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Constraints Faced by the Farm Women in Adoption of Improved Maize Production Technologies

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Abstract

The present study was planned to study the constraints faced by the farm women in adoption of improved maize production technologies. The study was conducted in purposively selected Badgaon and Girwa panchayat samiti of Udaipur district, Rajasthan. Total 4 villages were selected on the basis of random sampling technique. A sample of 30 farm women from each village was selected for the study. The total sample of study consisted of 120 farm women. For accomplishing the present investigation, interview technique was used to collect information from the rural women. Findings revealed that among all the constraints economic constraints were the most severe with MPS 32.81 and rank I. The other constraints faced by the respondents were institutional constraints with MPS 29.79 (rank II), service supply with MPS 10.83 (rank III) and technical constraints with MPS 10.75 (rank IV). None of the respondents faced operational constraints.

Key words : *Farm women, organic farming, constraints*

Introduction

Maize is one of the most versatile emerging crops with wider adaptability in different agro- climatic conditions. Globally, maize is known for highest genetic yield potential among the cereals. it is cultivated in about 160 international locations having wider range of soil, weather, biodiversity and control practices that contributes 36 per cent in the international grain production.

The poor performance of the agricultural sector observed in recent times had partly been blamed on low technology adoption and lack of modernization of agricultural practices. The farmers are also facing several constraints in adoption of improved crop production and post-harvest technologies. (1) highlighted that apart from lack of knowledge the farmers faced several other constraints in adoption of improved crop production and post-harvest technologies. Since very sporadic work has been done in Rajasthan specifically with regard to the adoption of improved maize production and post-harvest technologies, it is essential to know whether farm families are aware of improved maize production and post-harvest technologies or not to what extent they have adopted the improved technologies recommended by scientists and what are the constraints faced by farmers in adopting the technologies.

Research and extension are two important pillars of agricultural development. During the post- independence period, considerable research efforts were made in the country, resulting in a noticeable increase in agricultural production. Intensive efforts by scientists have led to the development of improved maize varieties that have a much higher production potential compared to local ones. Similarly, the extension scientists of KVKs/ field functionaries under Broad Based Agriculture Extension System are actively engaged in dissemination of technologies among the farming community. Despite active involvement of research and extension scientists, the expected results in crop productivity could not be achieved and there exists a vast gap in productivity between the highest yield recorded at the farmer's field and those representing the mean performance in the state. In addition, various pre-harvest and post-harvest operations result in significant losses of food grains. Till now no systematic research efforts have been made to know the constraints faced by the farm women in adoption of improved maize production technologies. Therefore, it becomes essential to find out the constraints faced by the farm women in this regard.

Research Methodology

The present study was conducted in Udaipur district of Rajasthan. Two Panchayat samities were selected purposively from the district. For selection of sample, two villages from each panchayat samiti i.e. Madar and Brahmano ki Hundar from Badgaon panchayat samiti and Pai and Peepalawas from Girwa panchayat samiti were selected randomly. A list of farm women was prepared separately for each village with the help of Krishi Vigyan Kendra (KVK), Badgaon. From the list, 30 farm women from each village were selected for the study. The total sample of the study consisted of 120 farm women. To collect the required information the personal interview

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Table-1 : Technical constraints faced by the respondents in adoption of improved maize production technologies. n=120

S. No.	Constraints	To a great extent		To some extent		Not at all		MPS
		f	%	f	%	f	%	
1.	Lack of training facility for acquiring new technology	0	0.00	66	55	54	45	18.33
2.	Not sure that hybrid will give higher yield	0	0.00	45	37.50	75	62.50	12.50
3.	Poor germination of hybrid seeds	0	0.00	58	48.33	62	51.67	16.11
4.	Hybrid seeds requires high amount of fertilizer	0	0.00	0	0.00	120	100	0.00
5.	Hybrid seeds requires more number of irrigation	0	0.00	0	0.00	120	100	0.00
6.	Agriculture supervisor not able to solve technical problems	0	0.00	45	37.50	75	62.50	12.50

Table-2 : Service supply constraints faced by the respondents in adoption of improved maize production technologies. n=120

S. No.	Constraints	To a great extent		To some extent		Not at all		MPS
		f	%	f	%	f	%	
1.	Unavailability of improved seeds in time	0	0.00	59	49.17	61	50.83	16.39
2.	Non availability of improved implements	0	0.00	76	63.33	44	36.67	21.11
3.	Unavailability of adequate fertilizers	0	0.00	0	0.00	120	100	0.00
4.	Unavailability of insecticides, pesticides	0	0.00	31	25.83	89	74.17	8.61
5.	Unavailability of labor	0	0.00	68	56.67	52	43.33	18.89
6.	Inadequate and untimely rainfall	0	0.00	0	0.00	120	100	0.00

Table-3 : Economic constraints faced by the respondents in adoption of improved maize production technologies. n=120

S. No.	Constraints	To a great extent		To some extent		Not at all		MPS
		f	%	f	%	f	%	
1.	Lack of finance facility	0	0.00	84	70	36	30	23.33
2.	Low price of maize in the market	120	100	0	0.00	0	0.00	66.67
3.	Higher cost of inputs like seeds, fertilizers and chemicals	0	0.00	120	100	0	0.00	33.33
4.	High labor charges	0	0.00	68	56.67	52	43.33	18.89
5.	Fragmented land holding	0	0.00	0	0.00	120	100	0.00
6.	Poor net return as compared to pulses crops	0	0.00	120	100	0	0.00	33.33
7.	High cost of farm implements	120	100	0	0.00	0	0.00	66.67
8.	High rate of interest on loan taken by using kisan credit card	0	0.00	73	60.83	47	39.17	20.28

technique was used by the researcher. After establishing good rapport with the respondents, data were collected by the researcher with the help of developed interview schedule in an informal manner using local dialect.

Results and Discussion

Constraints are barriers or obstacles that maize growers saw as standing in the way of implementing improved maize production technologies. Finding the main obstacles preventing the respondents from adopting more advanced maize production technologies seemed necessary. The constraints were categorized under technical constraints, service-supply constraints, economic constraints, institutional constraints and operational constraints. The results of the study are presented in table-1 to 5.

With regard to technical constraints faced by farm women, the data in Table 1 reveals that more than half of the respondents (55%) faced constraints regarding lack of training for acquiring new skills for better and improved maize production technologies as most of the respondents were not able to attend such trainings due to some extra household tasks, whereas 48.33 per cent of the respondents faced problems related to poor germination of hybrid seeds.

Data in Table-1 further revealed that more than one third of the respondents (37%) hesitated to opt hybrid seed for maize as they were not sure if the hybrid seeds would give high yield or not. On an average score, 37.50 per cent respondents with MPS 12.50 reported that they found difficulty in contacting directly to agricultural supervisors as the trainings are mostly conducted at KVKs. The findings are in line with the study conducted by (2, 3) in which he stated that major constraints faced by farmers in maize cultivation were low income, low or erratic rainfall, lack of technical knowledge, high cost of seed, low soil fertility and lack of technical knowledge.

The observation from Table-2 clearly depicted that 49.17 per cent respondents faced difficulty in procuring of improved seeds on time with MPS 16.39, 63.33 per cent

Table-4 : Institutional constraints faced by the respondents in adoption of improved maize production technologies. n=120

S. No.	Constraints	To a great extent		To some extent		Not at all		MPS
		f	%	f	%	f	%	
1.	Lack of training to the agricultural supervisors	0	0.00	69	57.50	51	42.50	19.17
2.	Lack of active local leaders	0	0.00	120	100	0	0.00	33.33
3.	Lack of women extension personnel at village level	0	0.00	120	100	0	0.00	33.33
4.	Inadequate no. of training for farm women	0	0.00	120	100	0	0.00	33.33

Table-5 : Operational constraints faced by the respondents in adoption of improved maize production technologies. n=120

S. No.	Constraints	To a great extent		To some extent		Not at all		MPS
		f	%	f	%	f	%	
1.	Lack of co-ordination among farm women	0	0.00	0	0.00	120	100	0.00
2.	Damage of maize field due to bulls	0	0.00	0	0.00	120	100	0.00

Table-6 : Overall constraints faced by respondents in adoption of improved maize production technologies. n=120

S. No.	Constraints	MPS	Rank
1.	Technical constraints	10.75	IV
2.	Service supply constraints	10.83	III
3.	Economic constraints	32.81	I
4.	Institutional constraints	29.79	II
5.	Operational constraints	00	V

respondents expressed that to some extent there was non-availability of improved implements with MPS of 21.11 followed by 25.83 per cent respondents stated that they found constraints regarding unavailability of insecticides and pesticides with overall MPS 8.61 and about 56.67 per cent respondents faced difficulty in labor unavailability with MPS 18.89. According to (4) the main constraints faced by farmers in maize production were poor cash flow, inadequate farm tools, poor extension service, drought and pests. Striga was considered as the most important pest followed by termites.

Table-3 shows economic constraint faced by respondents in adoption of improved maize production technologies, majority of the respondents (70%) with MPS 23.33 stated that they face lack of finance facility due to which they were not able to purchase newer varieties. The other constraints particularly faced by the respondents were low price of maize in the market and higher cost of inputs like seeds, fertilizers and chemicals with MPS 66.67 and 33.33 respectively. More than half of the respondents (56.67%) faced difficulty during the season as in peak season labor charges become high. Further, cent per cent respondents (100%) reported that they faced the problem of poor net return as compared to soybean/black gram along with high cost of farm implements and high rate of interest on loan taken by using kisan credit card with an overall MPS of 33.33, 66.67 and 20.28, respectively. The findings are in line with the study conducted by (5) who stated that barriers to the adoption of maize production technologies included high labor cost, fragmented land holdings, high cost of farm implements and agricultural inputs.

With regards to institutional constraints data presented in Table-4 depicts that major constraints experienced by all the respondents (100%) was inadequate number of trainings for farm women, lack of women extension personnel at village level and lack of active local leaders with overall MPS score of 33.33. Lack of training to the agriculture supervisors was faced by 57.50 per cent respondents with MPS 19.17.

Regarding operational constraints, none of the respondents faced problems like lack of co-ordination among farm women and damage of maize field due to bulls (Table-5). (5) studied the challenges faced by farm families in implementing improved maize production technologies and found that primary challenge for farm families was the blue bulls' destruction of the maize field due to improper fencing (96.11 MPS). Other barriers to the adoption of better post-harvest and maize production technologies by farm families included high labour costs (93.06 MPS), lack of labour, fragmented land holdings (91.11 MPS), high costs of farm implements (87.50 MPS) and agricultural inputs (83.89 MPS).

Table-6 reveals that among all the constraints economic constraints were the most severe with MPS 32.81 and rank I. The other constraints faced by the respondents were institutional constraints with MPS 29.79 (rank II), service supply with MPS 10.83 (rank III), technical constraints with MPS 10.75 (rank IV). None of the respondents faced operational constraints. According to (1) two main factors lowering maize productivity were the lack of improved seed and the lack of production inputs. About 80 per cent of the respondents indicated

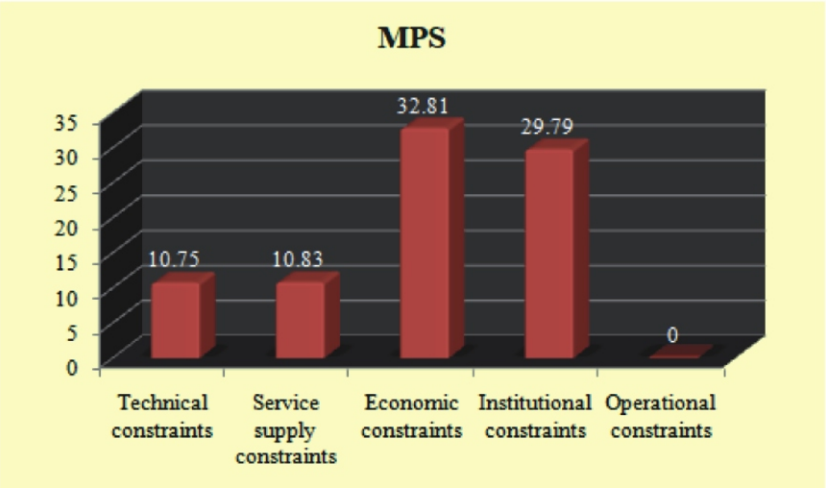

Figure-1 : Constraints faced by respondents in adoption of improved maize production technologies.

that volatile grain prices were the main market constraint and 46 percent of respondents stated that Northern corn leaf blight was a significant issue.

Conclusion

The most important constraints faced by the respondents were technical constraints, service-supply constraints, economic constraints, institutional constraints and operational constraints. Among all the constraints economic constraints were the most severe with MPS 32.81 followed by institutional constraints with MPS 29.79, service supply with MPS 10.83 and technical constraints with MPS 10.75. None of the respondents faced operational constraints.

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