A STUDY OF INFORMATION ABOUT RESOURCES AND CROPPING PATTERN FOLLOWED BY FARMERS IN DISTRICT BIJNOR(U.P.)

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The agricultural situation is rapidly changing in our country. Yield growth rates of food grains are also stagnating in most part of the country. The productivity of soil has also declining in several region of the country. Over two third population of the country are involved in agriculture sector, so agriculture has become a main stay for their livelihood. Agriculture sector has made tremendous progress after independence . Annual food grain production increased from 55 million tonnes in early fifties to 206 million tonnes in the year 2000 (Bhattacharya 2001). Thus, in coming years we have to increase production at large extent with limited availability of land to feed large population. This can only be achieved by using recent information on advanced agricultural technology related different aspect of development including agriculture.

The present study is oriented in such a framework to find out resource use and cropping pattern followed by farmers alongwith the constraints experienced by them.

METHODOLOGY

The study was conducted in four village from two blocks of district Bijnor purposively. Twenty farmers as respondent were selected from each selected village randomly. Total eighty respondents were categorized into three groups as marginal and small (upto 2 ha), semi-medium (2-4 ha) and medium (4-10 ha). Data on general information, size of holding and production, critical inputs used on major crops, information sources and constraints faced in raising productivity were collected with the help of pre structured schedule by personal interview method. The collected data were analysed by using frequency and percentage for logical conclusions.

RESULTS AND DISCUSSION

Holding Size–Table 1. shows out of total 80 farmers, 36 were marginal and small (upto 2 ha) with an average of 0.92 hectare , 32 were semi-medium (2-4 ha) with an average of 2.69 hectares and 12 were medium (4-10 ha) with an average of 5.52 hectares of land holding. Marginal and small farmers had 78.48 percent irrigated land holding. While semi-medium and medium farmers had 96.45 and 100.00 percent irrigated land holding respectively.

Farm Assets–The data presented in the Table-1 revealed that the higher percentage of farmers had buffaloes and cattle in semi-medium and medium groups as compared to marginal and small group. About 11.08 and 6.24 percent farmers had goat in marginal and small and semi-medium group, respectively. Only 2.77 percent farmers posses Poultry of marginal and small group. While in case of other farm assets majority of medium farmers posses tractor, tubewells/pumping set, followed by semi-medium and marginal and small group of farmers respectively. Whereas only 33.32 percent farmers of medium group having sprayers/duster for spraying chemicals.

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Table 1. Distribution of farmers according to their category and characteristics

S. No.	Variable	Farmers category		
		Marginal & Small n=36	Semi-Medium=32	Medium n=12
1.	Avr. Land Holding Size (Ha)	0.92	2.69	5.52
2.	Irrigated Land	78.48	94.45	100.0
3.	Farm Assets			
	(A) Livestock			
	(a) Farmer have buffaloes	30(83.1)	31(96.72)	11(91.63)
	(b) Farmer have cattle	16(44.32)	23(71.76)	8(66.64)
	(c) Farmer have goat	4(11.08)	2(6.24)	–
	(d) Farmer have poultry	1(2.77)	–	–
	(B) Other Farm assets			
	(a) Farmer have tractor	3(8.31)	4(12.48)	7(58.31)
	(b) Farmer have tubewell/ pumping sets	17(47.09)	30(93.6)	12(100.0)
	(c) Farmer have thresher	3(8.31)	3(9.36)	7(58.31)
	(d) Farmer have sprayer/ duster	–	–	4(33.32)
4.	Household equipment and communication aids			
	(a) Farmer have Radio	19(52.63)	20(62.4)	6(49.98)
	(b) Farmer have TV	15(41.55)	18(56.16)	10(83.3)
	(c) Farmer have M/Cycle	4(11.08)	8(24.96)	7(58.31)
	(d) Farmer read Newspaper	–	–	3(24.99)
	(e) Farmer have Telephone	–	2(6.24)	1(8.33)

Figures in parenthesis indicates percent

Household equipments and communication aids–About 83.3 and 56.13 percent farmers had owned TV sets in medium and semi-medium group respectively followed by marginal and small farmers. Similar trend of motorcycle was also recorded in some group of farmers. Highest percentage (62.4) of farmers had owned radio in semi-medium group. Only 24.99 percent farmers read newspaper in medium category. While in case of telephone 8.33 and 6.24 percent farmer of medium and semi-medium group had this facility.

Land utilization and production–The data indicated (Table-2) that sugarcane was the most important crop, as the area covered by sugarcane was 64.84, 57.4 and 51.14 percent in medium, semi-medium and marginal and small group of farmers respectively. Wheat crop was next in importance followed by rice crops in all category of farmers. The adoption of high yielding varieties (HYV) seed of rice and sugarcane was more in all category of farmers whereas the adoption of HYV seed was low in wheat crop by marginal and small farmers. The average yield of rice, wheat and sugarcane was more with HYV as compared to local variety in all category of farmers because of area irrigated, area sown more than once and the more area under HYV Singh(1979) and Reddy and Srinivasulu(1992) also reported the same.

Critical inputs–There was no variations in the application of D.A.P. (125 kg/ha) between farmers category and crops(Rice, wheat and sugarcane). The application of urea, pesticides and weedicides were high in medium category with all the crops as compared to semi-medium and marginal and small farmers. The application of FYM in sugarcane crop was 178, 222.1 and 255.88 qt/ha by marginal and small, semi-medium and medium group of farmer respectively (Table 3) . The adoption of green manure in rice crop was more in medium category as compared to semi-medium and marginal and small farmers.

Table 2. Use of seed, area and production of major crops

S. No.	Crops/Particulars	Categories of farmers		
		Marginal & Small n=36	Semi-Medium=32	Medium n=12
A.	**Rice**			
	1. Use of local seed	12(33.24)	6(18.72)	2(16.66)
	2. Use of HYV seed	24(66.48)	26(81.12)	10(83.30)
	3. % area used under rice	28.90	25.21	18.77
	4. Average seed(qt/ha) from local seed	43.86	46.6	45.59
	5. Average yield(qt/ha) from HYV seed	45.61	47.0	47.68
B.	**Wheat**			
	1. Use of local seed	25(69.25)	15(46.8)	3(24.99)
	2. Use of HYV seed	11(30.47)	17(53.04)	8(66.64)
	3. % area used under wheat	18.59	14.75	11.09
	4. % area under wheat after sugarcane	18.49	14.65	10.57
	5. Average yield(qt/ha) from local seed	21.87	25.0	26.25
	6. Average yield (qt/ha) from HYV seed	28.75	34.37	31.25
C.	**Sugarcane**			
	1. Use of Local seed	12(33.24)	4(12.48)	3(24.99)
	2. Use of HYV seed	24(66.48)	28(87.36)	9(74.97)
	3. % area used under sugarcane	51.14	57.40	64.84
	4. Average yield(qt/ha) from local seed	506.25	462.50	550.0
	5. Average yield (qt/ha) from HYV seed	601.30	538.70	559.10

Figures in parenthesis indicates percent

Table 3. Input use by farmers in different major crops

S. No.	Crops/Input used	Categories of farmers		
		Small & Marginal n=36	Semi-medium n=32	Medium n=12
A.	**Rice**			
	1. Use of FYM by % farmers	6(16.62)	—	—
	2. Use of Urea	36(100.0)	32(100.0)	12(100.0)
	3. Use of DAP	7(19.39)	9(28.08)	5(41.65)
	4. Use of Green manuring	2(5.54)	8(24.96)	4(33.32)
	5. Use of Chemicals	5(13.85)	7(21.84)	5(41.65)
	6. Use of FYM q/ha	100.0	—	—
	7. Use of Urea kg/ha	192.21	201.92	208.82
	8. Use of DAP kg/ha	125.0	125.0	125.0
B.	**Wheat**			
	1. Use of FYM by % farmers	—	—	—
	2. Use of Urea	36(100.0)	32(100.0)	12(100.0)
	3. Use of DAP	20(55.4)	19(59.28)	6(49.98)
	4. Use of Chemicals	—	—	2(16.66)
	5. Use of FYM qt/ha	—	—	—
	6. Use of Urea kg/ha	179.82	192.30	194.85
	7. Use of DAP kg/ha	125.0	125.0	125.0
C.	**Sugarcane**			
	1. Use of FYM by % farmers	36(100.0)	32(100.0)	12(100.0)
	2. Use of Urea	36(100.0)	32(100.0)	12(100.0)
	3. Use of DAP	24(66.48)	15(46.80)	10(83.3)
	4. Use of Chemicals	4(11.08)	6(18.72)	4(33.33)
	5. Use of FYM qt/ha	178.0	222.11	255.88
	6. Use of Urea kg/ha	245.83	255.09	257.32
	7. Use of DAP kg/ha	125.0	125.0	125.0

Figures in parenthesis indicates percent

Major Constraints–Table 4. revealed that the problem of fund was faced by 69.25 and 28.08 percent farmers of Marginal and small and semi-medium group respectively. In study area 84.24, 74.88 and 74.97 percent farmers indicated lacking technical know-how as one of the problem for higher production in marginal and small, semi-medium and medium group respectively, the findings is supported by Sharma and Sharma (1988). The problem of availability of input in time was faced by all category farmers. High price of fertilizers and chemical was another major constraints of production for all category. Lack of irrigation facility was also an important constraint which affected production adversely in marginal and small and semi-medium group. The shortage of electric supply was also another constraints for economic production in all category of farmers.

Table 4. Constraints experienced by the farmer

S. No.	Constraints	Category of farmers		
		Marginal & Small n=36	Semi-Medium=32	Medium n=12
1.	Shortage of funds	25(69.25)	9(28.08)	—
2.	Lack of technical knowledge	27(84.24)	24(74.88)	9(74.97)
3.	Untimely availability of inputs	2(5.54)	6(18.72)	4(33.32)
4.	Higher cost of chemicals	36(100.0)	32(100.0)	12(100.0)
5.	Higher cost of fertilizer	36(100.0)	32(100.0)	12(100.0)
6.	Lack of irrigation facility	19(52.63)	5(15.6)	— 7
7.	Shortage of electric supply	5(13.85)	26(81.12)	10(83.3)

Figures in parenthesis indicates percent

CONCLUSION

It may be concluded from the study that majority of the farmers posses an average land holding of 0.92 ha, with the poor communication aids. Under land utilization pattern the sugarcane was most important crop among the all categories viz. 64.84, 57.4 and 57.14 percent in medium, semi-medium and small group of farmers respectively. Under use of fertilizer dose the DAP was common among all the farmers while other organic and inorganic fertilizers were not equally applied. Only 17.5 percent farmers were using green manuring in rice crop. Problem of high price of chemical/ fertilizer were reported by all category of farmers followed by lack of technical knowledge.

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