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A Study on Paddy Growers Awarness on Farm Mechanization in Uttarkannada, Karnataka

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ABSTRACT

Farm mechanization implies the use of various power sources, improved farm tools and equipment, with a view to reduce the drudgery of the human beings and draught animals, which increasing the crop production and productivity. About 65 per cent of the Indian population depends on agriculture for their livelihood. In recent years, non availability of farm labours and fragmentation of land holdings (smaller land holdings) are forcing many farmers to mechanize their farms and over the last few years, there has been considerable progress in agriculture mechanization. Mechanization in agriculture is predominantly taking place mainly for operations where traditional practices have failed to achieve the precision in operations. Keeping this in view a study was conducted to know the awareness of farm mechanization on paddy grower in Uttarkannada, Karnataka A survey was conducted by interview method from paddy growers to elicit information regarding awareness level of farm mechanization. It was revealed that majority of the respondents (90.00%) were fully aware about the farm implements and machinery.

Key words: *Awareness, Implements, Mechanization, Paddy and Profile*

INTRODUCTION

Agricultural machines have now been recognized as one of the major inputs in agriculture due to the advantages such as reduction in operational costs, minimizing human drudgery in addition to increasing farm production. Farm machines also confer definite benefits to the farmers in terms of greater efficiency, economy and higher productivity.

In recent years, non availability of farm laboures and fragmentation of land holdings (smaller land holdings) are forcing many farmers to mechanize their farms. Mechanization in agriculture is predominantly taking place mainly for operations where traditional practices have failed to achieve the precision in operations. This is mainly due to the fact that agricultural labour available in Indian farms is becoming scarce day by day due to rapid industrialization, urbanization, migration and employment guarantee programmes[2].

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Agricultural machines have now been recognized as one of the major inputs in agriculture due to the advantages such as reduction in operational costs, minimizing human drudgery in addition to increasing farm production.

Farm machines also confer definite benefits to the farmers in terms of greater efficiency, economy and higher productivity particularly by speeding up agricultural operations during crucial periods. Studies have revealed that farm mechanization has led to an increase in the productivity of land by as much as 30.00 per cent. Rijk[3] reported that majority 60.00 per cent respondents had adopted the production technology at higher level followed by 21.25 per cent and 18.75 per cent at medium and low level.

The availability of HYV seed at sowing time, high cost of improved seeds, unawareness about recommended seed rate, method and time of seed sowing etc. High price of fertilizer, strong need of capital, unawareness and non availability of fertilizers at sowing time in selected crops were pointed out as the other reasons of non adoption of recommended technology followed by lack of mulching technique, crop rotation technique and lack of alternative risk bearing capacity, irrigation and drainage system etc. as major constraints[1]. Thiyagarajan[4], revealed that majority of the respondents (78.30%) had medium level of knowledge followed by 19.20 per cent of the respondents with low level and 2.50 per cent with high level of knowledge in SRI cultivation and nearly half of the respondents had high level (48.40%) of adoption in the cultivation of paddy under SRI method followed by medium (25.80%) and low (25.80%) levels of adoption. Verma[6], reported that the increase in cropping intensity has been reported to be 165, 156 and 149 per cent for tractor-owning; tractor hiring and bullock operate farms, respectively. During 1960- 61, the animate power contributed 92 per cent of the total farm power and mechanical nand electrical together contributed 8 per cent. However, in 2004-05 the contribution from animate power reduced to 16 per cent and from mechanical and electrical power, it increased to 84 per cent. During the past few decades a large number of farm tools, implements and machines have been developed for different farm operations.

MATERIALS AND METHODS

Selection of district

There are 30 district in Karnataka state out of these Uttarakannada district of Karnataka was selected purposively for the present study, as based on highest area and production of paddy

Selection of blocks

There are 12 blocks in Uttarakannada district out of these Haliyal block was selected purposively on the basis of highest area and production of paddy.

Selection of village

There are 154 villages in Haliyal Taluka. out of these, 12 villages were selected randomly for the present study

Selection of Respondents

From each selected village, a list of farmers cultivating paddy was prepared with the help of Agricultural Assistant and Private Extension Officer. Ten respondents from each village were randomly selected to constitute the total sample size of 120 respondents.

Tools used for data collection

Survey is one of the tools used for collecting the relevant information from paddy growers. Interview schedule were structured which consisting of Part A which included set of questions to gather general information and Part B which consisted questions to gather specific information. The interview schedule was administered on the paddy growers to elicit information regarding profile characteristics of paddy growers, awareness level of paddy growers in improved farm equipments in paddy cultivations.

RESULTS AND DISCUSSION

Distribution of the respondents according to profile characteristics

From Table 1 and Fig.1 revealed that Majority (67.50%) of the respondents belonged to the middle aged, followed by young age (21.67%) and old age group (10.83%). where as the (79.00%) respondents are literates, Whereas, 67.50 per cent of the paddy growers belonged to 'medium innovative proneness' category followed by 25.00 per cent and 7.50 per cent belonged to 'low' and 'high innovative proneness' categories, respectively, Further, 57.50 per cent of the paddy growers belonged to 'medium risk orientation' category, followed by 24.17 per cent and 18.33 per cent belonged to 'high' and 'low risk orientation' categories, respectively. Majority (68.33%) of the paddy growers belonged to 'medium economic motivation' category, followed by 21.67 and 10.00 per cent belonged to 'low' and 'high economic motivation' categories, respectively. 45.00 per cent of the respondents belonged to semi medium land holding category followed by 30.83 per cent belonged to small land holding category, 13.33 per cent belonged to marginal land holding category, 9.16 per cent belonged to medium land holding category and only 1.66 per cent of them were big farmers, respectively. This could be attributed to inheritance of land from their ancestors who might have transferred from generation to generation. This result is in agreement with Sajith Kumar and Man and Sadiya.

Awareness levels about farm mechanization implements

The Table 2 shows that among the field operation implements cen per cent of the respondent were fully aware about the spade followed by M B plough, Disc plough and harrow. (each 91.67 %) whereas the paddy growers were partially aware about the cage wheel(25.00%), peg puddler (30.00%), leveler (25.00%), cultivator (30.00%) and tractor (25.00%). Among the transplanting 50.00 of the respondents were fully aware and 33.33 per cent were partially aware about the transplanter followed by drum sedder and most of the respondent (66.66%) were not aware of line marker. On the other hand cen per cent of the respondents were completely aware of broadcaster, pump set and sickles. Meanwhile, among the plant protection 90.00 per cent of them were fully aware of knapsack, charger and power sprayer. In harvesting implements cen per cent of them were fully aware of sickle followed by paddy reaper, (75.00%) combine harvester (73.33%) and paddy thresher, (73.00%) however, 25.00 per cent of the respondents were partially aware of paddy reaper and paddy thresher. 50.00 per cent of the respondents were unaware of tractor mounted harvester

The possible reasons for this trend could be medium educational level (80.00%) of the respondents (about 60.00 per cent of the respondents educated up to high school to graduation level) and medium extension contact (70.83%). Another reason may be due to medium mass media exposure (59.17%) particularly high majority (98.33%) possessed television and were regular viewer of agriculture programmes. Nearly half of the respondents (48.40%) were subscribers of news paper, of which 33.33 per cent of the respondents were regular reader of agriculture news. Majority of the respondents (67.50%) and (68.33%) belonged to 'medium innovative proneness' and 'economic motivation' respectively resulted in gaining knowledge about farm machinery and implements. It is clear from the findings that the positive and significant relationship of the personal characteristics like education, innovative proneness and economic motivation might have influenced the knowledge level of the farmers. The results are on far with Jyoti.

Table 1: Distribution of the respondents according to profile characteristics

Variables	Category	Frequency	Percentage
Age	Young age(<30years)	26	21.67
	Middle age(31-50 years)	81	67.50
	Old age (>50 years)	13	10.83
Education	Illiterate	14	11.67
	Primary school (1st to 4th)	24	20.00
	Middle (5th-7th)	32	26.67
	High school (8th-10th)	40	33.33
	PUC	6	5.00
Innovativeness	Low(<10)	30	25.00
	Medium (10-11)	81	67.50
	High (>11)	9	7.50
Risk Orientation	Low (<14)	22	18.33
	Medium (14-16)	69	57.50
	High (>16)	29	24.17
Economic Motivations	Low (<15)	26	21.67
	Medium (15-16)	82	68.33
	High (>16)	12	10.00
Land Holding	Marginal farmers (<2.5 acre)	16	13.33
	Small farmers (2.51 to 5.00 acre)	37	30.83
	Semi medium (5.01 to 10.00 acre)	54	45.00
	Medium farmers (10.01 to 25.00 acre)	11	9.16
	Big farmers (>25.00 acre)	2	1.66

Table 2: Awareness levels about farm mechanization implements

Sl. No.	Field operations	Farm implements and machinery	Awareness Level					
			Fully aware		Partially aware		Not aware	
			F	%	F	%	F	%
1	**Field Operation**	Tractor	90	75.00	30	25.00	--	--
		Power tiller	100	83.33	20	16.67	--	--
		Cage wheel	80	66.67	40	33.33	--	--
		Peg puddler	87	72.50	33	27.50	--	--
		M B plough	110	91.67	10	8.33	--	--
		Disc plough	110	91.67	10	8.33	--	--
		Cultivator	95	79.17	25	20.83	--	--
		Leveller	88	73.33	32	26.67	--	--
		Harrow	110	91.67	10	8.33	--	--
		Spade	120	100.00			--	--
2	**Transplanting**	Transplanter	60	50.00	40	33.33	20	16.67
		Drum seeder	44	36.67	36	30.00	40	33.33
		Line marker	20	16.67	20	16.67	80	66.66
3	**Fertilizer**	Broadcaster	120	100.00	--	--	--	--
4	**Irrigation**	Pump set	120	100.00	--	--	--	--
5	**Weeding**	Sickles	120	100.00	--	--	--	--
		Rotary weeder	90	75.00	20	16.67	10	8.33
6	**Plant protection**	Knapsack sprayer	98	81.67	22	18.33	--	--
		Charger sprayer	110	91.67	10	8.33	--	--
		Power sprayer	110	91.67	10	8.33	--	--
7	**Harvesting**	Sickle	120	100.00	--	--	--	--
		Paddy reaper	90	75.00	30	25.00	--	--
		Paddy thresher	88	73.33	32	26.67	--	--
		Tractor mounted harvester	48	40.00	12	10.00	60	50.00
		Combine harvester	88	73.33	22	18.33	10	8.33

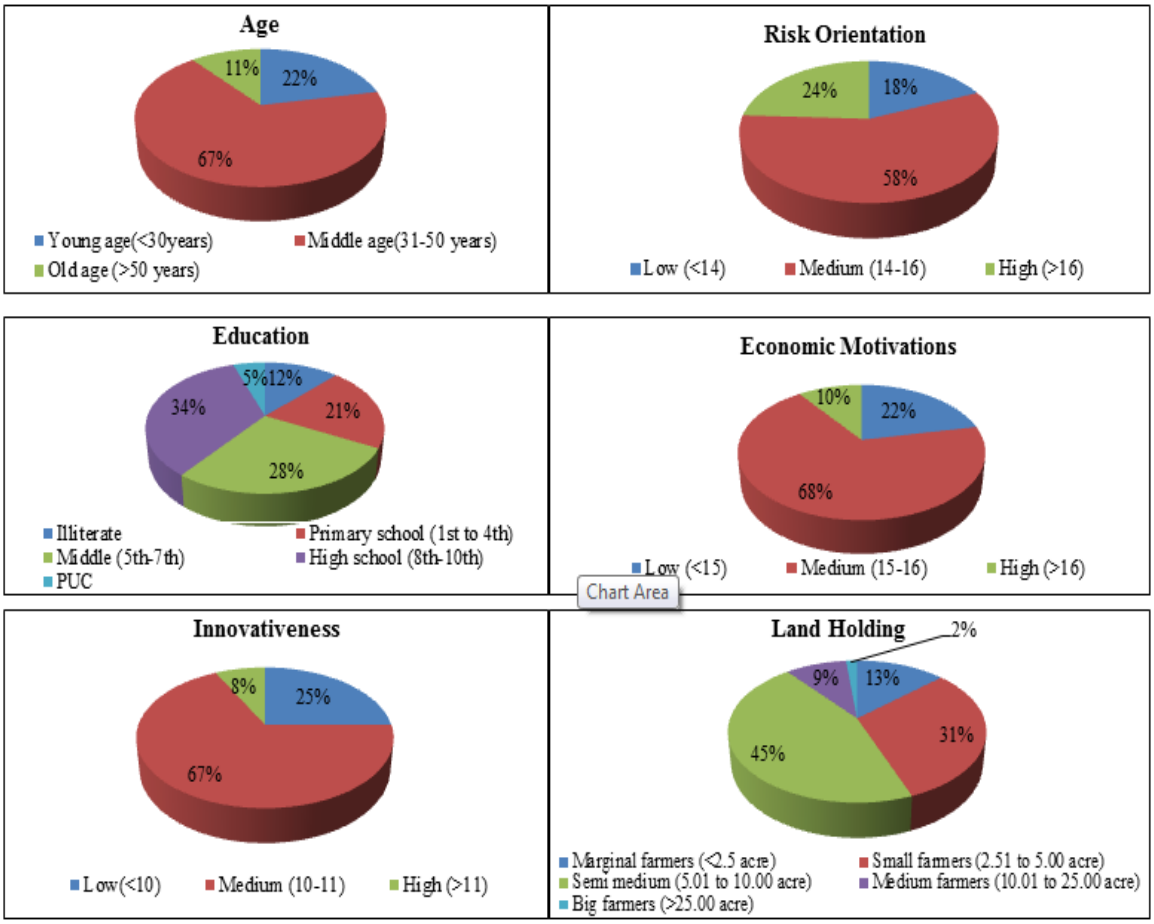

Fig. 1: Distribution of the respondents according to profile characteristics

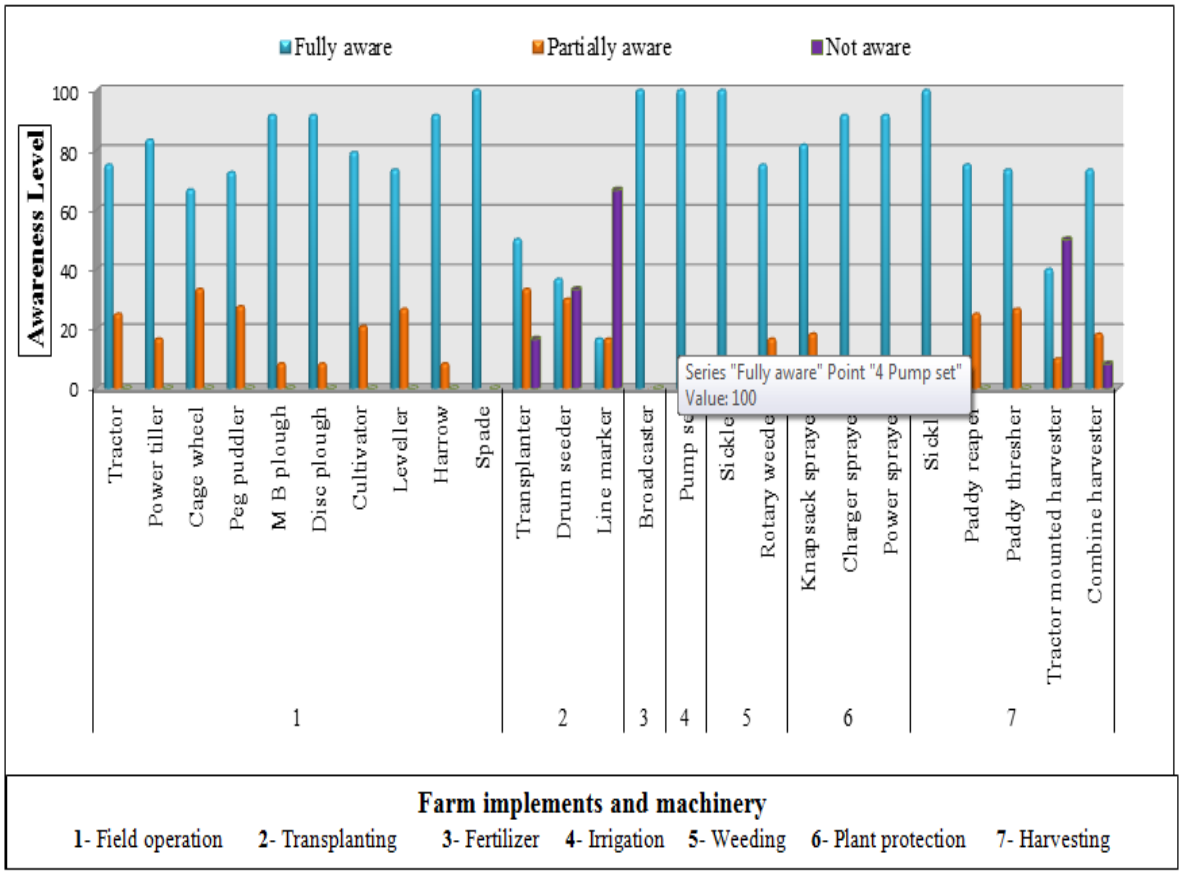

Fig. 2: Awareness levels about farm mechanization implements

CONCLUSION

It is concluded from the present study profile characteristics of the respondents were age, Education innovativeness, risk orientation, economic motivations and Land holding. These all independent variables found medium level which leads to awareness level of the machineries. Most of the farmers were fully aware about improved machineries but not aware about new machineries in certain implements. So, one of the best ways and to overcome this is to vigorously utilize the scientific expertise of Krishi Vigyan Kendras for organizing field and farmers' day and agriculture machine exhibitions which help and encourage the farmers to know about the advantages of mechanization. Since, production from mechanization improved over the period of mechanization, the government may promote mechanization among farming community. Government could promote use of machines by the poorest of farms through custom hiring of expensive farm machineries the task of coordination can be entrusted to NGOs or SHGs.

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