

Economics of Okra Production in Bilspur District of Chhattisgarh

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ABSTRACT

The present study was conducted with a view to economics of okra production in Bilspur district of Chhattisgarh. The survey for this purpose was conducted in Bilha block of Bilaspur district of Chhattisgarh. Data were collected from 60 randomly selected farmers from four villages for the year 2013-14. Primary data were collected through personal interview with the help of a pre-structured schedule. The major findings of this study revealed that the on an average the cost of cultivation of okra was found Rs.38191.00 per hectare. Overall on an average the cost of production okra was observed as 314.77 respectively. The estimated marketable surplus with marginal, small, medium, large farmers was 95.39,95.21,96.41,95.90 per cent for okra respectively. In view of findings study suggested that the varieties capable of resisting disease and pest should be grown. Extension agencies should provide information on new varieties and package of practices as well as procedures of standardization and grading of produce and their benefits. Horticultural crop produces cooperative societies should be formed for better performance and achievement. Some specific minimum prices should be declared for vegetables to ensure benefit for the producers.

Key words *Cost of Production, Cost Concepts and Marketable surplus*

Vegetables are important constituents of Indian agriculture and nutritional security due to their short duration, high yield, nutritional richness, economic viability and ability to generate on-farm and off-farm employment. India is the second largest producer of fruits and vegetables in the world. Total area under horticultural crops is 21.83 million ha and production is 240.53 million t. Fruits and vegetables together contribute about 92% of the total horticultural production in the country. The vegetable production in India has touched a new height in recent years, placing it as the second largest producer of vegetables in the world, next only to China (Kumar *et al.*, 2005; Kumar *et al.*, 2004 a&b). Their demand is expected to grow further, requiring the production of 185 million

tonnes by 2011-12 (Singh *et al.*, 2004).

India is the second largest producer of vegetables, next only to China, covering an estimated area of 5.9 million hectares with a production of 90.8 million tonnes. In the world, India occupies first position in the production of cauliflower, brinjal and pea, second in onion and third in cabbage (Pandey, 2004).

India ranks first in production of okra in the world (73% of world production) and second in other vegetables such as brinjal (27.55%), cabbage (13%), cauliflower & broccoli (36%), onion (19.90%), potato (13%) and tomato (11%). The State is contributing about 4 % of the total production of okra in the country. It produces about 0.25 m. MT of okra from an area of 0.03 m. ha. with productivity of 9.9 MT/ha. The major okra producing belts in the state are Raipur, Durg and Rajanandgaon.

Chhattisgarh produces 5.94 million tonnes of vegetables from 0.59 m.ha. area and accounted 2.47 % of vegetables production in the country. The major share of vegetables production and fruits was 71.49 and 26.41 percent respectively to the total Horticultural crops. The major vegetables grown in Bilaspur district of Chhattisgarh are brinjal, tomato, cabbage, cauliflower, okra. Bilaspur district covers 7.04 percent share in total vegetable area in Chhattisgarh.

It is not important just to produce vegetables, but it must be produced efficiently and marketed successfully. It is necessary to improve the marketing system to aid development. A study of the vegetable marketing system is necessary to understand the complexity involved and to identify bottleneck with a view to provide efficient services in transfer of farm produce and input from producers to consumers. An efficient marketing system minimizes costs and benefits in all sections of society. Keeping in-view the economic importance of vegetables "Economics of Okra Production In Bilaspur District of Chhattisgarh" was undertaken for the present study.

Table 1. Economics of okra on different size groups of farms**(Rs./ha)**

S. No.	Input cost	Farm Size				Average
		Marginal	Small	Medium	Large	
1	Family human labour	5916.67 (18.59)	4651.92 (12.85)	3456.25 (8.61)	3084.62 (7.09)	4118.42 (10.78)
2	Hired human labour	2494.79 (7.84)	6034.62 (16.67)	9556.25 (23.79)	10557.69 (24.28)	7616.67 (19.94)
	Total human labour	8411.46 (26.42)	10686.54 (29.52)	13012.5 (32.39)	13642.31 (31.37)	11735.1 (30.73)
3.	Bullock labour	1200 (3.77)	0 (0)	0 (0)	0 (0)	140 (0.37)
4	Machine power	0 (0)	1630.11 (4.50)	1750 (16.47)	1903.85 (4.38)	1521.82 (3.98)
5	Seed cost	9312.5 (29.25)	9653.85 (26.67)	10625 (26.46)	12607.69 (28.99)	10363.28 (27.13)
6	Manure & Fertilizer	11590.97 (36.41)	12096.54 (33.42)	12211.88 (30.41)	12411.54 (28.54)	12122.36 (31.74)
7	Plant protection	152.53 (0.48)	828.85 (2.29)	962.5 (2.39)	1030.77 (2.37)	829.19 (2.17)
8	Irrigation charges	229.34 (0.72)	238.46 (0.66)	418.75 (1.04)	607.69 (1.39)	355.59 (0.93)
9	Land revenue	12 (0.04)	12 (0.03)	12 (0.03)	12 (0.03)	12 (0.03)
10	Interest on working capital	926.9 (2.91)	1054.03 (2.91)	1169.77 (2.91)	1266.47 (2.91)	1112.38 (2.91)
	Total input cost	31835.7 (100.00)	36200.38 (100.00)	40162.4 (100.00)	43482.32 (100.00)	38191.72 (100.00)

Note: Figures in parentheses indicate percentage to total.

MATERIAL AND METHOD

Out of 27 district of Chhattisgarh, Bilaspur district is selected purposely for the study. Out of 7 block of Bilaspur district, bilha block has been selected purposively from which villages mopka, sendari, dhuma, kachhar have been further selected randomly. A sample of 60 respondents is selected by using probability proportional to size techniques method subject to condition that at least 5 respondents would be included on sample from each of four categorie's of farms i. e. marginal (less than 1.0 ha.), small (1.0 < 2 ha.), medium (2 < 4 ha.) and large farmers (above 4 ha.)

RESULTS AND DISCUSSION

Economics of okra

Table 1 clearly shows that the cost of cultivation per hectare of okra was higher on large farms as compared to marginal farms.

It was noticed that the average per hectare cost of cultivation of okra worked out to Rs.38191.72. The cost of cultivation in case of large farm was higher (Rs.43482.32) as compared to marginal farms (Rs.31835.7), small farms (Rs.36200.38) and medium farms (Rs.40162.4). Among different input operation on an average, the per hectare cost was observed highest for seed

Table 2. Per hectare yield, value of output and cost of production per quintal of okra

S. No.	Particular	Farm Size				Average
		Marginal	Small	Medium	Large	
1	Input cost (Rs.)	31835.7	36200.38	40162.4	43482.32	38191.72
2	Yield (qt/ha.)	90.19	108.08	132.82	151.15	121.33
3	Price (Rs./ qt)	900	900	900	900	900
4	Value of production(Rs.)	81171.2	97272.2	119538.2	136035.02	109197.11
5	Cost of production(Rs./qtl)	352.98	334.94	302.38	287.67	314.77

Rs.10363.28 followed by manure and fertilizer Rs.12122.36, total human labour Rs. 11735.1, machine power Rs.1521.82, bullock labour Rs.140, irrigation charges Rs. 355.59, plant protection Rs.829.19 and land revenue Rs.12 respectively. The cost of cultivation per hectare showed a rising trend with the rise in the size of farms. It was due to the fact that the large farmers incurred more expenditure on modern farm inputs.

Yield, value of output and cost of production per quintal

The yield, value of output per hectare and cost of production per quintal of okra on the sample farms have been worked out in Table 02. It indicates that the average yield per hectare of okra came to 121.33 quintals on the sample farms.

Overall cost of production of okra worked out to be Rs.314.77 per quintal on over all farm, being Rs.352.98, Rs.334.94, Rs.302.98, Rs.287.67 on marginal, small, medium, and large farm size respectively. It decreased with the increased in the size of farms due to higher yields in return to the cost of cultivation on the large farms. The average

value of output per hectare came to Rs.109197.11. The value of output per hectare came to Rs.81171.2, Rs.97272.4, Rs.119538.2 and Rs.136035.21 on marginal, small, medium and large farm size respectively. The higher value of output on large was associated with the higher expenditure incurred on modern farm inputs.

Measures of farm profit

The values of net income, family labour income and farm business income per hectare on the sample farms of different size groups have been worked out in the Table 03. It clearly indicates that, on an average the value of net income, family labour income and farm business income per hectare came to Rs.71005.39, Rs.75123.81 and Rs.76236.19, respectively, on the sample farms of different sizes. The average input-output ratio in okra came to 1:2.85 on the sample farms.

Cost and returns on the basis of cost concept

The Cost and returns on the basis of cost concept in the production of okra have been

Table 3. Cost and return of okra on the sample farms for different group of farms

S. No	Particular	Farm Size				Average
		Marginal	Small	Medium	Large	
1.	Input cost (Rs)	31835.7	36200.38	40162.4	43482.32	38191.72
2.	Output value (Rs/qt)	81171.2	97272.4	119538.2	136035.21	109197.11
3.	Net income (Rs)	49335.5	61071.62	79375.8	92552.89	71005.39
4.	Family labour income(Rs)	55252.17	65723.54	82832.05	95637.51	75123.81
5.	Farm business income(Rs)	56179.07	66777.57	84001.82	96903.98	76236.19
6.	Input –output ratio	1:2.55	1:2.69	1:2.98	1:2.90	1:2.85

Table 4. Break-up of total cost, cost concept wise income over different cost in okra

Particulars	Farm Size				Average
	Marginal	Small	Medium	Large	
	(Rs./ha)				
A. Break-up of cost					
a. Cost A	25937.03	31548.46	36706.15	40397.7	34075.24
b. Cost A1	25937.03	31548.46	36706.15	40397.7	34075.24
c. Cost B	35937.03	41548.46	46706.15	50397.7	44075.24
d. Cost C	41853.7	46200.38	50162.4	53482.32	48193.66
B. Income over different cost					
a. Income over cost A	55234.17	65723.94	82832.05	95637.51	75121.87
b. Income over cost A1	55234.17	65723.94	82832.05	95637.51	75121.87
c. Income over cost B	45234.17	55723.94	72832.05	85637.51	65121.87
d. Income over cost C	39317.5	51072.02	69375.8	82552.89	61003.45

presented in the table 04. It is evident from table that, the per hectare cost-A, cost-B and cost-C at the overall level were Rs.34075.24, Rs.44075.24 and Rs.48193.66 per hectare, respectively on the sample farms. The average income per hectare over cost-A, cost-B and cost-C were worked out to Rs.75121.87, Rs.65121.87 and Rs.61003.45 respectively. The income over different costs also increased with the increase in the farms size because of higher output in relation to total input cost.

Marketable Surplus:

Okra is highly perishable in nature they cannot be stored at household level for a longer period without losses. Lack of infrastructural facility is another reason that forces farmers to sell their produce in the market immediately after their harvest. Table 05 clearly reveals that the estimated marketable surplus with marginal, small, medium, large farmers was 95.39,95.21,96.41,95.90 per cent for okra respectively

Table 5. Marketable surplus of okra of sampled households

S. No.	Particulars	Farm Size				Average
		Marginal	Small	Medium	Large	
		(In quintal per farm)				
1.	Total quantity produced (qty)	24.12 (100.00)	28 (100.00)	41.88 (100.00)	50.75 (100.00)	35.98 (100.00)
2.	Quantity paid for wages	0.64 (2.65)	0.82 (2.93)	0.92 (2.19)	1.33 (2.62)	0.59 (1.64)
3.	Quantity used for home	0.47 (1.95)	0.52 (1.86)	0.58 (1.38)	0.75 (1.48)	0.57 (1.58)
4.	Total quantity Utilized	1.11 (4.60)	1.34 (4.79)	1.5 (3.58)	2.08 (4.09)	1.47 (4.09)
	Marketable Surplus	23.01 (95.39)	26.66 (95.21)	40.38 (96.41)	48.67 (95.90)	34.52 (95.94)

Note: Figures in parentheses indicate percentage to total quantity produced

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Received on 27-08-2015

Accepted on 31-08-2015