from the district were selected. Five backward villages were selected from the village list of each block. Accordingly, we have 20 selected backward villages. Five households were selected randomly from each village. From the above sample, 100 households were selected for detailed survey. Reference period for the study is the financial year 2018-19.

Material

Onion is semi perishable crop and subject to deterioration during storage, transportation and marketing. With an increasing population of the country, the demand of onion is also increasing day by day, which triggered the scientists to improve cultivation method for higher productivity, modern storage technique and marketing system. It has been found that farmers sold over two-third of onion just after harvest to the local traders in village market. The State West Bengal produces nearly 3.04 lakh tonnes onions only during the rabi season. The estimated demand is pegged at around 3.33 lakh tonnes. The shortfall of close to 29,000 tonnes is currently met through imports from Maharashtra and Karnataka (Roy2013). Nearly 15-17 tonnes of onion can be produced on a hectare. The rabi onions start coming into the market around February-March and is available till end of August. Once the stock of locally produced rabi onions gets deplete, post-August, onions from other states start flooding the local markets, thereby, pushing up prices. Seed rate of onion is 3 to 4 kg / acre. Farmer can expect a yield of 120 to 140 q/acre or 12 t to 14 t/ acre in 120 to 150 days after sowing. Average selling price of onion was Rs. 30 per kg as on Aug 18, 2019.

Methodology

Stratified random sampling procedure was adopted for selection of villages in onion cultivation. Four important onion-growing blocks of the district, namely Chhatna, Gangajalghati, Mejia and Saltora were purposively selected for the study. A sample of five villages from four blocks, i.e. 20 villages was selected for the study of onion cultivation. Further, it was decided to select a sample of 100 onion respondents from these selected onion-growing villages. A list of onion producing farmers from each selected villages was prepared, based on onion-cultivated land holding of nearly 1 acre. The primary data were collected by survey method with the help of pretested schedule of questionnaire through personal interview. The required primary data pertaining to cost, yield, prices and expenditure for the year 2018-19 were collected from selected onion growers. An in-depth interview was conducted. Data were collected from households, which were selected based on multistage random sampling. Four onion markets were selected purposively taking one primary and one secondary market from each block for the study. Hoarders, wholesalers and retailers were chosen randomly from primary and secondary /terminal markets from each block for collection of data/ information using survey method. Intermediary was not taken into consideration in calculating margin and profit because they act as a commission agent. The major items cost of cultivation were seeds, hired human labour, manure, bullock charges, fertilizer and rental value of land. Market price of input that was prevailing at the time of their use were considered for working out of cost of cultivation. The gross return was calculated on the basis of market price of the produce at the time when the produce is ready for sale. Net returns Rs. / ha. was calculated by deducting the cost of cultivation from the gross income.

Net Returns (Rs. / ha)

Benefit Cost Ratio = -----

Cost of Cultivation (Rs. / ha)

III. Result

Table 1- Cost and returns from onion production per quintal/acre 2018-19

Sl. No.	Cost items	Total production cost Rs. /Acre	Total production cost Rs. / acre in%
A	Variable cost	33000	76.75
1	Land preparation	5000	15.15
2	Seeds	3000	9.09
3	Manures	4000	12.12
4	Fertilizers	5000	15.15
5	Pesticides	3000	9.09
6	Irrigation	2000	6.06
7	Weeding and hoeing	3000	9.09
8	Harvesting and curing	3000	9.09
9	Repairs and maintaince	1000	3.03
10	Interest on variable cost	1000	3.03
11	Transportation and marketing cost	3000	9.09
B	Fixed cost	10000	23.25
1	Depreciation	1000	10
2	Rental value of land	8000	80
3	Land Revenue	500	5
4	Interest on fixed costs	500	5
C	Total cost of cultivation (A+ B)	43000	100.00
D	Returns Production in quintal / acre	135	-
E	Gross Return @ Rs. 800×135	108,000	-
F	Net Return acre(E – C)	65000	-
G	Cost of production per quintal/acre (C ÷ D)	319	-
H	Profit per quintal	481	-
I	Benefit cost Ratio (E ÷ C)	1:2.51	-

Source: Based on Field work (2018-19)

It is evident that percentage share of the total variable cost is Rs. 33,000 (i.e.76.75%) and fixed cost of production is Rs.10, 000 (i.e.23.25 %) to total cost of production per acre. The average net returns obtained by onion growers amounted to Rs.65, 000 per acre with gross returns of Rs. 108,000 per acre. The average yield per acre onion production is 135 quintal. The comes cost of production onion per quintal Rs.319 and net profit per quintal Rs.481. The Cost Benefit Ratio comes to about 1:2.51. It is definitely an encouraging return to the farmers only within five months.

Rate of onion enhanced in retailers' market (2018-19) @ Rs. /per kg for consumers

Apr.-May Jun-July Aug.-Sept. Oct.-Nov. Dec.-Jan.
10 -20 20 -30 30 -40 40 -50 60 >

Per quintal price spread of onion through different channels (2018-19)@Rs. /Quintal

Producer → Hoarder → Wholesaler → Retailer → Consumer
800 1000 3000 5000 6000

The hoarders, wholesalers and retailers are taking away the major share of consumer's price without investing any penny in the marketing process. The onion growers did not have any control over the market due to the absence of coordination and integration among themselves. Wholesalers buy and sell large quantities of farm products, usually in wholesale and terminal markets. It was also observed that the quantity of onion by this agency was very large compared to the retailers. All market activities come to an end with the retailers. Retailers buy and sell small quantities of product according to the demand of consumers in the area. Marketing efficiency was estimated by using below formula (Shepherd 1965, Acharya and Agarwal 2001).

$$ME = \frac{V}{I} - 1$$

Where, ME = Index of measuring efficiency, V= Value of goods sold (consumer price),
I = Total marketing cost

Marketing efficiency (ME) in marketing of onion

S.N.	Particulars	Marketing Channels			
		Hoarder	Wholesaler	Retailer	Consumer
1	Value of the produce sold (Consumers price Rs. Quintal)	1000	3000	5000	6000
2	Marketing cost Rs. quintal	100	200	300	200
3	Marketing efficiency	9	14	16	29

IV. Discussion

Small and fragmented holdings, risk factors in agriculture, high input cost, inadequate market access, fluctuating and unfavourable market has resulted in farming gradually becoming nonremunerative. There is lack of godown in market yard compared to the requirement. Farmers get very low proportion of the consumer's price (NABARD 2017). The services and infrastructure of the markets deserve much improvement. Farmers not equipped with market information, price movements and the like, thus becoming prone to exploitation by middlemen. Large amount of profit share is going to wholesale and retail market and small amount of in producer level. In long run that may be discourage the producer level for production. So, storage facility and transport facility should be improved in producer level to cut marketing channel. Government should take necessary steps to check high price difference in different marketing channel for the betterment of farmer as well as consumer. Market taxes/tolls and other charges should be within the limits of the farmers and intermediaries. Small marketing channel ensure the small amount of losses. So, Co-operative marketing system in this sector should be developed to ensure better price of onion for the farmers. Proper scientific methods should be developed in harvesting and post-harvest handling operating of the onion to prevent the huge losses and to maintain the quality.

V. Conclusion

In view of the major cost on labour, there is immediate need to develop the labour saving practices such as use of weedicides, improved tools for planting, harvesting etc. On the other hand, market intermediaries are accruing higher margin by in incurring less cost and services. The middlemen pocket the major share of consumers' rupees. Therefore, in order to regulate the expenditure on commission, transportation and packing, efforts should be made to develop necessary infrastructure for marketing of onion in the district. The study indicates that longer marketing channel gave lesser share to farmer than shorter channel. Government should introduce proper scientific method for post-harvest practices and co-operative market and market monitoring facility. Once we start producing the kharif onions, our overall production will improve and in the next three-to-four years, we will turn self-sufficient to meet our demand.

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