RESEARCH PAPER

Economics of production of capsicum in Akola district

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ABSTRACT

Chilli (*Capscicum annuum* L.) is most widely used and universal spice of India. The study was conducted in Akola district in greenhouse and open condition. Total 120 farmers were selected randomly as sample size. Economic analysis of data indicated that cost C at overall level was found to Rs. 1,25,260. Net returns over cost C was Rs. 2,73,388 and input-output ratio at cost C was 3.11.

KEY WORDS : Spice, Chilli, Cost of cultivation, Economics of production

Capsicum (*Capsicum annuum* L. var. grossumsendt) is also called as bell pepper or sweet pepper and is one of the most popular and highly remunerative annual herbaceous vegetable crop. India contributes one fourth of world production of capsicum with an average annual production of 0.9 million tons from an area of 0.885 million hectare with a productivity of 1266 kg per hectare. The Capsicum generally seen in India and Maharashtra under open condition through the same can be cultivated under green house condition for boosting productivity. In Maharashtra it is cultivated in Pune, Thane, Sangli, Kolhapur districts and some other few districts. It is likely to increase in the future because of heavy demand. In Vidarbha, Capsicum is grown in neglected areas. It is one of the important cash crops grown under open condition and green house condition.

Objectives :

– To estimate cost of cultivation of capsicum

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– To estimate profitability of capsicum.

METHODOLOGY

The study was undertaken purposively in Akola district because the highest area under capsicum in Akola district. Major share in arrival of capsicum in Akola vegetable market is from Patur, Barshitakli taluka and these are selected for study.

Method of collection of data :

The data was collected by survey method with the help of special design questionnaire.

Analysis of data :

Simple tabular analysis was done in respect of all objectives taken :

Sr. No.	Land holding	Green house condition	Open condition		
		Drip irrigation system	Drip irrigation system	Traditional (furrow) irrigation system	Over all
1.	Small	0	5	20	25
2.	Medium	5	15	20	40
3.	Large	25	15	15	55
4.	Total	30	35	5	120

Table A : Distribution of the cultivations

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Table 1 : Per ha. cost of cultivation of capsicum

Sr. No.	Particular	Green house condition — Drip irrigation system		Open condition — Traditional (furrow) irrigation system			Open condition — Drip irrigation system			Overall
		Medium	Large	Small	Medium	Large	Small	Medium	Large	
1.	Cost 'A'	63362.56 (46.32)	70259 (47.1)	55263 (48.60)	59513 (43.75)	64755 (49.62)	54453 (49.96)	58093 (49.73)	62620.23 (50.47)	61037 (48.72)
2.	Cost 'B'	134987.56 (98.68)	147416 (98.82)	111683 (98.23)	120093 (93.37)	128598 (98.57)	106986 (98.15)	114865 (98.33)	122170.23 (98.47)	123350 (98.48)
3.	Cost 'C'	136787.56 (100)	149172 (100)	113690 (100)	122080 (100)	130458 (100)	109004 (100)	116810 (100)	124066.23 (100)	125260 (100)

Table 2 : Profitability and incomes of capsicum

Sr. No.	Particular	Green house condition — Drip irrigation system		Open condition — Drip irrigation system			Open condition — Traditional (furrow) irrigation system			Overall
		Medium	Large	Small	Medium	Large	Small	Medium	Large	
1.	Production per ha (qtl.)	406.25	410.31	246.40	265.00	281.25	170.31	165.00	188.50	263.30
2.	Gross income per ha (Rs.)	650000.00	656500.00	357280.00	384250.00	407813.00	238438.00	231100.00	263900.00	389392.00
3.	**Per ha cost of cultivation at**									
	Cost 'A'	63363.00	70259.00	55263.00	59513.00	64735.00	54455.00	58093.00	62620.24	61037.00
	Cost 'B'	134988.00	147416.00	111683.00	120093.00	128598.00	106985.00	114865.00	122170.24	123350.00
	Cost 'C'	135788.00	149172.00	113690.00	122080.00	130468.00	109004.00	116810.00	124066.24	125260.00
4.	**Per ha net return at**									
	Cost 'A'	586637.00	586241.00	302017.00	324737.00	343077.00	183984.00	172907.00	6262027	337610.00
	Cost 'B'	515012.00	505084.00	245597.00	264157.00	279215.00	131451.00	116135.00	141729.77	275298.00
	Cost 'C'	513212.00	507328.00	243390.00	262170.00	277345.00	129433.00	114190.00	139833.77	273388.00
5.	Gross return per qtl.	1500.00	1600.00	1450.00	1450.00	1450.00	1400.00	1400.00	1400.00	1468.80
6.	Cost of production per quintal (Rs.)	336.71	363.56	461.40	460.68	463.88	640.03	707.94	658.18	511.55
7.	Net return per qtl.	1263.30	1236.40	988.60	989.32	986.12	759.97	692.06	741.82	957.20
8.	**Input output ratio at**									
	Cost 'A'	10.26	9.34	6.47	6.46	6.50	4.38	3.98	4.21	6.42
	Cost 'B'	4.82	4.45	3.20	3.20	3.17	2.23	2.01	2.16	3.15
	Cost 'C'	4.75	4.40	3.14	3.15	3.19	2.19	1.98	2.13	3.11

Cost concept :
 – Cost A : It included the expenditure on seed manures and fertilizers hired human labour, bullock labour, land revenues, irrigation charges, machinery charges, interest on working capital and depreciation on farm implements.
 – Cost B – cost A + rental value of owned land + interest on owned fixed capital (excluding land).
 – Cost – cost B + i mputed value of family labour.

Profitability :
 B:C Ratio:- Gross returns/Cost C

ANALYSIS AND DISCUSSION

The per ha. cost of cultivation of capsicum calculated and presented in Table 1.

From the above results, it is observed that cost A, B and C per hectare from capsicum cultivation were positively correlated with size of holding different conditions like green house condition and open condition and different irrigation systems.

The per ha. profitability and incomes of capsicum calculated and presented in Table 2.

It is noted from the table that, the per hectare total yield obtained from capsicum 263 qtls. at the overall level. The gross income received from capsicum was 389392.00 at the overall. The per hectare net profit was Rs. 273388.00 at the overall level.

The B:C ratio which indicates the profitability of investment was observed to be 3.11 at the overall level. At the cost C the B:C ratio was greater than unity indicating that the cultivation of capsicum was profitable when both direct and indirect costs were taken into account. Similar work related to the present investigation was also carried out by

Conclusion :
 – Per hectare cost of cultivation was highest in crop grown in greenhouse cultivation followed by open condition under drip irrigation system and lower in traditional irrigation system. Whereas, per quintal cost of production was highest in open condition under traditional irrigation system in medium size group.
 – Capsicum cultivation under green house condition was estimated more gross income than open condition.
 – Comparatively healthier and bigger size of fruits was obtained from green house condition under drip irrigation system and hence, it received better market

price than the open condition under drip and traditional irrigation systems.
 – Gross return and net return on the basis of cost C is highest in green house condition under drip irrigation system followed by open condition under drip irrigation system and traditional (furrow) irrigation system.
 – Input out ratio was found to be highest in green house condition under drip irrigation system in almost all size of holding of holding as compared to open condition under drip and traditional (furrow) irrigation systems.

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