

Case Study

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Production and Marketing Efficiency of Non-notified Vegetable - A Case Study of Brinjal in Kalaburagi District of Karnataka

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ABSTRACT

The present study was conducted to find out the profitability of cultivation and marketing of brinjal in Kalaburagi district. Multistage random sampling design was used for selection of taluks, villages and cultivators. The study revealed that farmers incurred a total cost of ₹ 68,034 per acre of which variable costs accounted for 86.05 per cent. Expenditure on plant protection chemicals (35.50%), human labour.(19.94%) and chemical fertilizers (10.04%) were the major component of variable cost. This phenomenon calls for concerned efforts for dissemination of new technology for proper as well as judicious use of inputs with low cost. The cost of marketing incurred by the farmers including the expenditure on commission, transportation, packing, etc., was found to be ₹ 169/q. The commission charge (47.93%) was the major component of total cost of marketing followed by transportation, packing etc. Brinjal growers got less than 50 per cent price paid by the consumer, implying exorbitant margin (25.11%) accrued by market intermediaries involved in moving the produce of which retailer realised higher margin (14.27%). Further, suitable measures are needed to rationalise the rate of commission by way of imposing a ceiling on it and enforcing licensing of the private commission agents/commission agents-cum-wholesalers as well as keeping a watch on their transactions. Alternatively, it is suggested to develop farmers market/apnimandi/ryth bazar for vegetables in the state.

Keywords

Non-notified
Vegetable, Brinjal,
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Introduction

In the world, the important vegetable producing countries are China, India, USA, Turkey, Nigeria, Vietnam, Mexico and Egypt. India stands as the largest producer of vegetables after China, producing of about 13 per cent of world vegetable production. India

has about 7.50 million hectares of area under vegetable cultivation with a production of 97.50 million tonnes. Moreover, India ranks first in the production of cauliflower followed by onions and cabbage in the year 2017-18 (Annon, 2018). India can claim to grow the largest number of vegetable crops compared to any other country of the world and as many

as 61 annual and 4 perennial vegetable crops belonging to different groups, namely, solanaceous, cucurbitaceous, leguminous, cruciferous (Cole crops), root crops and leafy vegetables are grown in India in tropical, sub-tropical and temperate regions. Important vegetable crops grown in the country are potato, onion, tomato, brinjal, cabbage, cauliflower, okra and peas.

The production of vegetables being seasonal and face tremendous uncertainties on several counts. Further, vegetables are extremely perishable in nature and require speedy and efficient marketing. This gives rise to various problems to vegetable growers. High marketing cost, quantitative and qualitative losses at various stages, high level of price spread and unpredictable behaviour of prices are some problems. Low marketed surplus, market imperfections and poor infrastructural facilities add to these problems. Therefore, in the backdrop of the situation it becomes worthwhile to conduct studies on marketing of vegetables so as to identify remedial measures for better management and to earn higher returns from vegetable crops (Joshi, 2011). Major vegetable growing states of the country in were Uttar Pradesh (1457.2 thousand hectares area and 28316.4 thousand metric tonnes of production), West Bengal, Madhya Pradesh, Bihar, Maharashtra, Odisha, Gujarat, Chhattisgarh and Karnataka (483.2 thousand hectares area and 8394.1 thousand metric tonnes of production) (Annon., 2018).

Increase in production and improvement in the post-harvest handling of vegetables have great potential for improving the nutritional security of the rural and urban poor as well as to enhance the farmers' incomes. Brinjal is one of the vegetable, which is rich and comparatively cheaper source of vitamins and minerals. It is grown throughout the world, however, India, China, France, Italy, Spain, USA, Korea and Japan are the important

countries. India ranks second after China both in area and production in the World, accounting 23.3 per cent of the total brinjal production. Major brinjal producing states in the country are West Bengal, Orissa, Gujarat, Bihar, Madhya Pradesh, Chattisgarh and Karnataka.

Karnataka is one of the important brinjal producing state in the country producing 431.80 thousand tonnes. Cost of growing brinjal has increased considerably over past few years in this area. Efforts are made to improve the efficiency of production and to increase the yield. However, farmers are not the benefited mainly because of higher cost of inputs and inefficient marketing system. This can be achieved only by making the cultivation of this crop more attractive. Improving the marketing of this crop is a must because of the peculiar characteristics like the high degree of perishability, seasonality, bulky nature etc. This will lead to a host of marketing problems like concentration of trade in a few hands, high transportation cost, wide price fluctuations, etc. Besides, it was estimated from several studies that the amount spent by the producers towards the marketing of brinjal was more than 50 per cent of the cost of inputs used for raising the brinjal. Hence the study was designed to evaluate empirically the profitability of brinjal production in Kalaburagi district.

Materials and Methods

The multistage random sampling technique was adopted in design sample size. In the first stage, Kalaburagi district was purposively selected based on the highest area under brinjal. Similarly, in the second stage, three taluks will be selected based on potentiality and highest area under brinjal. In the third stage, 30 farmers growing brinjal were chosen at random, in view of spread out of vegetable

growers in different villages. Thus, the sample size constitute 30 for the study as a whole. Further, while selecting the villages in the selected taluks for identifying the potentiality as well as concentration of brinjal growers, experience of the officers of Horticulture/Agriculture/Marketing Departments at district/taluka level along with those of market intermediaries were taken by consultation.

For studying marketing aspects of brinjal, Kalaburagi market was chosen based on size of the market for brinjal. Further, 20 market intermediaries were chosen constituting five village merchants, five commission agents, five commission agent-cum wholesalers and five retailers and interviewed personally to elicit required information with the help of well-structured and pre-tested questionnaire. Tabular analytical technique with the help of percentages, averages and ratios were used to compute costs, returns, prices, sales, etc. of producer-seller as well as different market functionaries.

Results and Discussion

Cost and Return structure of Brinjal

The overall total cost of cultivation (Table 1) amounted to ₹ 68,034 per acre of which ₹ 58,542 (86.05%) was incurred on variable costs. Out of the total cost of cultivation, the cost on plant protection chemicals (35.50%) formed the major component followed by expenditure on human labour (19.94%) and chemical fertilisers (10.04%). Farmyard manure (6.61%) and seeds (3.27%) were the other important variable costs while rental value of land (11.76%) formed major cost of cultivation amongst fixed costs. It is worth noting that the magnitude of cost incurred on plant protection chemicals was higher than that of labour mainly due to severe incidence of pests and diseases.

On an average, farmers obtained per acre net returns of ₹ 75,989 with gross returns of ₹ 1,44,023. Further, the per quintal (Table 2) overall average net returns realised in brinjal production worked out to ₹ 260 with gross returns of ₹ 813 and total cost of ₹ 553, resulting in returns per rupee of investment of 1.47. However, net returns per quintal over variable cost (₹ 483) and cultivation cost (₹ 429) were found in Kalaburagi district.

Marketing cost of Brinjal

A perusal of Table 3 revealed that the marketing cost incurred by the farmers was ₹ 169 per quintal in the study area. Out of the total cost of marketing incurred by farmers, commission charges shared 47.93 per cent followed by cost on transportation (16.57%) and packing cost (12.43%) in the study area (Fig. 4.3). The per acre cost of marketing incurred by the farmers found to be ₹ 29,938 in Kalaburagi district. This was mainly due to abnormally high rate of commission charged by the commission agent/commission agent-cum-wholesaler, which is 10 per cent of the value of the produce sold. Since brinjal was not covered by the market legislation, the commission charged by the commission agent/ commission agent-cum-wholesaler was about 10 percent as against two per cent for notified commodities like potato.

Therefore, brinjal should be brought under notified commodity in the state for sale of vegetables particularly brinjal, so that the commission charges can be regulated and brought down for the benefit of the farmers. Further, lack of cheap and timely transportation facilities might be other reasons for higher transportation cost as expressed by majority of the farmers in the brinjal survey.

In order to regulate the expenditure on commission, transportation and packing, efforts should be made to develop the

necessary infrastructure for the marketing of vegetables in the state. Alternatively, it is suggested to develop the farmer's markets for vegetables.

Table.1 Costs and return structure of brinjal in Kalaburagi district (₹/acre)

SI. No.	Particulars	Unit	Qty.	Value (₹)
I.	Variable Cost			
1.	FYM	TL	1	4502 (6.61)
2.	Seedlings	Gms	180	2228 (3.27)
3.	Chemical Fertilizers	Kgs	425	6834 (10.04)
4.	PPC	Lt	20.25	24152 (35.50)
5.	Bullock labour	PD	4	1346 (1.97)
6.	Human labour	MD	49	13181 (19.37)
7.	Irrigation	₹	-	2023 (2.97)
8.	Maintenance and repairs	₹	-	446 (0.65)
9.	Interest on working capital @ 7% p.a	₹	-	3830 (5.63)
Sub-total (I)		₹	-	58542 (86.05)
II.	Fixed Cost			
1.	Land revenue	₹	-	30 (0.04)
2.	Depreciation	₹	-	440 (0.64)
3.	Rental value of land	₹	-	8005 (11.76)
4.	Interest on fixed capital @ 12% p.a	₹	-	1017 (1.49)
Sub-total (II)		₹	-	9492 (13.95)
III.	Total Cost (I+II)	₹	-	68034 (100)
IV.	Returns			
1.	Yield	Qts	-	177.15
2.	Sale price	₹/q.	-	813
3.	Gross return	₹	-	144023
4.	Net return	₹	-	75989

Note: Decimal values arerounded to its nearest value

Table.2 Cost of production of brinjal in Kalaburagi district (₹/Qtl)

SI. No.	Particulars	Value(₹)
A.	Costs	
1.	Variable costs	330
2.	Fixed costs	54
3.	Cultivation costs	384
4.	Marketing costs	169
5.	Total costs	553
B.	Returns	
1.	Gross return	813
2.	Net return over	
i.	Variable costs	483
ii.	Cultivable costs	429
iii.	Total costs	260
3.	Returns per rupee of Investment	1.47

Note: Decimal values are rounded to its nearest value

Table.3 Marketing costs incurred by brinjal producers (₹/Qtl)

SI. No.	Particulars	Value(₹)
I.	Transactions	
1.	Sold quantity (q)	177.15
2.	Sale price (₹/q)	813
3.	Net price received (₹/q)	644
4.	Total sale value	144023
II.	Costs	
1.	Packing cost	21 (12.43)
2.	Loading and unloading costs	12 (7.10)
3.	Cost of transportation	28 (16.57)
4.	Commission charges	81 (47.93)
5.	Hamali charge	12 (7.10)
6.	Market cess	12 (7.10)
7.	Weighment cost	2 (1.18)
8.	Other expenses	1 (0.59)
Total cost		169 (100.00)
Total marketing cost (₹/acre)		29938

Table.4 Costs, margins and price spread in marketing of brinjal

SI. No.	Particulars	Price/Per cent
I.	Sale price of (₹/q.)	
1.	Farmer at farm level	644
2.	Farmer at market level	813
3.	Commission agent-cum-wholesaler	991
4.	Retailer or consumer	1276
II.	Marketing cost of (%)	
1.	Producer	13.24
2.	Commission agent-cum-wholesaler	3.12
3.	Retailer	8.06
4.	Total	24.42
III.	Profit margins of (%)	
1.	Commission agent-cum-wholesaler	10.84
2.	Retailer	14.27
3.	Total	25.11
IV.	Price spread (%)	49.53
V.	Producer's share in consumer's rupee (%)	50.47

Note: The percent figures are to the consumer price

Producer's Share in Consumer's Rupee

A perusal of Table 4 clearly indicated that producer's share in consumer's rupee was found to be 50.47 per cent in the market. It is worth noting that out of the price spread (49.53%) in the overall study area, was found to be marginally lower in total marketing cost (24.42%) compared to total margins (25.11%) of different market functionaries. However, commission agent-cum-wholesaler with minimum cost of marketing (3.12%) realised higher margins (10.84%). Whereas, retailers realised highest margins (14.27%) with highest cost of marketing (8.06%). It is importance to note that the percentage of margins realised by the different market intermediaries were higher than their cost incurred in the marketing of brinjal. Amongst the market intermediaries, share of the retailers in the marketing margin was higher than other intermediaries. This might be accredited to the very fact that retailers often incurred losses due to wastage in handling,

spoilage with passage of time, price fluctuations, etc. leading in higher marketing cost and risk in handling. Amongst the wholesalers, it is interesting to note that the commission agent-cum-wholesalers/commission agents annexed exorbitantly higher net margin disproportionate to their cost incurred within the marketing process largely due to higher commission charged (10 per cent of the value of the produce sold). The margins realised by these commission agents appears to be unreasonable as they don't take title to the goods and bear risk of handling/marketing.

In conclusion the present study leads to a logical conclusion that there exists vast scope for increasing profit from brinjal cultivation. However, cost of human labour, fertilizers and plant protection chemicals cause considerable erosion in the profit margin to farmers. Therefore, appropriate extension method may be adopted to educate the farmers on optimum use of inputs. Further,

there is an urgent need for subsidy on fertilizers and plant protection chemicals to encourage brinjal production when the market price falls below the cost of production. Brinjal should be brought under notified commodity in the state in addition to developing local markets within the state for sale of vegetables, so that the commission charges can be regulated and brought down for the benefit of the farmers.

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