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Farmers perspective, farmer's management and farmers participation in pulses production

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Abstract

The study was conducted in Natren block of Vidisha district in the Vindhyan Plateau in 2017 in order to know the farmers' perspective, management and participation in pulses crop production. The study revealed that major reason for low production of pulses as per farmers perspective was unawareness regarding improved pulse crop production technology. Farmers management was not appropriate regarding improved varieties, fertilizers, insecticides, fungicides and majority of respondents had high level of extension participation. Farmers' perspective and farmers' management were found to be non-significant whereas farmers' participation in extension activities was significant with the low yield of pulses.

Keywords: Farmers' perspective, management, participation and pulses

1. Introduction

As agriculture is facing a big challenge in the Vindhyan Plateau of Madhya Pradesh, farmers are focusing on alternate and immediate profit gaining activities from agriculture. Several participatory approaches have been evolved with a view to develop relevant and viable technologies for production system comprising complete knowledge about its existing farming system. Also the technology cannot be evaluated alone in terms of its conformity to the socio-economic and cultural aspects of the users. Since the farmer is the target of adoption of any technology regarding agricultural production, their perspective, management and participation should be known before the transfer of technology.

Historically, Madhya Pradesh has been the major pulse producing state accounting 23% of total pulse production in the country followed by Uttar Pradesh (18%), Maharashtra (14%), Rajasthan (11%) and Andhra Pradesh (9%). In 2013-14 Madhya Pradesh has produced 4.3 million tonnes of pulses. It ranked first both in terms of area (19.8%) and production of pulses in India. Over 20 per cent of the Gross Cropped Area (GCA) of M.P. is under pulses. Though ranked first in terms of area and production, it ranked sixth in terms of average yield.

Also, it is expected that the area under cultivation of pulses in the next season will also go up to about 46 lakh hectares, up from the 38 lakh hectares last year. The main pulses sown in the rabi season are gram, tewda and masoor. Besides this, another 2 lakh hectares was under moong cultivation in the summer months as part of a third crop that has become possible due to release of water from certain reservoirs in the state. The total increase in cultivated area under pulses is expected to be about 18 lakh hectares by the end of the year.

The added area, as per the agriculture department, will contribute to increase in production and will in fact reduce the shortfall of pulses in the country by half. "The annual production of pulses in MP stands at about 50-54 lakh tonnes which is expected to go up to about 75 lakh tonnes,

Pulses, especially arhar and urad has fetched farmers a higher price and an assured market. Moreover, the failure of the soybean crop to deliver in the last few years has also contributed to the shift. That's why the farmers in MP are diverting towards pulse cultivation. Since the farmer is the target of adoption of any technology regarding agricultural production, their perspective, management and participation should be known before the transfer of technology. Keeping this in view the study was undertaken with the following objectives:

1. To study the farmers' perspective regarding low yield of pulses.
2. To study the farmers' management in pulses cultivation.
3. To know the farmers' participation in the extension activities.

2. Materials and Methods

The study was conducted in three villages of Natren block of Vidisha district in the Vindhyan Plateau namely Johad, Khejra and Hasanpur. The data were collected personally through Participatory Rural Appraisal (PRA) and observation of the crop in the field. A total of 75 respondents constituted the sample. These respondents were divided into three categories i.e. 25 in Pigeon pea, 32 in Gram and remaining 18 in Black gram. The reasons of low yield were observed through farmers' perspective, farmers' management and farmers' participation. Farmers' perspective was analysed

with the help of personal observation and preparing problem cause diagram. Farmers' management was measured through the observation of crop condition, farmers' practices in the three crops and collected yield data. Level of participation was measured with the three point continuum like most preferred, preferred and average and scored as 3, 2 and 1 respectively. The scores obtained by a participant for all dimensions were summed and participation index was developed.

3. Results

Table 1: Distribution of respondents on the basis of farmers' perspective.

S.N.	Farmer's perspective	Low yield			Total N=75
		Pigeon pea	Gram	Black gram	
		N=25	N=32	N=18	
1	Unawareness regarding improved pulse crop production technology	20 (80.00)	28 (87.50)	13 (72.22)	61 (81.33)
2	Focus only on more and immediate profit	16 (64.00)	21 (65.50)	06 (33.30)	43 (57.33)
3	Lack of technical knowledge	12 (48.00)	16 (50.00)	08 (44.40)	36 (48.00)
Figures in parenthesis indicate percentage		χ^2_{tab} at 0.5 level and 4 d.f. is 9.488		χ^2_{cal} at 0.5 level and 4 d.f. is 1.545	
Hence, test is Non-Significant					

Table 2: Distribution of respondents according to their management about pigeon pea, gram and black gram cultivation.

S.N.	Farmers' management	Low yield			Total N=75
		Pigeon pea	Gram	Black gram	
		N=25	N=32	N=18	
1.	No use of improved varieties	23 (92.00)	30 (93.75)	15 (83.33)	68 (90.66)
2.	Imbalanced use of fertilizers	19 (76.00)	20 (62.50)	12 (66.66)	51 (68.00)
3.	Low dose of insecticides	01 (04.00)	28 (87.50)	14 (77.71)	43 (57.33)
4.	Improper use of fungicides for seed treatment	18 (72.00)	18 (56.25)	07 (38.88)	43 (57.33)
5.	Improper use of seed storage	12 (48.00)	18 (56.25)	06 (33.33)	36 (48.00)
Figures in parenthesis indicate percentage		χ^2_{tab} at 0.5 level and 6 d.f. is 12.592		χ^2_{cal} at 0.5 level and 6 d.f. is 7.9778	
Hence, test is Non-Significant					

Table 3: Distribution of respondents according to their level of participation in the extension activities.

S.N.	Level of participation	Frequency	Percentage
1	Low (4-6)	12	16.00
2	Medium (7-9)	28	37.33
3	High (10-12)	35	46.66
χ^2_{tab} at 0.5 level and 2 d.f. is 0.010		χ^2_{cal} at 0.5 level and 2 d.f. is 11.12	
Hence, test is Significant			

4. Discussion

Table 1 shows that the unawareness of pulse crop production was the pivotal reason for low yield of pigeon pea, gram and black gram with 80.00, 87.50 and 72.22 per cent respectively. The second major reason for the low yield was the farmers focus on more and immediate profit with 64.00, 65.50 and 33.30 per cent respectively. Lack of technical knowledge was the least reason for low productivity of the pulses with 48.00, 50.00 and 44.40 per cent respectively. Similar findings were reported by Dolli *et al.* (1995) [1]. The association between the farmers' perspective and low yield of the pulses was found to be non-significant. Hence, it can be concluded that there is no significant relation between farmers' perspective and the low yield of pulses.

Table 2 reveals that all the respondents were adhered to no use of improved varieties in all three crops. The respondents

had used imbalanced fertilizer in pigeon pea (76.00%), gram (62.50%) and black gram (66.66%). The low dose of insecticides was followed by 04.00, 87.50 and 77.71 per cent of respondents in case of pigeon pea, gram and black gram respectively. However, 72.00, 56.25 and 38.88 per cent of farmers had improper use of fungicides for seed treatment in the pulse respectively. The respondents had gone through improper use of seed storage (48.00%) Pigeon pea, gram (56.25%) and black gram (33.33%). Farmers' management is found to be non-significant with the low yield of pulses.

It is evident from the table 3 that majority of the respondents had high level of participation (46.66%) followed by medium (37.33%) and low (16.00%) level in extension activities respectively. The farmers' participation in extension activities is found to be significant with low yield of pulses. Therefore,

it can be concluded that farmers' participation in extension activities has significant relation with the low yield of pulses.

5. Conclusion

The study brought out the reasons for the low yield of pigeon pea, gram and black gram in farmers' perspective, farmers' management and farmers' participation in the pulses production. Therefore, it can be concluded from the above findings that analysis of farmers' perspective, farmers' management and farmers' participation is crucial for success of any transfer of technology programme like front line demonstrations, trainings and others extension activities.

6. References

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