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CONSTRAINTS CAUSING SERIOUS CONCERN TO RICE GROWERS IN BANSWARA DISTRICT OF RAJASTHAN

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ABSTRACT

In Rajasthan rice is grown in an area of 127803 lakh hectares with a production of 259624 lakh tonnes. The major rice growing districts are Banswara, Dungarpur, Kota, Bundi, Shri Ganganagar and Hanumangarh. Banswara district contributes maximum production in the southern Rajasthan, while the productivity is far below (1413 kg/ha) as against the state average of 1746 kg/ha (Status report, ARS-IVb, 2006-07). Therefore, the present study was conducted in Banswara district of southern Rajasthan. From this district two tehsils namely Kusalgarh and Bagidora were selected on the basis of maximum area under cultivation of rice. Total 150 rice growers (50 marginal, 50 small and 50 large farmers) were selected on the basis of proportionate sampling method from the identified tehsils for the present study.

The study revealed that 64 (42.66 %) of total rice producers faced medium level of constraints in adoption of rice production technology. Whereas, 39 (26.00 %) respondents were reported from the group of low constraints level and 47 (31.34 %) respondents were in the high constraints level. It was further noted that low price of produce at the time of harvesting, poor economic condition of the farmers, lack of proper market, scattered land holding and high insect pest incidence were major constraints perceived by large, small and marginal farmers in adoption of improved rice cultivation technology. There was significant difference among large, small and marginal farmers with respect to constraints perceived by them in adoption of rice production technology.

INTRODUCTION

India is the second leading producer of rice in the entire world, preceded only by China. Rice is grown extensively in India in about 43.77 million hectares area with an annual production of 96.43 million tonnes having an average yield of 2203 kg per hectare (Anonymous, 2008). Annual consumption is around 85 million tones.

In Rajasthan rice is grown in an area of 127803 lakh hectares with a production of 259624 lakh tonnes (Anonymous, 2008). The major rice growing districts are Banswara, Dungarpur, Kota, Bundi, Ganganagar and Hanumangarh. Banswara district contributes maximum production in the southern Rajasthan, while the productivity is far below (1413 kg/ha) as against the state average of 1746 kg/ha (Status report,ARS-IVb ,2006-07). This is due to cultivation of poor yielding local genotypes under rainfed and irrigated conditions. The soil and climatic condition of Banswara district is most suitable for rice cultivation and production of rice can be increased through timely adoption of recommended rice production technology by the farmers. Adoption of rice production technology may be increased by overcoming the constraints faced by the rice growers. Therefore preent study was undertaken to identify the constraints faced by rice growers in Banswara district of Rajasthan.

RESEARCH METHODOLOGY

The present study was conducted in Banswara district of Southern Rajasthan. There are total five tehsils in Banswara district of Rajasthan, out of which two tehsils namely Kushalgarh and Bagidora have been selected on the basis of maximum area under cultivation of rice. A complete list of all the major rice growing villages was prepared in consultation with the personnel of revenue and agriculture department from the identified tehsils. From the list so prepared, five villages from each identified tehsil were selected

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on the basis of random selection technique. For selection of respondents, a comprehensive list of rice growers was prepared with the help of village Patwari and agricultural supervisor of respective village. Total 150 rice growers (50 marginal, 50 small and 50 large farmers) were selected on the basis of proportionate sampling method from the identified villages for the present study. Relevant information was collected through face to face contact method. The statistical tests *viz;* per cent, mean per cent score, rank, standard deviation and F Test were used in the data analysis.

RESULTS AND DISCUSSION

Distribution of rice growers according to level of constraints faced by them in rice cultivation:

To get an overview of the rice growers regarding the constraints encountered by them in adoption of recommended rice cultivation technology, they were categorized in low, medium and high level of constraints on the basis of calculated mean and standard deviation of the score given to the constraints by the respondents.

The data in Table 1 reveal that 64(42.66%) of total rice producers faced medium level of constraints in adoption of rice production technology. Whereas, 39 (26.00%) respondents were reported from the group of low constraints level and 47 (31.34%) respondents were in the high constraints level. While analyzing the case of large, small and marginal respondents regarding constraints in adoption of improved rice production practices, it was reported that 10 (20.00%) large farmers were in the high constraints level and 16 (32%) large farmers in the low constraints group, while 48.00 per cent large farmers were found in the medium level constraints category. Likewise 44.00, 30.00 and 26.00 per cent small farmers faced medium, high and low level of constraints respectively. In case of marginal farmers it was observed that 44.00, 36.00 and 20.00 per cent respondents had high, medium and low level of constraints in adoption of recommended rice cultivation practices.

Table 1: Distribution of farmers according to level of constraints faced by them in rice cultivation(n=150)

S. No.	Levelof constraints	Large farmers		Small farmers		Marginal farmers		Total	
		f	%	f	%	f	%	f	%
1.	Low(<59.25)	16	32.a00	13	26.00	10	20.00	39	26.00
2.	Medium (59.25-86.80)	24	48.00	22	44.00	18	36.00	64	42.66
3.	High(>86.80)	10	20.00	15	30.00	22	44.00	47	31.34
	Total	50	100.00	50	100.00	50	100.0	150	100.0

f = Frequency, % = Per cent

It can be inferred that majority of large and small farmers fell under category of medium level of constraints regarding adoption of recommended rice production technology. Whereas, majority of marginal farmers were under high level of constraints as compared to large and small farmers.

Constraints perceived by the farmers in adoption of recommended rice cultivation practices

Data presented in Table 2 reveal that "low price of produce at the time of harvesting" was expressed as one of the most important constraints and ranked first by marginal, small and large farmers with 93.11, 91.11 and 89.32 per cent respectively. It means that farmers of all the three categories wants remunerative price of rice produce at the time of harvesting in the study area. The next important constraints like "Poor economic conditions of the rice growers for purchasing of inputs", "lack of proper market in the area" which were also expressed as important constraints by all the categories of farmers and ranked second and third respectively in the priority of constraints. The problem related to poor economic condition of the rice growers might be because of the reason that research area is in tribal dominated dis-

Table 2: Constraints perceived by the farmers in adoption of recommended rice cultivation practices (n=150)

S.No.	Constraints	Marginal Farmers		Small Farmers		Large Farmers		Total	
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank
1.	Lack of knowledge about rice cultivation technology	37.59	15	32.42	15	36.67	15	35.56	15
2	In non-availability of inputs at their locality	66.54	8	63.33	8	61.16	8	63.67	8
3	Lack of knowledge about High Yielding Varieties	46.54	13	43.22	13	39.22	13	42.99	13
4	Seed treatment is complex in nature	41.17	14	38.44	14	37.65	14	39.08	14
5	Poor economic conditions of the rice growers for purchasing of inputs	92.23	2	90.45	2	87.78	2	90.15	2
6	Non- availability of high yielding seeds	61.11	9	57.77	9	57.32	9	58.73	9
7	High cost of plant protection measures	56.67	10	53.13	10	52.22	10	54.00	10
8	Non availability of irrigation water in time	32.11	16	29.43	16	26.56	16	29.36	16
9	Unavailability of electricity for water lifting from well and tube well	28.88	17	24.17	17	22.32	17	25.12	17
10	High cost of improved seeds	70.02	7	66.96	7	65.44	7	67.47	7
11	Lack of improved storage structure	50.33	11	51.17	11	49.54	11	50.34	11
12	Inadequate facility for nursery raising	47.54	12	48.87	12	45.45	12	47.28	12
13	Low price of produce at time of harvesting	93.11	1	91.11	1	89.32	1	91.18	1
14	Lack of proper market in the area	87.98	3	86.43	3	88.42	3	87.61	3
15	High insect pest incidence	76.55	5	77.90	5	71.23	5	74.12	5
16	Poor produce procurement policy of government	20.16	18	19.33	18	17.89	18	19.12	18
17	Improper transport facilities	72.91	6	73.33	6	67.93	6	71.39	6
18	Scattered land holding	84.99	4	81.22	4	79.77	4	81.99	4

MPS = Mean per cent score

trict of Rajasthan so that majority of the farmers are poor in economic condition and they can't purchase the costly inputs for crops.

Further analysis of Table 2 reveals that "scattered land holding" was also perceived as important constraint by the marginal, small and large farmers with MPS 79.77, 81.22 and 84.99 respectively and it was ranked fourth by all the categories of respondents. Likewise, the constraints "high insect-pest incidence" and "improper transport facilities" were considered as major constraints in adoption of rice cultivation technology by the respondents and ranked fifth and sixth in the priority of constraints by the rice growers in the study area.

Table also shows that "high cost of improved seeds", "timely non-availability of inputs at their locality", "non- availability of high yielding seeds", " high cost of plant protection measures", " lack of improved storage structure", and " inadequate facility for nursery raising" were also important constraints considered by the rice growers in adoption of rice cultivation technology. The overall mean percent score of these constraints was 67.47, 63.67, 58.73, 56.00, 50.34 and 47.28 respectively. The least important constraint faced by the respondents was "poor produce procurement policy of government" with overall MPS 19.12. The last priority given to this constraint may be because of the reason that majority of the farmers were not acquainted with the procurement policy of government in the study area.

From the above discussion it could be concluded that low price of produce at the time of harvesting, poor economic condition of the farmers, lack of proper market in the area, scattered land holding and high insect pest incidence were major constraints perceived by large, marginal and small farmers in adoption of improved rice cultivation technology in the study area.

The present findings are in line with the findings of Balasubramani *et al.* (2005) found that inadequate organic matter, occurrence of weeds, high pest incidence, low plant population, inadequate irrigation water, high rate of credit and scattered land holding, non-availability of improved seed and poor quality of seed were the major constraints perceived by the farmers in adoption of improved paddy cultivation technology.

Comparison of constraints among large, small and marginal farmers in adoption of recommended rice cultivation technology

Analysis of variance (F test) was applied to find out the significance of variance among large, small and marginal farmers with respect to constraint perceived by them in adoption of rice cultivation technology. The result of ANOVA computed for this purpose are presented in Table 3.

Table 3 reveals that calculated 'F' value (3.54) is higher than tabulated 'F' value at 5 per cent level of significance and 2 degree of freedom. So the result is statistically significant. Thus, null hypothesis (NH_{01}) was rejected and alternate hypothesis RH_1 entitled "There is significant difference among large, small and marginal farmers about constraints in adoption of improved rice cultivation technology" was accepted. It means that there was significant variation among all categories of rice growers with respect to constraints perceived by them in adoption of rice production technology.

Table 3: Analysis of variance among large, small and marginal farmers in adoption of recommended rice cultivation technology

S. No.	Source of variation	D.F.	S.S.	M.S.S.	'F' cal
1.	Between the category of farmers	2	167.81	83.91	3.54*
2.	Within the categories of farmers	147	3480	23.67	
	Total	149	3647.81		

* Significant at 5 per cent level of significance

The variation among the categories of rice growers may be due to the fact of higher socio-economic status, risk-bearing capacity and innovativeness among large farmers in comparison with small and marginal farmers.

CONCLUSION

From the above discussion it can be concluded that 42.66 per cent respondents faced medium level of constraints in adoption of rice production technology. Whereas, 26.00 and 31.34 per cent respondents possessed low and high level of constraints respectively. It was also concluded that low price of produce at the time of harvesting, poor economic condition of the farmers, lack of proper market in the area, scattered land holding and insect pest incidence were major constraints perceived by the rice growers in adoption of improved rice cultivation technology in the study area.

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