

To Study about Production and Economics Analysis of Major Vegetable Crops in K.V.K Purnea (Bihar)

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ABSTRACT

The investigation was carried out by survey method in Krishi Vigyan Kendra, Jalalgarh purnea (Bihar) during year 2018-19. The per hectare total cost of cultivation was analysis and it shows that the highest cost per hectare in valued in potato cultivation (Rs.62806.28) followed by Tomato (Rs. 37755.92) green pea (Rs. 37103.28) and cauliflower (34514.89) variable cost directly associated with level of production and share of variable cost (cost A) was highest of the total cost in case of potato (76.23%) followed by green pea (89.63%) Tomato (52.27%) and cauliflower (43.27%). The average yield per hectare of potato, cauliflower, Tomato and green pea crops were achieved 236.67 Qtls, 194.67 Qts, 194.0 Qtls, and 90.67 Qtls. The return over per hectare for different vegetables. Showed that highest net return was obtained for potato (Rs.72526.88) followed by tomato (Rs. 56944.08) cauliflower (Rs.42855.11) and green pea (Rs. 41363.39). Input –Output analysis reflects that tomato crops is most remunerable among all four vegetable and fetched highest return of Rs. 3.75 on investment Rs. 1.0 followed by cauliflower (1:3.35), potato (1:2.99) and green pea (1:2.20) benefit cost ratio.

KEYWORDS: Production economics, vegetable crops, Farm business income, family labour income

INTRODUCTION

Weather is the instantaneous state of the atmosphere or sequence of state of the atmosphere with time, which can be defined as the condition of the atmosphere at any given time and place, climate on other hand is the average as well as variability of weather condition prevailing in an area. India is the second largest vegetable producer in the world next to China. In year 2018-19, the total production of vegetable was 230.50 million tones the area of 29.2 million hectare. Which was 170.50 million tons in year 2018-19 with area of 36.50 million hectare. India ranks first position in production of vegetables pea and cauliflower while it have second position in production of onion, cabbage, tomato and brinjal . In potato production, India has fourth position in the world. In India, vegetable constitutes 9-18% of the total food intake, which is low as compared to United States and Japan. Vegetable have becomes integral part of the balanced diet in all sections of the society. A wide ranges of them can be grown in different seasons of the year. The recommended vegetable consumption per capita per day is only around 180 gm in our country.

Method:-

A multistage random sampling techniques was adopted to select block, village and vegetable farmers Purnea district consist of development blocks i.e., Dagaruwa, Purnea East, Jalalgarh and Kasba was selected purposely for the present study. This block has performance in vegetable production occupied higher 7.92 percentage area under vegetable than

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other block of district purnea. A list of all the villages of block under taking Dagaruwa, Purnea East, Jalalgarh and kasba was engaged in vegetables cultivation specially (Tomato, Potato, Cauliflower and Green pea) was proposed. A list of all vegetable grower/farmers having of more than 36% area under vegetables crops for each of the selected block under taken in villages. The vegetable grower were than categorized in to three size group ie, marginal (0-1 ha.), small (1-2 ha.) and large (2 ha.-above). Out of this list 120 vegetable grower were finally selected randomly from the universe of Ten villages.

Result and Discussion:-

Economic and Farm Business Analysis: The highest average yield 326.67 q/ha was obtained through potato followed by 284.0 q/ha on tomato, 284 q/ha on cauliflower and 180q/ha through green pea crop. The highest net return over the cost among major vegetable came to Rs.11528.55 /ha on potato cultivation followed by Rs. 99896.22 /ha on the green pea crops cultivation Rs. 86844.08 /ha on Tomato, cauliflower and Rs. 61685.11 /ha cauliflower crops cultivation.

Cost and returns analysis of potato crops: The per hectare costs and return analysis of potato at different sample farms were competed (Table:1). Table 1, reveals that per hectare cost of cultivation of potato crops ranges between Rs. 68737.40 on marginal farms to Rs. 74098.16 on small farms, while it was Rs. 28353.36 on large farms. Whereas per

hectare production varied between 310.0 qtls. on marginal farms, 340.00 qtls on small farms and 360.0 qtls on large farms. Average gross income, net income, family labour income and farm business income were concluded as Rs. 336666.62, Rs. 262932.03, Rs. 265109.19 and Rs. 225037.56 . The input output ratio on sample farm was estimated 1:4.57 and it ranging from 1:4.5 ,on marginal farm 1:5.80 on small farm and 1:4.59 large farms.

Cost and returns analysis of Tomato crops: Per hectare costs and return analysis of tomato crops at different sample farms were computed (Table-2). Table-2 reveals that per hectare cost of cultivation of tomato crop ranges between Rs. 49073.11 large farm to Rs. 45739.09 marginal farms. Whereas per hectare production varied between 305.0 qtls on large farms, 290.0 qtls on small farms and 275.0 qtls on marginal farms. Average gross income, net income, family labour income and farm business income were concluded as note Rs. 34800, Rs. 300579.96, Rs. 303250.52, Rs. 313098.31 respectively. The input-output analysis revealed that tomato crops nearly three time benefit over cost which indicates that tomato is a remunerative vegetable crops.

Cost and returns analysis of Green pea crops: The per hectare costs and returns analysis of green pea crops at different sample farms were computed (Table-3), Table-3

reveals that per hectare cost of cultivation for vegetable green pea crop ranges between Rs. 42855.01 on marginal farms to Rs. 51858.13 on large farms, whereas per hectare production varied between 210.0 qtls on large farms, 195.0 qtls on small farms and 160.0 qtls on marginal farms. Average gross income, net income, family labour income and farm business income were conducted as Rs. 263200 Rs. 215296.10, Rs. 217568.94 and Rs. 225981.04 respectively. Input-Output ratio on sample farm was estimated 1:1 and in varied between 1:6.75 on large farm, 1:6.56 on small farms and 1:6.47 on marginal farms.

Cost and returns analysis for cauliflower crops: The per hectare costs and return analysis of cauliflower crops at different sample farms were computed (Table-4). It is obvious from the above table that per hectare cost of cultivation of cauliflower ranges between Rs. 42503.81 on marginal farms to Rs. 45939.07 on large farms. Whereas per hectare production varied between 310.0 qtls on large farms, 290.00 qtls exes on small farms and 275.0 qtls on marginal farms . Average gross income, net income, family labour income and farm business income were computed Rs. 291000.00, Rs. 246799.06, Rs. 249681.06 and Rs. 262463.69 respectively. Average input-output ratio on sample farm was obtained 1:6.56 and varied between 1:2.59 on large farm, 1:6.47 on small farms to 1:6.75 marginal farms.

Table-1: Per hectare cost and profit for potato crop on sample farm (Rs./ha) rate Rs. 1000/ quintals.

Particulars	Size group of farms			Overall average
	Marginal(0-1ha)	Small (1-2ha)	Large (2 ha. above)	
Cost A	56246.50	61705.54	66935.30	61629.11
Cost B	65623.43	71735.66	77313.36	71557.48
Cost C	68737.40	24098.16	78353.36	73729.64
Total yield	310.00	340	360.00	336.62
Gross Income	310000.00	340000.0	360000.00	336666.67
Net Income	241262.60	26597.84	281646.64	262937.03
Family Income	175639.17	268264.34	282686.64	265109.19
Family Business Income	185016.10	27705.54	293064.70	275037.56
Input-Output ratio	1:4.51	1:5.8	1:4.59	1:4.57

Table-2: Per hectare cost and profit for Totato crop on sample farm (Rs./ha) rate Rs. 1200/ quintals.

Particulars	Size group of farms			Overall average
	Marginal(0-1ha)	Small (1-2ha)	Large (2 ha.& above)	
Cost A	32699.32	34860.82	37144.91	34901.68
Cost B	42009.22	44831.07	47408.14	44749.48
Cost C	45739.03	47450.07	49073.11	47420.74
Total yield	275.00	290.00	305.00	290.00
Gross Income	330000.00	348000.00	366000.00	348000.00
Net Income	284260.97	300549.93	316926.89	300579.26
Family labour Income	287990.78	303168.93	318591.86	303250.52
Family Business Income	297300.68	313139.18	328855.09	313098.31
Input-Output ratio	1:7.21	1:7.34	1:7.46	1:7.34

Table-3: Per hectare cost and profit for green pea crop on sample farm (Rs./ha) rate Rs. 1400/ quintals.

Particulars	Size group of farms			Overall average
	Marginal(0-1ha)	Small (1-2ha)	Large (2 ha. above)	
Cost A	33377.35	37034.98	40644.55	37018.96
Cost B	39121.32	46244.98	50926.88	45431.06
Cost C	42855.01	48998.56	51858.13	47903.90
Total yield	160.00	195.00	210.00	188.00
Gross Income	224000.00	273000.00	294000.00	263200.00
Net Income	181144.99	224001.44	242141.87	215296.10
Family Income	184878.68	226755.02	243073.12	217568.94
Family Business Income	190622.65	235965.02	253355.45	225981.00
Input-Output ratio	1:5.23	1:5.57	1:5.67	1:5.49

Table-4: Per hectare cost and profit for cauliflower crop on sample farm (Rs./ha) rate Rs. 1000/quintals.

Particulars	Size group of farms			Overall average
	Marginal(0-1ha)	Small (1-2ha)	Large (2 ha. above)	
Cost A	19431.91	31762.95	34414.07	28536.31
Cost B	37549.81	41719.95	44687.07	41318.94
Cost C	42503.81	44164.95	45934.07	44200.94
Total yield	275.00	290.00	310.00	291.00
Gross Income	275000.00	290000.00	310000.00	291000.00
Net Income	232496.19	245835.05	264065.93	246799.06
Family Income	237450.19	248280.05	265312.93	249681.06
Family Business Income	255568.09	258237.05	275585.93	262463.69
Input-Output ratio	1:6.47	1:6.56	1:6.75	1:6.58

Conclusion:-

The economic analysis of the four major vegetable revealed that potato crop is most productive and profitable vegetable crop on the front of total yield (290.67 q/ha.) among all over vegetable while tomato crop on per unit investment front by fetching 3.09 times return over cost among all four vegetable crops evaluated in the study area, so, it is suggested to the farmer to allocate their input resources on tomato first then potato to generate more economical and productive benefit in the study area.

References

- [1] Radhay, Y and Y. Eswara Prasad (2017). Economics of production and marketing of vegetables in Karim Nagar district, A. P. India. J. Agric marketing, 15:55-61.
- [2] Dhinnon, K. (2018). Crop yield and economics of potato based crop sequence at varying levels of manorial treatment. Indian J. Agric.res, 30:91.
- [3] Pandit, A, N. K, Panday, Barsati Lal, K. P. chandram and R. K, Rana (2018): Financing Agricultural: A study of Bihar and East Bengal potato cultivar. India J. Agric. Econ, 62:340-349.

