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Short Communication

Production and Marketing of Cucumber Crop in Chiraigaon Block of Varanasi, Uttar Pradesh

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***Key words*:** Cost of cultivation, Gross income, Net income, Marketing channels

India stands the second largest producer of vegetables in the world just after China. It contributes over 14.6 per cent of the world's vegetable production with an annual production of 185 million metric tones within an area of 16.2 mha. Out of this lady's finger 5.13 m ha, cucumber 1.09 m ha, and bitter gourd 0.99 m ha with production the 6.17 MT, 1.696 MT and 1.198 MT respectively [1]. West Bengal takes first rank in India with regards to area 29.545 lakh ha, production 14.9 lakh MT followed by Uttar Pradesh with an area and production 1256.27 thousand ha and 27703.83 thousand metric tonns respectively [1]. Vegetable production is a high cost and labor intensive which need a careful management of resources before allocating the area under these crops. The farmers who are interested to go for these enterprises should be well aware with different type of information about the enterprise like the total cost of particular vegetables, the operational cost, the gross and net returns they will get from this enterprise [2]. If farmers have such valuable information, then they can allocate a manageable area under these crops and achieve a desirable benefit from this enterprise [3]. In this sense, this study will help to farmers to made available all this information through which they will improve their socio-economic condition and policy making. Marketing is also equally important as production for any agricultural product [4]. Due to high perish ability and seasonality, efficiency of marketing operation is crucial in determining the profit of the producer on the one hand and level of satisfaction of a consumer on the other. It is essential to be very careful about the market of vegetable produce in which the negligence may cause not only wastage of resources but also dissatisfaction to the producer and consumer. In general, marketing cost of vegetables is higher than food grains. This point should also be taken care of by the financial institutions while advancing loan to the vegetable's growers. In Varanasi District total area and production of cucumber is 1220 ha and 61000 mt respectively. Where as in Chiraigaon block the total area under cucumber is 137 ha. The total production of cucumber in Chiraigaon block is 6550 mt. (Source: Department of Horticulture, Varanasi). Several studies on economic analysis of production and marketing of vegetables have been undertaken in the past [5-6]. The present study has been undertaken to analyze the economics of production and marketing of Cucumber in Chiraigaon block of district Varanasi, Uttar Pradesh.

The present study has been conducted if the Chiraigaon block of district Varanasi. Out of 141 villages in the bock, only two villages have been selected randomly for the present study. There were 300 farmers in the sample villages and 30 farmers including 20 marginal and 10 small farmers have been selected for the study. The information about the production and marketing of cucumber has been collected the sample farmers for the year 2019-20.

Cost of cultivation and return from cucumber

The cost of cultivation of cucumber has been given in (Table 1). It reveals that per ha. cost of cultivation of cucumber crop on sample farm was Rs. 109247 on marginal farms to 113283 on small farms. The cost B accounting major share as 59.72 percent on marginal farms and 68.22 percent on small farms. Among the variable input cost manure and fertilizer accounting highest proportion i.e., 14.93 percent on marginal farms and 16.33 on small farms. There was no any definite trend in the cost of variable inputs with the size of farms except hired human labor than increase with the increase in size of farms [7].

It reveals from (Table 2) that per hectare cost of cultivation for cucumber ranging between Rs. 109247 on marginal farms to Rs. 113283 on small farms, whereas per hectare production varied between 400 qt on marginal farms to 440 qt. on small farms. Average gross income, farm business income, family labor income and net income were estimated Rs. 400000 Rs. 348878, 334753 and Rs. 290753 respectively on marginal farms and Rs. 440000, Rs. 376841.60, 362717 and Rs. 326717 respectively on small farms [8]. Output input ratio was ranging between 3.88 on small farms to 3.66 oil marginal farms.

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Table 1 Per hectare distribution of cost of cultivation on input for cucumber crop

Particular	Marginal (0-1 ha)	Small (1-2 ha)
Hired Human labour	4800 (4.39)	12000(10.59)
Seed	6000 (5.49)	5800(5.11)
Tractor/ Machinery	8400 (7.68)	8400 (7.41)
Manure and Fertilizer	16320 (14.93)	18500 (16.33)
Irrigation Charge	4000 (3.66)	4200(3.70)
Plant Protection	10000 (9.15)	12220(10.78)
Repair and Maintenance	600 (0.54)	800 (0.70)
Interest on working capital	1002.40(0.91)	1238.40 (1.09)
Cost-A	51122.40 (46.79)	63158.40 (55.75)
Rental Value of Owned Land	14000 (12.81)	14000 (12.35)
Interest on Fixed Capital	125(0.11)	125 (0.11)
Cost -B	65247 (59.72)	77283 (68.22)
Family Human Labor	44000 (40.27)	36000 (31.77)
Cost -C	109247	113283

Table 2 Per hectare farm profit for cucumber crop on sample farms (Rs/ha)

Particulars	Marginal (0-1ha)	Small (1-2ha)
Cost –A	51122.40	63158.40
Cost- B	65247	77283
Cost –C	109247	113283
Total Yield	400q	440q
Gross income	400000	440000
Farm business Income	348878	376841.60
Family Labor Income	334753	362717
Net Income	290753	326717
Out-put input Ratio	3.66	3.88

Table 3 Per quintal price of cucumber in marketing channel-(Producer-Retailor-Consumer)

Particulars	Marginal (0-1ha)	Small (1-2ha)
Product of selling price	1000 (83.33)	1000(78.50)
Producer net selling price	920.50 (76.70)	942 (78.50)
Charge paid by Producers	119(9.91)	102 (8.50)
(i) Shorting Cost	5 (0.41)	4(0.33)
(ii) Packaging	2 (0.16)	2 (0.16)
(iii) Loading	7 (0.58)	7(0.58)
(iv) Transportation	25 (2.08)	20(1.66)
(v) Arhat Charge	80 (6.66)	69 (5.75)
Retailer Purchasing Price	1000 (83.33)	1000 (83.33)
Charge Paid by retailors/	29 (2.91)	29 (2.00)
(i) Transportation/	18 (1.50)	15 (1.25)
(ii) other Charges	11 (0.916)	9 (0.75)
Retailors Margins	115(9.58)	108 (9.0)
Retailor selling price	1200 (100)	1200 (100)

Marketing channels

There were two major marketing channels for disposal of cucumber in the study area. These channels were as listed below:

Channel - I Producer - Consumer
Channel - II Producer - Retailer - Consumer

The majority of marginal farmers were disposing of their produce through first channel. The details about marketing costs and net margins to the farmers following second channel are listed in (Table 3). It reveals from table 3 that per quintal marketing cost measured in different heads and share of production in the price paid by consumers. Price spread shows that producer's net receipt in the price paid by consumers varied between 76.70 percent on marginal from to 78.50 percent on small farms. The Charges paid by producers in heads of the shorting, packing, loading etc. accounting 9.91 percent on marginal farms 8.50 percent on small farms for Cucumber crop. Retailer bears minimum marketing charges in the marketing process and varied between 2.91 to 2.00 percent respectively. Despite bearing minimum marketing charges by retailer and get higher share in profit, ranging between 9.58 to 9.00 percent. Thus, producer net share in the price paid by consumer varied between 76.70 percent on the marginal farms to 78.50 percent on the small farms [9-10].

SUMMARY

The economics of production and marketing of cucumber grown by small and marginal farmers have been analyzed. The net income from cucumber crop was Rs. 290753 on small farms and Rs. 326717 on marginal farms. The producer-retailer-consumer was the major channel followed in the disposal of cucumber. The net market margin was 76.70 and 78.50 percent received by small and marginal farmers respectively. The present study has been carried out for analyzing the production and marketing of cucumber crop

grown by small and marginal farmers. The study is based on the information obtained from 30 farmers of Chiraigaon block of district Varanasi, Uttar Pradesh. The cost of cultivation of cucumber on both small and marginal farms have been estimated. Similarly, the marketing costs and margins realized by small and marginal farmers have been estimated.

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