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Constraints faced by Beneficiary Farmers in Adoption of Improved Chickpea Production Technology in Malwa Pleatue of Madhya Pradesh

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ABSTRACT

The present study was under taken in the Malwa Plateau Agro-climatic zones of Madhya Pradesh where chick pea is one of the most important pulse crops and covers highest area. A list of villages where CFLD pulses programme was implemented for the last five year was taken from the respective KVKs. 15 beneficiary farmers and 15 non beneficiary farmers were selected randomly from each village. Thus, total 120 beneficiary and 120 non-beneficiary farmers were selected for the study. An ex-post facto research design was used. It was found that, majority of the problems faced by chickpea growing farmers were related to production constraints. Majority of the chickpea grower's reported that high infestation of insect,disease (91.66%) with rank I followed by non availability of fertilizers at proper time (85%) with II rank ,unfavourable weather condition (81.66%) with III rank, incidence of weeds menace (79.16%) with IV rank, not availability of loan at proper time (55.83%) with V rank, not available of seed at time (52.50%) with VI rank, lack of proper resource and money (50.83%) with rank-VII, high cost of agricultural inputs (46.67%) with the rank-VIII, lack of good quality of seeds with the rank-IX .

Kew Words: Adoption, Improved Practices, Production Technology, Constraints.

INTRODUCTION

In India, owing to its diverse agro-climatic conditions, pulses are grown throughout the year and plays an important role in crop rotation, mixed and inter-cropping, maintaining soil fertility through nitrogen fixation, release of soil-bound phosphorus and thus contribute significantly to sustainability of the farming systems. In the production process, pulses require less water than cereals. Cluster Front Line demonstrations (CFLDs) is a unique approach to provide an direct interface between researcher and farmers as the scientists are directly involved in planning, execution and monitoring of the demonstrations. Bhargav *et al* (2018) reported that Chickpea is mainly grown during *Rabi* season in India under diverse production systems including both rain fed and irrigated, but its maximum area and production is mostly confined to Madhya Pradesh, Rajasthan, Maharashtra, Karnataka, Andhra Pradesh and Uttar Pradesh. In Madhya Pradesh chickpea occupy 2.6 M ha area which contribute 2.8 MT production, but average productivity is very low as compared to potential yield. Indian government imports large quantity of pulses to fulfill domestic requirement of pulses (Khedkar *et al* , 2017). Singh (2018) reported that decline in area under chickpea in Tal area of Patna was due to various constraints like low yield, low market price, time factor, late maturity, high infestation by insect, pest and diseases and use of local seed . Singh and Kumawat (2019) revealed that the farmers had poor knowledge about soil treatment, high yielding varieties and bio-fertilizer, while

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Table 1. Constraints faced by chickpea growers.

Sr.No.	Constraint	No. of chickpea growers	Percentage	Rank
A	**Production constraint**			
1.	High infestation of insect,disease.	110	91.66	I
2.	Non availability of fertilizers at proper time	102	85.00	II
3.	Unfavourable weather condition	98	81.66	III
4.	Incidence of weeds menace.	95	79.16	IV
5.	Not availability of loan at proper time	67	55.83	V
6.	Not availability of seed at time	63	52.50	VI
7.	Lack of proper resource and money	61	50.83	VII
8	High cost of agricultural inputs	56	46.67	VIII
9	Lack of good quality of seeds	54	45.00	IX
B	**Technical constraint**			
10.	Lack of knowledge on location specific improved varieties of chickpea	80	66.66	I
11.	Lack of knowledge about improved technology	58	48.33	II
12	Lack of trainings / demonstration for improved agriculture	55	45.83	III
13.	Lack of cooperation and demotivation of agriculture extension officer and workers for field survey.	51	42.50	IV
14.	Lack of irrigation facilities	48	40.00	V
15.	Lack of information	38	31.67	
C	**Marketing constraints**			
16.	Lack of knowledge about proper place of marketing.	110	91.67	I
17.	In sufficient storage facilities.	95	79.16	II
18.	Lack of cooperative marketing organization.	92	76.67	III
19	Lack of market facilities	90	75.00	IV
20.	Low market price of product	85	70.83	V
21.	Loading charges has to be bear by the growers.	83	69.17	VI
22.	Less transportation facilities	80	66.67	VII

majority of them had knowledge about critical stage of irrigation. The majority of the respondents had awareness regarding recommended doses of manures and fertilizer, biofertilizer, seed rate, improved varieties, spacing and method of sowing. Likewise, Teggelli *et al* (2017) revealed

variation in the yield obtained probably due to variation in agro-climatic parameters under rain-fed conditions. The highest yield of FLDs plots of chick pea achieved by adopting improved production technology was 12.87q/ha compared to farmers' practice (10.06 q/ha). Hence, the study was conducted to know the constraints faced by chickpea producers in malwa plateau agro-climatic zone of Madhya Pradesh .

MATERIALS AND METHODS

The present study was under taken in the Malwa Plateau Agro-climatic zones of Madhya Pradesh. Among all 8 KVKs in Malwa Plateau Agro-Climatic Zone *i.e.,* Indore, Dewas, Ujjain, Shajapur, Rajgarh, Ratlam, Mandsaur and Neemuch; four KVKs were selected randomly. Two villages from each KVK ,one village at nearest vicinity and other village at remote vicinity from each KVK were selected for the present study. Thus, total eight villages were selected for the study. A list of villages where CFLD pulses programme was implemented for the last five year was taken from the respective KVKs. 15 beneficiary farmers and 15 non beneficiary farmers were selected randomly from each village. Thus, total 120 beneficiary and 120 non-beneficiary farmers were selected for the study. An ex-post facto research design was used to explore or search through a problem or situation to provide insights and understanding in the investigation. The responses were scored on 4 points scales fitting to the statements as very much (4), much (3) not so much (2) and not at all (1) important. Based on mean score values, ranking was done regarding different constraints faced by the chick pea growers.

RESULTS AND DISCUSSION

The constraints analysis reported based on the opinion survey of the sample Chickpea growers. Several constraints barring the sustainable production were related to resources management, faults and stresses of a biotic and biotic nature. The farmer's opinion obtained regarding the factors affecting adversely production as well as non adoption of various improved chickpea production technology and practices are presented in table 1.

It was found that in case of production constraints majority of the chickpea grower's reported that high infestation of insect,disease (91.66%) with rank I followed by non availability of fertilizers at proper time 85% with II rank ,unfavourable weather condition 81.66% with III rank, incidence of weeds menace 79.16% with IV rank, not availability of loan at proper time 55.83% with V rank, not available of seed at time 52.50% with VI rank, lack of proper resource and money 50.83%with rank-VII, high cost of agricultural inputs 46.67%with the rank-VIII, lack of good quality of seeds with the rank-IX.

In case of technical constraints most of them had lack of knowledge on location specific improved varieties of chickpea 66.66% with the rank -I followed by 48.33% farmers had lack of knowledge about improved technology with the rack-II, lack of training/ demonstration for improve the agriculture 45.83% with the rank -III, lake of cooperation and de-motivation of agriculture extension officer and workers for field survey 42.50% with the rank-IV lake of irrigation facilities 40% with the rank-V, lake of information 31.67% with the rank -VI respectively.

Similarly in case of marketing constraints majority of farmers reported lack of knowledge about proper place of marketing 91.67% with the rank-I, followed by insufficient storage facilities 79.16% with the rank -II, lack of cooperative marketing organization 76.67% rank -III, lack of market facilities 75% rank-IV ,low market price of product 70.83% with the rank -V, loading charges has to be bear by the growers 69.17% with the rank -VI and less transportation facilities 66.67% rank-VII respectively. These results were in agreement with Asrat *et al* (2022).

CONCLUSION

It can be concluded that during the chickpea production technology farmers faced several constraints, such as- production, technical, and marketing constraints. It was found that, majority of the problems faced by chickpea growing farmers were related to production constraints. Further, it was also revealed that, majority of the innovative farmers faced issues like demotivation from others, lack of awareness

about financial support, lack of technical guidance, lack of timely guidance and unavailability of proper storage facility for produce. Hence, the findings indicated that farmers are keen to innovate more but due to various constraints improved chickpea production technologies.

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