

CONSTRAINTS IN PULSES CULTIVATION AS PERCEIVED BY THE FARMERS

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ABSTRACT

The present study was conducted in Ranbir Singh Pura block of Jammu district as a sample of 80 pulse growing farmers. The results revealed that the main constraints faced by pulse grower were non availability of improved variety seeds, manure and fertilizers in time, lack of knowledge regarding weed control and back of regulated market for sale.

INTRODUCTION

Pulses constitute an important group of food plaths in the world. They are the most important source of proteins not only for human population but also for herbivores. Pulses contribute substantially to food production system by enriching the soil through biological nitrogen fixation and improving soil physical conditions. They are rightly called unique jewels' of Indian crop husbandry. Their inclusion in the cropping system by Indian farmers is responsible for maintaining soil productivity. The major states in India where pulses are grown are Madhya Pradesh, Uttar Pradesh, Maharashtra, Orissa, Bihar, Karnataka and Andhra Pradesh. India has the largest cultivated area under pulses but the production and productivity is the least. The total production decreased from 14.26 million tones in 1990-91 to 13.38 million tones in 2004-05. The productivity of pulses is 622 Kg/ hectare. The per captia net availability of pulses in India was as high as 60.7 gm/day in 1950-51, it declined to almost half of what it was five decades ago. In 2006, per captia net availability of pulses was as low as 32.5 gm/day (Anonymous, 2008). In India the green revolution was confined only to rice and wheat and no concentrated effort was made to increase the productivity of pulses. In Jammu and Kashmir area under pulses cultivation is 0.20 lakh hectares with a productivity of 4.61 quintals per hectare (Anonymous, 2005-06). Pulses are treated as an unimportant crop. The present study

was aimed to find out the various constraints in pulses cultivation as perceived by the farmers.

RESEARCH METHODOLOGY

The study was conducted using exploratory research design. It was conducted in purposively selected block *Ranbir Singh Pura*. Four villages from the block were selected on the basis of maximum area under pulses. A sample of 20 pulse growers were identified from each village by applying random sampling technique. Thus, the total sample selected was 80 farmers. Data were collected through a semi-structured interview schedule by employing personal interview technique. Thereafter data were tabulated, analysed and interpreted in the light of objectives of the study. Individual aspect-wise constraints of pulse growers were worked out. These were categorized into four categories namely infrastructural constraints, socio-economic constraints, technological constraints and institutional constraints. The intensity of constraints was measured on a three point continuum scale. Weight of 3, 2 and 1 were given for most important, important and least important constraint, respectively. Total score obtained by each respondent as well as for each statement was calculated. Finally mean percent score was calculated by the following formula.

Mean percent score = Total score obtained/Maximum obtainable score \times 100.

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RESULTS AND DISCUSSION

Descriptive statistics of the respondents:

The data incorporated in Table 1 show that out of 80 respondents only 5 percent were illiterate and 50 percent of them were educated up to primary level. None of the respondents was a graduate. The study also revealed that 20 percent of the respondents were the members of social organization like Panchayati Raj institutions and village education committee. Agriculture constituted the primary occupation of 62 percent of respondents. Majority of the respondents were medium farmers having 2-4 hectares of land. The percentage area under pulses cultivation is very less. It accounted for only 5.69 percent of the total area under cultivation.

Table 1. Descriptive Statistics of the respondents

S. No.	Parameter	%
1.	EDUCATION	
	a. Illiterate	5
	b. Primary	50
	c. Middle	25
	d. Secondary	20
	e. Graduate	5
2.	SOCIAL PARTICIPATION	
	f. Panchayati Raj Institutions	12
	g. Village Education Committee	8
3.	LAND HOLDING	
	h. Small (up to 2 hectares)	20
	i. Medium (up to 2-4 hectares)	65
	j. Large (more than 4 hectares)	15
4.	OCCUPATION	
	k. Agriculture	62
	l. Subsidiary	38
5.	AREA UNDER PULSES CULTIVATION	5.69

Major Categories of Constraints:

Infrastructural constraints

Infrastructural constraints comprised of four related constraints viz non availability of high yielding varieties (HYV) of seeds at the time of sowing, non availability of plants protection chemicals, non availability of fertilizers (mainly Diammonium Phosphate) in the market at the time of sowing and lack of irrigation facilities. Among

these, non availability of HYV seeds of pulses and unavailability of fertilizers (DAP) at the time of sowing were the two major constraints that were ranked I and II having a MPS of 88.76 and 82.50, respectively (Table 2). Non availability of plant protection chemicals was ranked third in order (MPS 75.76). Lack of irrigation facilities was perceived as the least important constraint (MPS 05.50).

Socio-economic constraints

Table 2 reveals that six constraints were perceived by the farmers as related to their socio-economic conditions. Low profit obtained from pulse crops, non availability of credit in time, high cost of labour were the three major constraints in this category. These were ranked I, II, III with an over all MPS of 88.75, 82.50 and 81.75 respectively. The other constraints in this category were labour scarcity (MPS 71.75) high cost of inputs (MPS 68.75) and lack of subsidy for inputs (MPS 65.50).

Technological constraints

An analysis of the data present in Table 2 reflects that lack of knowledge about seed rate, spacing, sowing date was ranked I on the basis of mean percent score (MPS 92.50). Lack of knowledge about seed treatment and lack of knowledge about insect pest and disease management were ranked II and III with an overall MPS of 88.75 and 82.75 respectively. The other constraints in this category were lack of knowledge about weed management (MPS 76.54) and lack of knowledge about fertilizer dosage and recommended method of its application (MPS 64.76)

Institutional constraints

Regarding institutional constraints it was observed that there was a weak research- extension-farmer linkage and there was no regulated market nearby where the villagers could sell their produce (Table 2). Weak research-extension-farmer linkage was ranked I (MPS 89.85) and lack of regulated market was ranked II (MPS 86.75). The third in order in this category was non availability of suitable literature (MPS 77.50).

Technological constraints

An analysis of the data present in Table 2 reflects that lack of knowledge about seed rate, spacing, sowing date was ranked I on the basis of

Table 2. Major constraints in pulses cultivation as perceived by the farmers

S. No.	Constraints	MPS	Rank
1.	Infrastructural constraints		
	a. Non availability of HYV seeds at time of sowing	88.76	I
	b. Non availability of plant protection chemicals in the market	75.76	III
	c. Non availability of DAP** in the market	82.50	II
	d. Lack of irrigation facilities.	05.50	IV
2.	Socio-economic constraints		
	a. High cost of inputs	68.75	V
	b. High cost of labour.	81.75	III
	c. Labour scarcity	71.75	IV
	d. Non availability of credits in time.	82.50	II
	e. Lack of subsidy for inputs.	65.50	VI
	f. Low profit	88.75	I
3.	Technological Constraints		
	a. Lack of proper knowledge about improved varieties, seed, rate, spacing and sowing date.	92.50	I
	b. Lack of knowledge about seed treatment.	88.75	II
	c. Lack of knowledge about fertilizer dosage and method of fertilizer application.	64.76	V
	d. Lack of knowledge about weed management.	76.54	IV
	e. Lack of knowledge about insect pest and diseases management	82.75	III
4.	Institutional Constraints		
	a. Weak research-extension farmer linkages.	89.95	I
	b. Non availability of suitable literature.	77.50	III
	c. Lack of regulated market.	86.75	II

** DAP is Diammonium phosphate

mean percent score (MPS 92.50). Lack of knowledge about seed treatment and lack of knowledge about insect pest and disease management were ranked 11 and 111 with an overall MPS of 88.75 and 82.75 respectively. The other constraints in this category were lack of knowledge about weed management (MPS 76.54) and lack of knowledge about fertilizer dosage and recommended method of its application (MPS 64.76)

Institutional constraints

Regarding institutional constraints it was observed that there was a weak research-extension-farmer linkage and there was no regulated market nearby where the villagers could sell their produce (Table 2). Weak research-extension-farmer linkage was ranked I (MPS 89.85) and lack of regulated market was ranked 11 (MPS 86.75). The third in order in this category was non availability of suitable literature (MPS 77.50).

Table 3. Major categories of constraints as perceived by the farmers in pulses cultivation

S. No.	Categories Constraints	MPS	Rank
1.	Infrastructural constraints	63.13	IV
2.	Socio-economic constraints	76.50	III
3.	Technological constraints	81.06	II
4.	Institutional constraints	84.73	I

An observation of the data in Table 3 reveals that institutional constraints were ranked I by the respondents (MPS 84.73). The institutional constraints were followed by the technological constraints (MPS 81.06) and socio-economic constraints (MPS 76.50) respectively. The infrastructural constraints were ranked least (63.13).

CONCLUSION

Based on the above study it can be inferred

that there are several constraints faced by the farmers in cultivation of pulses. The major constraints were non availability of HYV seeds, non availability of fertilizers, non availability of plant protection chemicals at the time of sowing, low price of produce, lack of subsidy for inputs, lack of knowledge about seed rate, seed, treatment, weed management dosage and method of fertilizer application. Similar have also been reported by Yadav et al (2002). The findings of the present study provides the empirical feedback to agricultural development departments, state agricultural universities and various non-governmental organizations working in agricultural and allied departments to strengthen the research-extension-farmer linkage by providing credible and timely information to the farming community. The government of India has set up a target of 32 million tones with the productivity of 850 kg/hectare for the period 2007-12 (Yadav, 2007). The ICAR has started a programme of organizing front line demonstrations on pulses in order to motivate farmers to increase the area under cultivation there

by enhancing production To achieve this extension personnel should disseminate the technology related to plant protection measure with emphasis on providing knowledge and skills to farmers. Farmers programmer and result demonstrations on pulses cultivation should be organized by the extension personnel's. The technology should be such that the farmers could get the net returns equivalent to that they get from the crops they mainly grow. Only then, will the farmers go for cultivation of pulses.

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