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Socio-economic characteristics of maize growers in Telangana State

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Abstract

Maize (*Zea mays* L.) is a key cereal crop in Telangana, valued for its use as food, feed, fodder, and industrial raw material. This study examines the socioeconomic factors influencing maize farming in Telangana, based on survey data from 120 maize farmers, most farmers were middle-aged (40-53 years), had primary education (36.67%), and belonged to small families (2-4 members) (2). The coefficient of variation for bullock pairs was high at 89.84%, with an average of 0.66 pairs and a standard deviation of 0.59. Agriculture was the main occupation for 92.50% of farmers, followed by trading at 6.67%. The cropping intensity among maize growers was 162.18% (6).

Keywords: Multistage sampling, coefficient variation, standard deviation, mean, cropping intensity

Introduction

India has been a generally agrarian frugality, and agriculture continues to be the main base of our frugality indeed moment. Agriculture is an important sector to fuel profitable growth, and it needs to be made more seductive. By creating a necessary frame for strengthening the entire agriculture value chain, the present study won't only help ameliorate the socio- profitable condition of the growers but also enable them to come economically profitable, ultimately leading to further inclusive development.

Maize is grown throughout the year in India. It is predominantly a kharif crop with 85 per cent of the area under cultivation in the season. India ranks sixth in global production and consumption. Maize is the third most important cereal crop in India after rice and wheat. It accounts for 9 per cent of total food granule production in the country; the production and consumption of maize have been rising regularly in India. Maize is not only used as human food and animal feed, but is also commonly used in several other industries as a raw material. The uses of maize are projected to increase drastically in the coming years, in line with industries that are poised to grow largely in the future. India's maize production depends on the southwest monsoon as more than three-fourths of the maize is produced in the *Kharif* season and only one-fourth in the *Rabi* and summer seasons. The total cultivated area of maize in India during 2016-17 is 9633.20 thousand hectares with an annual production of 25899.87 thousand tonnes, having an average productivity of 2689 Kg/ha. States such as Karnataka, Rajasthan, Madhya Pradesh, and Telangana add towards half of the total maize acreage in the country.

Telangana is one of the largest maize-producing states in India. In Telangana, maize is cultivated in all the districts (except Hyderabad) in both the *Kharif* and *Rabi* seasons. The total maize production doubled in the state within the past ten years (Anonymous, 2014). In Telangana during 2017-18, the total area under maize cultivation was 630.457 thousand hectares with an annual production of 275.2147 thousand tonnes, having 4960 Kg/ha of productivity. Mahabubnagar district holds the highest area (132.358 thousand hectares), which is about 21% in total Maize area, with a production of 298.531 thousand tonnes, followed by Medak district, which has 118.581 thousand hectares, which is about 19%; both of these districts contribute nearly 40 per cent of the total area in the state.

Objective of the study

To find out the socio-economic profile of the Maize farmers in Telangana state.

Materials and Methods

A multi-stage sampling design was adopted for the selection of districts, mandals, villages and maize growers (6). In the first stage, two districts, namely Mahabubnagar and Medak, were purposely selected from Telangana state. In the second stage, from the Mahabubnagar district, Balanagar and Nawabpet in Medak district, Dubbak and Jagdevpur mandals were selected on the basis of the highest area under maize. In the third stage, from each of the Mandal, three villages were selected purposely. In the fourth stage, ten maize growers were randomly selected from each village. In this way, from two districts, one hundred twenty maize growers were selected for the present study. The primary data was collected from cultivators with the help of a pretested schedule through personal interviews by taking farmers' opinions;

Results and Discussion

Multiple responses taken to ascertain the socio-economic characteristics of maize growers include age, educational level, family size, occupational level, operational land holding, bullock pair and livestock, etc.

Frequency distribution of maize growers with respect to socio economic status

Socio-economic characteristics of maize growers were estimated

and are presented in Table 1. It was observed from the table that the middle-aged farmers (>40 to ≤53) were 42.50 per cent, then the young (>26 to ≤39), which was 30.83 per cent and the old group farmers (>53) were 26.67 per cent results were similar to Issa F. O. and Kangbu (2016) (2). With respect to educational level, the primary school level, i.e., the primary group, was dominating over the other group, which had 36.67 per cent. 20.83 per cent of farmers were observed as illiterate, and 13.33 per cent of farmers were educated up to higher secondary level similar results were found in Mohan Paramkusam and Sivaramane, (2016) [1]. The family size of the farmers was divided into three categories on the basis of the number of members in the family as small, medium and large. About 50.83 per cent of growers belonged to a small family size, which had a dominant group ranging from 2 to 4 members in a family. In respect of the occupational level of maize growers, most of the farmers belonged to agriculture, which was 92.50 per cent, followed by trading, having 6.67 per cent. In the case of operational land holding, a small group ranging from 2 to 4 hectares was found to be the maximum, having 52.50 per cent (5). With respect to the bullock pair, 23.33 per cent of farmers had one bullock pair. 73.33 per cent of farmers have no bullock pair. In case of livestock, 24.17 per cent of farmers rearing two livestock and 19.17 per cent of farmers rearing three livestock (3 & 6).

Table 1: Socio-economic characteristics of maize growers

Sr. No.	Particulars	Frequency N=120	Percentage (%)
A	Age of farmer		
I	Young(<26-39 years)	37.00	30.83
II	Middle (40 to 53 years)	51.00	42.50
III	Old (> 53 years)	32.00	26.67
	Total	120.00	100.00
B	Education		
I	Illiterate	25.00	20.83
II	Primary	44.00	36.67
III	Secondary	35.00	29.17
IV	College	16.00	13.33
	Total	120.00	100.00
C	Family size no		
I	Small(2-4)	61.00	50.83
II	Medium(5-6)	48.00	40.00
III	Large(7-8)	11.00	9.17
	Total	120.00	100.00
D	Land holding		
I	Marginal(<1)	29.00	24.17
II	Small(2-4)	63.00	52.50
III	Medium(5-6)	28.00	23.33
	Total	120.00	100.00
E	Bullock pair		
I	Zero	88.00	73.33
II	One	28.00	23.33
III	Two	4.00	3.33
	Total	120.00	100.00
F	Livestock		
I	Zero	50.00	41.67
II	One	18.00	15.00
III	Two	29.00	24.17
IV	Three	23.00	19.17
	Total	120.00	100.00
G	Occupation		
I	Farming	111.00	92.50
II	Services	3.00	2.50
III	Trading	6.00	5.00
	Total	120.00	100.00

Mean, SD, and CV of Socio-economic characteristics of maize growers

Mean, standard deviation and coefficient of variation of socio-economic characteristics of maize growers were calculated and are presented in Table 2. It was observed from the table that the average age of maize growers was 45.26 years (2). The coefficient of variation with respect to age was found to be 20.70 per cent. The educational level of farmers indicated 2.35 scores with a 40.78 per cent coefficient of variation. With regards to the bullock pair, it was 0.66 numbers. The average number of livestock reared by maize growers was 2.60, with a 65.80 per cent coefficient of variation, which was highest among all characteristics of maize growers. The results were similar to Nouman and Siddiqi (2013) [5].

Table 2: Mean, SD and CV of socio-economic characteristics of maize growers

Sr. No.	Particulars	Mean	SD	CV (%)
1	Age of farmer(years)	45.26	9.46	20.70
2	Education level (score)	2.35	0.96	40.78
3	Family size no(no)	4.63	1.14	24.54
4	Land holding(ha)	1.58	0.86	54.38
5	Bullock pair(no)	0.66	0.59	89.84
6	livestock(no)	2.60	1.71	65.80
7	Occupation(score)	1.13	0.46	40.84

Cropping pattern of maize growers

Cropping pattern of maize farms during *Kharif*, *Rabi* and summer seasons was estimated and is presented in Table 3. The results revealed that the gross cropped productivity was 2.93 hectares. In the *Kharif* season, the dominant crops were maize, followed by chilli, cotton and paddy, which were 32.66 per cent, 10.04 per cent, 7.44 per cent and 4.91 per cent of the gross cropped area, respectively. Area under redgram was 6.07 per cent, which was taken as an intercrop in cotton by the maximum number of farmers. Paddy, cotton, maize and redgram covered 51.11 per cent of the area. Thus, these crops were found to be major crops in the *Kharif* season. In the *Rabi* season, maximum area covered by *Rabi* maize and Jowar, followed by gram, and paddy, which were 10.81 per cent, 9.30 per cent, 4.90 per cent, 2.93 per cent, and 27.82 per cent of the gross cropped area, respectively. Paddy and maize crops were taken only by those farmers who had an adequate source of irrigation in the *Rabi* season, because most farmers depended on rainfall. Regarding the summer season, groundnuts are dominant. Castor and sugarcane crops are cultivated as annual crops with 5.53 per cent of the area.

The percentage share of net sown area and double-cropped area on the maize farm was estimated and is presented in Figure 3. The results revealed that the share of net sown area was 61.66 per cent and double-cropped area was 38.34 per cent of the gross cropped area, i.e. 2.93 hectares (100 per cent).

Table 3: Cropping pattern of selected maize growers

Sr. No.	Particulars	Area (ha)	Per cent
Kharif			
1	Rice	0.14	4.90
2	Redgram	0.18	6.06
3	Maize	0.96	32.66
4	Cotton	0.22	7.43
5	Chilli	0.29	10.04
	Sub Total	1.79	61.09
Rabi			
6	Paddy	0.09	2.93
7	Bengal gram	0.14	4.89
8	Maize	0.32	10.80
9	Jowar	0.27	9.29
	Sub Total	0.82	27.91
Summer			
10	Groundnut	0.16	5.47
	Subtotal	0.16	5.47
Annual			
11	Sugarcane	0.06	2.13
12	Castor	0.10	3.40
	Sub Total	0.16	5.53
	Total	2.93	100.00
	Gross cropped area	2.93	
	Double cropped area	1.12	38.34
	Net sown area	1.81	61.66
	Cropping Intensity (GCA*100/NSA)		162.18

Note: Numbers in per cent indicate the total percentage of the Gross Cropped area

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