Profile characteristics of paddy and irrigated dry crop growers of Karimnagar district, Andhra Pradesh

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ABSTRACT

The present study was conducted in Karimnagar district of Telangana. Ex post facto research design was adopted in the present investigation. Karimnagar district was purposively selected for the study as maximum budget was allotted by the state government for this district among all the Telangana districts under farm mechanization. The study was conducted in 4 villages selected from 2 Mandals of Karimnagar district which included 30 farmers from each selected village thus making a sample of 120 farmers. The analysis of profile characteristics of farmers indicated that majority of them were middle aged (47.00%), had primary school education (37.5%), low farming experience (59.00%), medium socio-economic status (41.00%), medium source of procurement of agricultural implements and machinery (60.0%), medium level of socio-political participation (48.5%), more than one crop (71.00%), having more than one source of irrigation (52.5%), one time participation in extension activities related to agricultural implements and machinery (47.5%), low labour availability (57.5%), medium level of scientific orientation (52.5%) and more repair centers (62.5%).

Keywords: Farmers; profile characteristics; paddy; irrigated dry crops; mechanization

INTRODUCTION

Indian agriculture is undergoing a gradual shift from dependence on human power and draft animal power (DAP) to mechanical power because maintenance of DAP and manual labour is becoming increasingly costly coupled with scarce availability of fodder and feed to animals.

While the success of the green revolution in the 1970s was largely attributed to three major inputs- the increased utilization of fertilizers and improved seeds (the high yielding varieties) as well as irrigation, it is apparent that mechanization as the fourth input also played a key role as it is evident from the statistics that the states with high rates of available power per hectare are also the ones which have the highest yields.

The ICAR in its Vision 2020 document has projected the demand of food grains at about 293.6 MT by 2020 for which besides other things the average farm power availability will have to be increased from the present level of about 1.35 to 2.00 kw/ha by 2020. For increasing productivity of dryland agriculture, timeliness in farm operations is essential especially for seedbed preparation and sowing operations for establishing good crop stand in deficient/receding soil moisture content. In these areas also the demand of tractors/power tillers, seed drills/planters and other farm machinery on custom service will increase in future.

Despite of the advantages of farm mechanization many constraints also stand in the way of mechanization such as small size and scattered holdings of the farmers, majority of small cultivators being poor who are not in a position to purchase the costly machinery, lack of proper knowledge of farmers to purchase farm machinery, operate and maintain it properly, inadequacy of farm power and machinery with the farmers etc. Lack of repair and replacement facilities especially in the remote and rural areas is another hindrance in efficient small farm

mechanization. Also due to the seasonal nature of the agriculture the farm machinery remains idle for much of the time.

METHODOLOGY

Telangana region was selected for the study purposively as maximum budget was allotted by the state government for this district among the other Telangana districts under farm mechanization. Out of 57 Mandals of the district two Mandals namely Choppadandi and Jagitial were selected and from each Mandal two villages viz Bhoopalapatnam and Vedurugatta villages in Choppadandi and Dharu and Thippannapet villages in Jagitial Mandal were selected at random by following simple random sampling method. From each village 10 small, medium and large farmers each cultivating paddy and irrigated dry crops were selected. In order to elicit precise and statistically valid results an equal number of farmers from the three categories of small (33.3%), medium (33.3%) and large (33.4%) farmers were selected under both the crops. This was done to probe the differences among these three categories of respondents in their profile, knowledge level, attitude and extent of use of farm implements and machinery. This helped to draw suitable conclusions and strategy for further promotion of farm implements and machinery among farming community. the interview schedule was developed for collecting data from the selected respondents on various aspects related to their profile concentrating on farm mechanization.

RESULTS and DISCUSSION

The distribution of farmers was studied on the various parameters and the results are given in Table 1.

Age

In overall majority of the small (42.5%), medium (45%) and large (52.5%) farmer categories were middle aged. Small farmers (50%) of irrigated dry crops belonged to young age category. The above findings are in accordance with the findings of Lamidi and Akande (2013).

Education

Majority of the small (47.5%), middle (35%) and large (30%) farmers had primary school education whereas small farmers (40%) in paddy and large farmers in irrigated dry crops (30%) were functionally literate ie they could read and write. The above findings are in accordance with the findings of Lamidi and Akande (2013)

Farming experience

Majority of small (52.5%), middle (70%) and large (55%) farmers had low farming experience. The reason for this trend might be that majority of farmers were middle aged (36-48 years) and might have started cultivation from the age of 19-20 years hence most of them were found to have low farming experience. The above findings are in accordance with the findings of Singh et al (2011).

Socio-economic status

Majority of the respondents under small (67.5%), medium (65%) and large (50%) farmer categories had low, medium and high socio-economic status respectively. The small farmers had low socio-economic status which could be due to their low social status and occupations and low economic status in terms of less annual income and material possession. The findings are in line with the findings of Sailesh et al (2005).

Procurement of agricultural implements and machinery

Majority of small (75%) and medium farmers (57.5%) had medium procurement whereas large farmers (52.5%) had high procurement. The large farmers might have high procurement due to their higher socio-economic status and socio-political participation. The above findings are in accordance with the findings of Owombo et al (2012).

Socio-political participation

The results show that majority of small (77.5%) had low and medium (75%) and large (55%) farmers had medium socio-political participation. The reason could be that small farmers had low socio-economic status which might have kept them away from being members in different organizations in the village whereas socio-economic status of medium and large farmers was comparatively better. The findings of Anitha (2004) endorse these findings.

Sources of irrigation

Majority of small (67.5%) farmers had one source of irrigation whereas majority of medium (55%) and large (70%) farmers had more than one source of irrigation. Results under paddy and irrigated dry crops separately indicate that majority of small (75 and 60%

Table 1. Distribution of respondents according to various factors (n= 120)

Category	Paddy (n= 60)			Irrigated dry crops (n= 60)			Over all farmers (n= 120)			Total (n= 120)
	S (n= 20)	M (n= 20)	L (n= 20)	S (n= 20)	M (n= 20)	L (n= 20)	S (n= 40)	M (n= 40)	L (n= 40)	
Age (years)										
Young age (<35)	5 (25)	7 (35)	6 (30)	10 (50)	5 (25)	2 (10)	15 (37.5)	12 (30)	8 (20)	35 (29)
Middle age (36-48)	9 (45)	9 (45)	8 (40)	8 (40)	9 (45)	13 (65)	17 (42.5)	18 (45)	21 (52.5)	56 (47)
Old age (>48)	6 (30)	4 (20)	6 (30)	2 (10)	6 (30)	5 (25)	8 (20)	10 (25)	11 (27.5)	29 (24)
Education level										
Illiterate (no formal education)	3 (15)	5 (25)	4 (20)	2 (10)	5 (25)	5 (25)	5 (12.5)	10 (25)	9 (22.5)	24 (20)
Functionally literate (can read and write)	8 (40)	4 (20)	5 (25)	5 (25)	6 (30)	6 (30)	13 (32.5)	10 (25)	11 (27.5)	34 (28)
Primary (1-7th class)	6 (30)	6 (30)	8 (40)	13 (65)	8 (40)	4 (20)	19 (47.5)	14 (35)	12 (30)	45 (37.5)
Middle to high (8th to10th)	2 (10)	5 (25)	2 (10)	0 (0)	1 (5)	4 (20)	2 (5)	6 (15)	6 (15)	14 (12)
College & above (>10th)	1 (5)	0 (0)	1 (5)	0 (0)	0 (0)	1 (5)	1 (2.5)	0 (0)	2 (5)	3 (2.5)
Farming experience(years										
Low (6-17)	9 (45)	13 (65)	10 (50)	12 (60)	15 (75)	12 (60)	21 (52.5)	28 (70)	22 (55)	71 (59)
Medium (17-28)	10 (50)	5 (25)	7 (35)	6 (30)	5 (25)	6 (30)	16 (40)	10 (25)	13 (32.5)	39 (32.5)
High (28-39)	1 (5)	2 (10)	3 (15)	2 (10)	0 (0)	2 (10)	3 (7.5)	2 (5)	5 (12.5)	10 (8.5)
Socio-economic status										
Low (5-9)	13 (65)	2 (10)	5 (25)	14 (70)	6 (30)	5 (30)	27 (67.5)	8 (20)	10 (25)	45 (37.5)
Medium (9-13)	7 (35)	15 (75)	5 (25)	6 (30)	11 (55)	5 (25)	13 (32.5)	26 (65)	10 (25)	49 (41)
High (13-18)	0 (0)	3 (15)	10 (50)	0 (0)	3 (15)	10 (50)	0 (0)	6 (15)	20 (50)	26 (26.5)
Procurement of agricultural implements and machinery										
Low (3-8)	10 (50)	10 (50)	0 (0)	0 (0)	7 (35)	0 (0)	10 (25)	17 (42.5)	0 (0)	27 (22.5)
Medium (8-13)	10 (50)	10 (50)	9 (45)	20 (100)	13 (65)	10 (50)	30 (75)	23 (57.5)	19 (47.5)	72 (60)
High (13-18)	0 (0)	0 (0)	11 (55)	0 (0)	0 (0)	10	0 (0)	0 (0)	21 (52.5)	21 (17.5)
Socio-political participation										
Low (1-3)	15 (75)	3 (15)	4 (20)	16 (80)	4 (20)	6 (30)	31 (77.5)	7 (17.5)	10 (10)	48 (40)
Medium (3-5)	4 (20)	17 (85)	12 (60)	2 (10)	13 (65)	10 (50)	6 (15)	30 (75)	22 (55)	58 (48.5)
High (5-7)	1 (5)	0 (0)	4 (20)	2 (10)	3 (15)	4 (20)	3 (7.5)	3 (7.5)	8 (20)	14 (11.5)
Source of irrigation										
One source	15 (75)	10 (50)	5 (25)	12	8 (40)	7 (36)	27 (67.5)	18 (45)	12 (30)	57 (47.5)
More than one source	5 (25)	10 (50)	15 (75)	8 (40)	12 (60)	13 (65)	13 (32.5)	22 (55)	28 (70)	63 (52.5)

Participation in extension activities related to agriculture implements and machinery											
Nil	7 (35)	7 (35)	2 (10)	8 (40)	7 (35)	6 (30)	15 (37.5)	14 (35)	8 (20)	37 (31)	
One time	11 (55)	11 (55)	8 (40)	12 (60)	12 (60)	3 (15)	23 (57.5)	23 (57.5)	11 (27.5)	57 (47.5)	
More than one time	2 (10)	2 (10)	10 (50)	-	1 (5)	11 (55)	2 (5)	3 (7.5)	21 (52.5)	26 (21.5)	
Labour availability											
Low (1-4)	10 (50)	9 (45)	8 (40)	15 (75)	18 (90)	9 (45)	25 (62.5)	27 (67.5)	17 (42.5)	69 (57.5)	
Medium (4-8)	10 (50)	1 (5)	1 (5)	0 (0)	0 (0)	3 (15)	10 (25)	1 (2.5)	4 (10)	15 (12.5)	
High (8-12)	0 (0)	10 (50)	11 (55)	5 (25)	2 (10)	8 (40)	5 (12.5)	12 (30)	19 (47.5)	36 (30)	
Types of crops cultivated											
One crop	11 (55)	2 (5)	4 (10)	9 (45)	6 (30)	3 (15)	20 (50)	8 (20)	7 (17.5)	35 (29)	
More than one crop	9 (45)	18 (95)	16 (90)	11 (55)	14 (70)	17 (85)	20 (50)	32 (80)	33 (82.5)	85 (71)	
Scientific orientation											
Low (5-8)	6 (30)	3 (15)	0 (0)	4 (20)	2 (10)	4 (20)	10 (25)	5 (12.5)	4 (10)	19 (16)	
Medium (8-11)	9 (45)	8 (40)	13 (65)	13 (65)	11 (55)	9 (45)	22 (55)	19 (47.5)	22 (55)	63 (52.5)	
High (11-14)	5 (25)	9 (45)	7 (35)	3 (15)	7 (35)	7 (35)	8 (20)	16 (40)	14 (35)	38 (31.5)	
Availability of repair centres											
Low (0-1)	2 (10)	5 (25)	2 (10)	1 (5)	2 (10)	2 (10)	3 (7.5)	7 (17.5)	4 (10)	14 (11.5)	
Medium (1-2)	7 (35)	6 (30)	2 (10)	5 (25)	5 (25)	6 (30)	12 (30)	11 (27.5)	8 (20)	31 (26)	
High (2-3)	11 (55)	9 (45)	16 (80)	14 (70)	13 (65)	12 (60)	25 (62.5)	22 (55)	28 (70)	75 (62.5)	

S= Small farmers, M= Medium farmers, L= Large farmers, Figures in parentheses are percentages

respectively) farmers for both the crops used one irrigation source whereas majority of medium (50 and 60% respectively) and large (75 and 65% respectively) had more than one source of irrigation under both the crops. It was found that majority of the medium and large respondents had bore wells and some of them had drip/sprinkler and canal/pond irrigation. The reason could be that due to higher socio-economic status, majority of medium and large farmers used many irrigation sources compared to small farmers. The above findings are in accordance with the findings of Vermani and Punia (2014).

Participation in extension activities related to agriculture implements and machinery

Results indicate that majority of small (57.5%) and medium (57.5%) farmers were participating in extension activities related to agricultural implements and machinery for one time whereas majority (52.5%) of large farmers participated more than one time. Thirty one per cent of total farmers had not attended any extension activity whereas 21.5 per cent of them attended more than once. The findings are in accordance with the findings of Nagabhushnam (2003).

Labour availability

This variable was measured in terms of adequacy of labour and ease of availability of labour. Majority of small (62.5%) and medium (67.5%) farmers expressed that labour availability was low for them. Large farmers (47.5%) indicated that they had high labour availability for both the crops. The reason could be that large farmers had permanent labour at their disposal and also due to their higher economic status they might have paid labour wages immediately. The other two categories of farmers (small and medium) who did not have permanent labour and who could not do prompt payments to hired labour became vulnerable to problem of migration, labour diversion to MGNREGA etc. The work of Sailesh et al (2005) supports these findings.

Types of crops cultivated

Majority of small (50%), medium (80%)

and large (82.5%) categories had been growing more than one crop. The crops grown by them were paddy, cotton, maize, vegetables, ground nut etc. In case of small farmers majority (55%) were found to cultivate only paddy. The reason could be their low economic status preventing them to take up more crops that demanded more labour and investment. The findings are supported by the work of Sailesh et al (2005).

Scientific orientation

Majority of small (55%), medium (47.5%) and large (55%) farmers had medium scientific orientation which could be due to the reason that majority of small and medium farmers had nil to one time participation in extension activities and low to medium socio-political participation which might have caused medium scientific orientation among these two groups. The above findings are supported by the observations of Gowda (2009).

Availability of repair centres

In all the three categories majority of the respondents viz small (62.5%), medium (55%) and large (70%) expressed that there was high availability of repair centres for them. They informed that repair centres were located at Mandal headquarters and their villages were within a reach of 4-8 km from them. The results are as per the work of Deshmukh et al (2011).

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