

Socio-Economic Study of Potato Farmers in Medak District of Telangana State

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Abstract—In Telangana, Medak district alone accounts for more than 50 per cent of total production of potato. The average family size of potato growers was five in the study area. The educational status of the respondents showed that 70.8% were literates. The social status included 29.2% of respondents were schedule cast and tribes and the remaining 70.8% were backward and other caste. The average size of the holding was 4.82 ha. In which dry land constituted 4.22 ha (87.56%) and irrigated dry land was 0.6 ha (12.44%). It is further observed that 1.2 ha (24.89%) of the total holding of the respondents was under potato cultivation, the potato farmers realized a gross income of Rs.112800 and net income of Rs.63441.57 per hectare. B.C Ratio was worked out as 1.7. Potato yield can be augmented through dissemination of technology and institutional reforms, low yielding growers can follow collective or co-operative farming to minimize input cost, financial support at village would strengthen the farmers to adopt modern practices, extension activities at village level through Government, NGOs and farmers' institutions need to be extended.

1. INTRODUCTION

Potato popularly known as “The king of vegetables”, has emerged as fourth most important food crop in India after rice, wheat and maize. Indian vegetable basket is incomplete without potato. Potato is a nutritionally superior vegetable due to its edible energy and edible protein. Being a short duration crop, it produces more quantity of dry matter, edible energy and edible protein in lesser duration of time compared to cereals like rice and wheat. Hence, Potato is considered to be an important crop to achieve nutritional security of the nation.

In India, Potato is cultivated in almost all states under diverse agro-climate conditions and bulk of the potatoes are grown in winter season under short day conditions and harvested from January to March. India has been exporting potatoes since 1970's. About 85 % of potatoes are cultivated in Indo-gangetic plains of North India. The states of Uttar Pradesh, West Bengal, Punjab, Bihar and Gujarat accounted for more than 80 % share in total production. In Telangana state, Medak and some places of Ranga Reddy districts are producing potato crop. Medak district occupies first position in area (4,297 ha) production (38,853 tonnes) [2] followed by Ranga Reddy. In Telangana, Medak district alone accounts for more

than 50 per cent of total production of potato. It has suitable environmental conditions and soils for potato cultivation in Rabi season. The crop being shorter duration and also provides quicker income to the farmers, it is interesting to study the socio-economic characteristics of Potato growers and economics of growing Potato crop. The present study is an attempt in this direction.

2. METHODOLOGY

Four stage sampling technique was used for the selection of district, mandals, villages and respondents. Medak district was purposively selected for the study as it is the highest potato producing district in the state. In Medak district, all the mandals growing the potato crop were arranged in descending order of the area and the first two mandals viz., Zaheerabad and Jharasangam which have largest area under potato were selected purposively. Two villages from each selected mandals were chosen purposively using the same procedure making the total number of villages to four. The selected villages were Algole, Ranjole, Kuppanagar and Bidekanna. From each selected village a sample of 30 farmers was selected randomly thus the total constitutes 120 farmers for achieving the objectives of study.

Table 1: Sample sizes of farmers

District	Mandals	Villages	Farmers
Medak	Zaheerabad	Algole	30
		Ranjole	30
	Jharasangam	Kuppanagar	30
		Bidekanna	30
Total			120

Data collection

All the necessary information required for the study was collected through survey method, by personally interviewing the farmers using the pre-tested schedule. The primary data collected from the farmers were interviewed personally. The relevant information such as house hold composition, educational profile, land ownership, inputs used in production

and output pertaining to potato growers was collected. The study was conducted during the agricultural year 2013-14.

Cost concepts

Cost concepts were used to estimate the cost of cultivation of potatoes. Cost of cultivation was generated from the following cost concepts. The cost concepts *viz.*, Cost A1, Cost A2, Cost B, Cost C were used in the present study and these are derived as follows.

Cost A1

This includes the value of

- i. Hired human labor
- ii. Hired bullock labor
- iii. Owned and hired machinery services
- iv. Seeds (both farm produced and purchased)
- v. FYM
- vi. Fertilizer
- vii. Plant protection chemicals
- viii. Depreciation
- ix. Land revenue
- x. Interest on working capital

Cost A2

Cost A1 + rent paid for leased in land

Cost B

Cost A2 + imputed value of owned land + interest on owned fixed capital

Cost C

Cost B + imputed value of owned value of family labor. It gives the total cost of cultivation (or) gross cost.

Gross Income (GI)

This represents the total amount of money obtained by the producers from the sale of potatoes after deducting from the house hold consumption, labor kind wages and transport losses.

Net income (NI)

This refers to the surplus of gross income over the total costs, *i.e.*, commercial cost of cultivation (Cost C).

NI = Gross income – Cost C

Benefit Cost Ratio

BCR = Net income / Cost C

3. RESULTS AND DISCUSSION

Socio economic characters of respondents

The socio- economic characters of the respondents include educational status, social status, family size, size of the holdings and pattern of assets. Socio economic analysis provides comprehensive idea of the socio economic characters

of respondents so as to execute in a proper way and for better comprehension to policy makers.

Educational status of the respondents

Particulars regarding the educational status are presented in Table 2. It is observed that the 35 respondents out 120 respondents were illiterate, which constitute 29.2%. The percentage of respondents having education up to 7th standard was 18.3%, while the secondary school education constituted 44.2%. Diploma and above qualification constituted only 8.3%, it is very much clear from the Table.2 that 29.2% of the respondents were illiterate and remaining 70.8% of the respondents were literates. Similar study was carried out by [4,5]

Table 2: Educational status of the respondents

S. No.	Educational status	No.of respondents
1	Illiterates	35 (29.20)
2	Primary (1st to 7th)	22 (18.30)
3	Secondary (8th to 10th)	53 (44.20)
4	Diploma and above	10 (8.30)
	Total	120 (100.00)

Note: Figures in the parentheses show percentage to the total

Age group of the respondents

It is observed from Table 3 that the percentage of farmers within the age group of 30-39 was about 21.6%. The respondents within the age group of 40-49 were 47.50%. The respondents within age group 50-59 were 26.7% and a very few number of farmers accounts for 4 (4.20%) in the age group 60-69 were observed. Hence most of farmers in the study area come under middle age group.

Table 3: Age groups of the respondents

S. No.	Age group(Yrs)	No.of respondents
1	30-39	26 (21.60)
2	40-49	57 (47.50)
3	50-59	32 (26.70)
4	60-69	5 (4.20)
	Total	120 (100.00)

Note: Figures in the parentheses show percentage to the total

Social status of the respondents

It is observed from the Table 4 that 29.2% of respondents were schedule cast and tribes and the remaining 70.8% were backward and other caste. Most of the scheduled caste and

tribes were having small holdings less than 2 ha were observed in the study area.

Table 4: Social status of the respondents

S. No.	Social status	No.of respondents
1	SC	31 (25.80)
2	ST	4 (3.30)
3	BC	35 (29.20)
4	Others	50 (41.70)
	Total	120 (100.00)

Note: Figures in the parentheses show percentage to the total

Family size of the respondents

It can be observed from the Table 5 that the average family size of the respondents was five. From the analysis it is clear that the respondents of the study region were educated and encouraging their children to study and not involving them in farm operations.

Table 5: Family size of the respondents

S. No.	Family size (No.)	No.of respondents
1	Less than 4	21 (17.50)
2	4 to 6	56 (46.66)
3	7 to 9	36 (30.00)
4	10 & above	7 (5.83)
	Total	120 (100.00)

Note: Figures in the parentheses show percentage to the total

Particulars of land holdings of the respondents

Land is the basic resource for agricultural production. The size of the holding influences the economic returns of the farmers significantly. The holding particulars of the respondents are presented in Table 6

It is observed from the Table 6 that the average size of the holding was 4.82 ha. The area under dry land constituted 4.22 ha *i.e.* 87.56% of the total holdings. The area under irrigated dry land was 0.6 ha (12.44%). It is further observed that 24.89% of the total holding of the respondents was under potato cultivation.

Table 6: Particulars of land holdings of the respondents

S. No.	Particulars	Area in Hectares
1	Dry land	4.22 (87.55)
2	Irrigated land	0.6 (12.44)

3	Total holding	4.82 (100.00)
4	Area under potato	1.2 (24.89)

Note: Figures in the parentheses show percentage to the total

Asset structure of respondent farmers

The risk bearing ability of the farmers largely depends on value of assets owned by the farmers. The value of assets possessed by the sample farmers are presented in Table 7. It is observed that land value constitutes a major item of the total assets. The value of the land was Rs.4,30,000 per hectare which accounted for 65.62 percent of the total value of assets. The value of the farm machinery and implements accounted for Rs.1,14,250 (8.62%) per hectare, farm buildings accounted for Rs.38,500 (5.88%) and establishment of irrigation equipment cost Rs.56,500 (17.44%). The total value of the assets per hectare with and without land value was Rs.6,55,250 and Rs.2,25,250 (34.38%) respectively. Similar kind of income & livelihood study was carried out by [1].

Table 7: Asset structure of respondent farmers

S. No.	Particulars	Per Hectare value in Rs
1	Value of land	430000 (65.62)
2	Value of live stock	16000 (2.44)
3	Value of farm building	38500 (5.88)
4	Value of machinery and implementation	114250 (8.62)
5	Value of irrigation source and equipments	56500 (17.44)
6	Value of assets	
	a. with land	655250 (100.00)
	b. without land	225250 (34.38)

Note: Figures in the parentheses show percentage to the total

Cost concepts

The cultivation expenditure of potatoes is dealt by analyzing the cost concepts used in farm management studies. *i.e.*, Cost A1, Cost A2, Cost B, Cost C was studied in the present study.

It is evident from the Table 8 that there was no leasing activity among the sample in the study area farmers and hence Cost A1 and Cost A2 remained the same. The total per hectare cost of cultivation (Cost C) of potato crop was worked out to Rs. 49358.40. Cost A1/A2 was estimated at Rs. 36035.40. Cost B was estimated to be Rs.47271.50.

Table 8: Cost concepts of potato farmers on per hectare basis (Rs/ha)

S. No	Particulars	Costs
1	Cost A1/A2	36035.40
2	Cost B	47271.50
3	Cost C	49358.40

Measures of farm income of potato farmers

Costs and returns are the two important elements of any business enterprise. Cost represents the value of the inputs used in the production process whereas the returns present the value of the output achieved. The relative magnitude of the costs and returns from the enterprise indicates the success or failure of the farm business. An important element in the farm business organization relates the manner in which the resources are allocated. Accordingly income measures *viz.*, gross income, net income and B.C ratio worked out and presented in Table 9.

The estimated gross income from one hectare of potato crop was Rs.112800.00. Although gross income is a good measure to gauge the productivity and efficiency of the farm, but it alone does not reveal the success of a farm business. Hence, net income of the farmer was analyzed. Higher the net income, more success is the farm business. The potato farmers realized a net income of Rs.63441.57 per hectare. B.C Ratio was worked out as 1.7. Similar results are reported by [3].

Table 9: Farm income measures of potato farmers on per hectare basis

S. No	Particulars	Income in Rs
1	Gross income	112800.00
2	Net income	63441.57
3	B:C Ratio	1.7

4. CONCLUSION

In Telangana state, Medak district accounts for more than 50 per cent of total production of potato. Most of the farmers in the study area are small and marginal farmers. The average potato cultivated area per farmer in the study was 1.2 ha. As

the operational land holding size is relatively lower, government has to take initiative for higher production growth of the crop. There is much scope for augmenting yield of potato through dissemination of technology and institutional reforms. Potato growers, particularly low yielding growers can minimize input and managerial costs through collective or co-operative farming.[3] Further institutional support, particularly financial support at village level would strengthen them to adopt modern practices, crop insurance at local level would also facilitate the risk-bearing capacity of farmers. Simultaneously, extension activities at village level through Government, NGOs and farmers' institutions need to be widened.

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