Analysis of Vegetable Crops at DKSCARS, Bhatapara, Chhattisgarh

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ABSTRACT

The study has been made to examine the economics of major kharif season vegetables crops at DKS College of Agriculture and Research Station, Bhatapara (Borsi farm). The study is confined to two major kharif season vegetables crops namely cabbageand potato. The experiment is laid out in randomized block design with 10 treatment, comprising of three drip irrigation level and three fertigation level and the treatment are replicated are thrice. The Benefit: Cost ratio is observed to be highest (1:2.83) in cabbage crop at all treatments, while it is lower (1:1.82) in potato crops at all treatments on farms. It was also observed that cost of cultivation of cabbage were observed Rs. 47,235 per hectare while for potato crops it was Rs.1,06,794 per hectare. It means cabbage crops need low input cost as compare to potato crops.

Keywords: *Vegetables, irrigation, fertigation*

INTRODUCTION

High risk involves in the production of vegetables owing to its perishable nature. The progressive farmers are in a position to take the decision towards the cultivation of vegetables but others are not due to lack of adequate inputs and cost benefit analysis information. If some information such as cost of cultivation, cost of production, input-output ratio, and marketing cost is available to the farmers, then the production of vegetable crops can be encouraged in the Bhatapararegion for benefit of the farmers. In the light of above, the present study is taken up to analyze and examineeconomicsof vegetable crops under Indira Gandi Krishi Vishwavidhyala funded project SWE-04 in 2016-17 at DKS College of Agriculture and Research Station, Bhatapara (Borsi farm).

METHODOLOGY

Effect of different level of irrigation and fertigation on vegetable crops is going on at DKS College of Agriculture & Research Station, Bhatapara in the financial year2016-17. The study was taken in one of the selected fields of borsi farm. Two crops were considered to include in the study namely cabbage and potato. The experiment is laid out in randomized block design with 10 treatment, comprising of three drip irrigation level and three fertigation level and the treatments are replicated are thrice.

RESULT AND DISCUSSION

Economic analysis of cabbage crops at various levels of irrigation and fertigation

It was observed from Table-1 that on average basis cabbage productivity was 194 quintal per hectare at different irrigation + fertigation level in the farm in which maximum yield (230.98 qt/ha.) obtained at 80 % of irrigation + fertigation level. The average gross return from cabbage crop was Rs.1,80,948 per hectare and on an average basis cost of cultivation of cabbage were observed Rs. 47,235 per hectare in which fertilizer cost is Rs. 31094 per hectare. It is 65 % of total cost of cultivation and remaining 35 % cost was born on cost of seedlings, spray materials, labour charges and depreciation of equipments. The cost of production was observed Rs. 243.45 per quintals and net return from cabbage crop was Rs.1,33,712 per hectare. The Benefit: Cost ratio was observed 1: 2.83 for cabbage crop.

Table-2 revealed cost benefit analysis of potato crops. It was observed that on average basis potato productivity was 194.5 quintal per hectare at

different irrigation + fertigation level in the farm in which maximum yields (205.32 qt/ha.) obtained at 80 per cent of irrigation + fertigation level. The average gross return from potato crop was Rs.1,94,528 per hectare and on an average basis cost of cultivation of potato were observed Rs. 1,06,794 per hectare in which fertilizer cost is Rs. 31894 per hectare. It was about 30 per cent of total cost of cultivation and remaining 70 per cent cost was born on cost of tuber, spray materials, labour charges and depreciation of equipments. The cost of production was observed Rs. 551.74 per quintal and net return from potato crop was Rs. 87,734 per hectare. The Benefit: Cost ratio was observed 1: 1.82 for potato crop.

Table-1
Cost economics of cabbage crop

Treatments	Yield (q/ha)	Gross Return (Rs. /ha.)	Cost of Cultivation (Rs./ha.)			Cost of Prod (Rs./q)	Net Return Rs./ha.)	B:C ratio
			Cost of Seedlings + Spray materials + Labour cost + Interest & Depreciation on Drip system	Fertilizer Cost (Rs. /ha.)	Total Cost (Rs./ha.)			
I1F1	204.32	204320	17200	26928	44128	215.97	160192	1:3.63
I1F2	195.58	195580	17200	33660	50860	260.05	144720	1:2.85
I1F3	187.15	187150	17200	40392	57592	307.73	129558	1:2.25
I2F1	230.98	230980	17200	26928	44128	191.05	186852	1:4.23
I2F2	200.89	200890	17200	33660	50860	253.17	150030	1:2.95
I2F3	190.76	190760	17200	40392	57592	301.91	133168	1:2.31
I3F1	201.74	201740	17200	26928	44128	218.74	157612	1:3.57
I3F2	192.34	192340	17200	33660	50860	264.43	141480	1:2.78
I3F3	182.26	182260	17200	40392	57592	315.99	124668	1:2.16
I4	159.12	63648	16500	8000	24500	153.97	39148	1:1.60
Average	**194.07**	**180948**	**17103.7**	**31094**	**47235.5**	**243.45**	**133712.6**	**1:2.83**

Table-2
Cost economics of potato crop.

Treatments	Yield (q/ha)	Gross return	Cost of Cultivation			Cost of prod. (Rs./q)	Net return	B:C ratio
			Tubers + Spray materials + Labour cost + Interest & Depreciation on Drip	Fertilizer cost	Total cost			
I1F1	191.76	191760	75000	26928	101928	531.54	89832	1:1.88
I1F2	231.98	231980	75000	33660	108660	468.40	123320	1:2.13
I1F3	201.89	201890	75000	40392	115392	571.56	86498	1:1.75
I2F1	188.15	188150	75000	26928	101928	541.74	86222	1:1.85
I2F2	205.32	205320	75000	33660	108660	529.22	96660	1:1.89
I2F3	196.58	196580	75000	40392	115392	587.00	81188	1:1.70
I3F1	183.26	183260	75000	26928	101928	556.19	81332	1:1.80
I3F2	202.74	202740	75000	33660	108660	535.96	94080	1:1.87
I3F3	193.34	193340	75000	40392	115392	596.83	77948	1:1.68
I4	150.26	150260	74000	16000	90000	598.96	60260	1:1.67
Average	**194.5**	**194528**	**74900**	**31894**	**106794**	**551.74**	**87734**	1:1.82

CONCLUSION AND SUGGESTIONS

The Benefit: Cost ratio is observed to be highest (1:2.83) in cabbage crop at all treatments, while it is lower (1:1.82) in potato crops at all treatments on farms. It was also observed that cost of cultivation of cabbage were observed Rs. 47,235 per hectare while for potato crops it was Rs.1,06,794 per hectare. It means cabbage crops need low input cost as compare to potato crops.

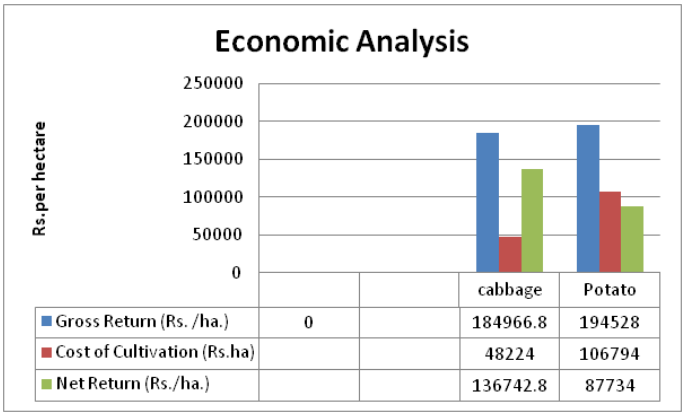

Fig:1 Comparative cost benefit analysis of cabbage and potato crops

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