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Analysis of constraints in production and marketing of rapeseed & mustard and chickpea in Haryana

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Abstract

The present study was carried out to analyze the constraints in production and marketing of rapeseed & mustard and chickpea. This study was based on primary data collected from Bhiwani and Mahendragarh districts of Haryana based on the highest area under rapeseed & mustard and chickpea, respectively. Two blocks namely Tosham and Kairu from Bhiwani district, Kanina and Mahendragarh from Mahendragarh district selected purposively. Further two villages of each selected block were selected randomly. From each village, 10 farmers were selected randomly and finally, 80 farmers of eight villages were interviewed to excerpt all desired information. The outcomes of study revealed the major problems faced by the farmer in the production, marketing of rapeseed & mustard and chickpea in Bhiwani district were inadequate irrigation facilities 74.17 per cent followed by lack of adoption of plant protection measures *i.e.* 70.00 per cent and marketing constraints were wide fluctuation in prices 72.50 per cent followed by remunerative prices 61.67 per cent. In Mahendragarh district, major production constraint of rapeseed & mustard and chickpea were inadequate knowledge of recommended packages and practices 61.67 per cent followed by big inadequate irrigation facilities 58.33 per cent, lack of adoption of plant protection measures 55.83 per cent and marketing constraints were remunerative prices 62.50 per cent followed by wide fluctuation in prices 60.00 per cent, large number of intermediaries in marketing process 56.67 per cent.

Keywords: Chickpea, constraints, minimum support price, price policy, rapeseed & mustard

Abbreviations: MS: Mean Score, MPS: Mean Percent Score, MSP: Minimum Support Price, N: Number of Farmers

Introduction

India produces a variety of pulses and oilseed crops where it is recognized as a major contributor in production and consumption at global level. The cultivation of rapeseed & mustard and chickpea faces a variety of constraints in their production from sowing to marketing of produce (Sengar *et al.*, 2020) [7]. Among them, fluctuations in the prices of these agricultural commodities have severe concerns on the economy of the country. As the sudden steep fall in the price of a particular crop, result in huge loss to the farmers producing that crop as their net return declines. This will force the farmers not to cultivate the crop next year, leading to a serious shortage in the supply of that food item and which leads to force the government to import that food crops from foreign countries. The large scale fluctuation in the price of agricultural produce will create a ruinous effect on the economy of the country. In order to maintain the interest of both producers and consumers a complete agricultural price policy must be properly framed out. Singh *et al.* (2015) [8] evaluated constraints in chickpea cultivation in Baldevgarh block of Tikamgarh District during 2013-14 and resulted into analysis of problem of insect-pests and diseases *i.e.* 80.66 per cent, followed by inputs-improved seeds and fertilizers are costly 70.34 per cent, unfavorable weather conditions 70.22 per cent, technical-lack of knowledge on location specific improved varieties of chickpea 57.00 per cent and constraints related to market-low market price of chickpea 45.40 per cent. These were serious constraints in chickpea cultivation and other constraints scenario in adoption of chickpea cultivation which was main reason of poor gram productivity. Sonvane and Pathak (2016) [10] examine the various constraints in economic analysis of production and marketing of rapeseed-mustard in Bastar Plateau of Chhattisgarh. Sahu *et al.* (2018) [6] reported the constraint in marketing of mustard in Gwalior and observed that the main problem was price fluctuations 90 per cent by farmers followed by lack of price information 85 per cent, malpractices by traders 80 per cent. Gireesh *et al.* (2019) [1] study was conducted at farmers' field in Maharashtra during 2016-2017 and resulted into the production constraints faced by

the farmers in cultivation of major pulses (pigeon pea and chickpea). Major constraint were low market price or low profit 74.39 per cent and crop damage by wild animals 74.39 per cent was observed, then followed by non-availability of labour 53.43 per cent, high cost of inputs 53.37 per cent, lack of subsidy for inputs 45.55 per cent, non-availability of credit facilities 44.16 per cent, lack of appropriate information sources 36.80 per cent and lastly the theft of crop at the time of maturity 20.00 per cent. Keeping these constraints in production of rapeseed & mustard and chickpea, the present study was designed and analyzed.

Materials and Methods

The present study was conducted in Bhiwani and Mahendragarh districts of Haryana having highest area under rapeseed & mustard and chickpea crop among all rapeseed & mustard and chickpea growing districts in the state.

Selection of blocks: Two blocks were selected from each selected district on the basis of highest area under selected crop. Tosham and Kairu blocks were selected from Bhiwani district and Kanina and Mahendragarh blocks were selected from Mahendragarh district of Haryana state.

Selection of villages: Two villages were selected randomly from selected blocks to obtain the primary data of selected crop. Alampur and Riwasa village were selected randomly from Tosham block and Sungarpur and Kairu village was selected from Kairu block of Bhiwani district. Sehlang and Nautana village were selected from Kanina block and Deroli Jat and Digrota village were selected from Mahendragarh block of Mahendragarh district of Haryana. In the total eight villages were selected for taking the primary data of selected crops.

Selection of farmers: A sample of 10 respondent farmers was selected purposively from each village irrespective of size of category of the farmers to obtain primary data of selected crops. Thus in the total sample of 80 respondents were selected for taking the primary data of selected crops.

Collection of data: Study was conducted in Haryana state based on primary data. For the primary data, purposively multi-stage random sampling techniques was used to the

selection of respondents and collection of data by personal interview with the help of pre-tested schedule designed for present study on rapeseed & mustard and chickpea crops.

The information related to constraints faced by farmer in production and marketing of rapeseed & mustard and chickpea grower as calculated by pretested schedule. Regarding constraints analysis, the response (various constraints as perceived by the farmers) were recorded on three point continuum *i.e.* very serious, serious and somewhat serious and subsequently assigned a weight-age of 3, 2 and 1 respectively. The constraints score of each respondent as well as of all the respondents for each item pertaining to production and marketing constraints were worked out. The mean score and rank order were also computed and arrange in descending order of severity of problem.

Following formula was employed to calculate Mean Per cent Score:

$$\text{Mean Score} = \frac{\text{Sum of score (constraint) for all responses}}{\text{Total number of respondents}}$$

$$\text{Mean Percent Score} = \frac{\text{Mean of item (constraint) for all responses}}{\text{Maximum score of the item (constraint)}} \times 100$$

Results and Discussions

Constraints in production and marketing of rapeseed & mustard and chickpea

The information about the problems faced by the rapeseed & mustard and chickpea grower was obtained from the selected respondents on various facets of production and marketing of rapeseed & mustard and chickpea.

Production constraints in rapeseed & mustard and chickpea in Bhiwani

Production constraints related to rapeseed & mustard and chickpea in Bhiwani district of Haryana was depicted in Table 1. Major production constraint in rapeseed & mustard and chickpea was inadequate irrigation facilities 74.17 per cent followed by lack of full adoption of plant protection measures 70.00 per cent, less-availability of institutional credit 63.33 per cent while least problem was labour problem during harvesting 55.00 per cent and superious agrochemicals 50.00 per cent.

Table 1: Production constraints in rapeseed & mustard and chickpea in Bhiwani (N= 40)

A. Production Problems				
S. No.	Constraints / Problems	MS	MPS	Rank order
1	Inadequate irrigation facilities	2.23	74.17	1
2	Lack of full adoption of plant protection measures	2.10	70.00	2
3	Less-availability of institutional credit	1.90	63.33	3
4	Inadequate knowledge of recommended packages and practices	1.78	59.17	4
5	Labour problem on weeding time	1.65	55.00	5
6	Labour problem during harvesting	1.65	55.00	5
7	Superious agrochemicals	1.50	50.00	7

Marketing constraints in rapeseed & mustard and chickpea in Bhiwani

Marketing constraints in rapeseed & mustard and chickpea in Bhiwani district of Haryana are presented in Table 2. Major marketing constraints observed in rapeseed & mustard and chickpea were wide fluctuation in prices 72.50 per cent

followed by remunerative prices are not available 61.67 per cent, large number of intermediaries in marketing process 57.50 per cent, while minor problem was less procurement by government agencies at MSP 41.67 per cent and high transportation cost 41.05 per cent.

Table 2: Marketing constraints in rapeseed & mustard and chickpea in Bhiwani (N= 40)

B. Marketing Problems				
S. No.	Constraints/Problems	MS	MPS	Rank order
1.	Wide fluctuation in prices	2.18	72.50	1
2.	Remunerative prices are not available	1.85	61.67	2
3.	Large number of intermediaries in marketing process	1.73	57.50	3
4.	Inadequate scientific storage facilities at reasonable price	1.63	54.17	4
5.	Non-existences cooperative marketing organization.	1.45	48.33	5
6.	Inadequate knowledge about market news and intelligence	1.40	46.67	6
7.	Less procurement by government agencies at MSP	1.25	41.67	7
8.	High transportation cost	1.20	41.05	8

Production constraints in rapeseed & mustard and chickpea in Mahendragarh

Production constraints related to rapeseed & mustard and chickpea in Mahendragarh district of Haryana were depicted in Table 3. Major production constraints in rapeseed & mustard and chickpea were inadequate knowledge of

recommended packages and practices 61.67 per cent. Then big problem was inadequate irrigation facilities 58.33 per cent followed by lack of full adoption of plant protection measures 55.83 per cent, less-availability of institutional credit 54.17 per cent while least problem was labour problem on weeding time and harvesting 48.33 per cent.

Table 3: Production constraints in rapeseed & mustard and chickpea in Mahendragarh (N= 40)

A. Production Problems				
S. No.	Constraints / Problems	MS	MPS	Rank order
1	Inadequate knowledge of recommended packages and practices	1.85	61.67	1
2	Inadequate irrigation facilities	1.75	58.33	2
3	Lack of full adoption of plant protection measures	1.68	55.83	3
4	Less availability of institutional Credit	1.63	54.17	4
5	Superious agrochemicals	1.55	51.67	5
6	Labour problem on weeding time	1.45	48.33	6
7	Labour problem during harvesting	1.45	48.33	6

Marketing constraints in rapeseed & mustard and chickpea in Mahendragarh

Marketing constraints in rapeseed & mustard and chickpea in Mahendragarh district of Haryana are presented in Table 4. Major marketing constraints in rapeseed & mustard and chickpea were remunerative prices are not available 62.50 per

cent followed by wide fluctuation in prices 60.00 per cent, large number of intermediaries in marketing process 56.67 per cent while minor constraints were inadequate knowledge about market news and intelligence 45.83 per cent and non-existences cooperative marketing organization and high transportation cost 44.17 per cent.

Table 4: Marketing constraints in rapeseed & mustard and chickpea in Mahendragarh (N= 40)

B. Marketing Problems				
S. No.	Constraints / Problems	MS	MPS	Rank order
1.	Remunerative prices are not available	1.88	62.50	1
2.	Wide fluctuation in prices	1.80	60.00	2
3.	Large number of intermediaries in marketing process	1.70	56.67	3
4.	Inadequate scientific storage facilities at reasonable price	1.60	53.33	4
5.	Less procurement by government agencies at MSP	1.50	50.00	5
6.	Inadequate knowledge about market news and intelligence	1.38	45.83	6
7.	Non-existences cooperative marketing organization.	1.33	44.17	7
8.	High transportation cost	1.33	44.17	7

Production constraints in rapeseed & mustard and chickpea in Bhiwani:

Table 1 evaluated production problem in rapeseed & mustard and chickpea in Bhiwani district. Also result out that major production problem faced by most of the farmer was inadequate irrigation facilities 74.17 per cent. Keeping this in view, there was a strong need irrigation facility by government for increasing the chickpea production in the study area. The second most important problem faced by growers were lack of adoption of plant protection measures 70.00 per cent and third problem was less-availability of institutional credit 63.33 per cent. In addition to the above problems, the farmer also faced the minor problems of labour problem during harvesting and weeding time 55 per cent and superior agrochemicals 50.00 per cent. Similar study was reported by Kumar *et al* (2018) ^[2]; Kumar and Bourai (2012) ^[3].

Marketing constraints in rapeseed & mustard and chickpea in Bhiwani

From the contents of Table 2, it was indicated that wide price fluctuation was ranked as the most important constraint among the farmer with mean per cent score of 72.50 followed by remunerative prices 61.67 per cent. Large number of intermediaries in marketing process which got rank III with a score of 57.50. Fourth major constraint reported by the farmer was inadequate scientific storage facilities at reasonable price 54.17 per cent. In addition to the above problems, non-existences cooperative marketing organization (v), inadequate knowledge about market news and intelligence (VI) procurement by government agencies at MSP (VII) and high transportation cost (VII). Kumar *et al* (2018) ^[2]; Kumari and Singh (2017) ^[4] observed price fluctuations, problem faced due small quantity of marketable surplus and lack of

availability about market news and intelligence were the important constraints faced by the farmer.

Production constraints in rapeseed & mustard and chickpea in Mahendragarh

It was evident from Table 3; most important constraint was inadequate knowledge of recommended packages and practices 61.67 per cent, followed by inadequate irrigation facilities 58.33 per cent. Also result shown that rank III with a score 55.83 per cent of lack of adoption of plant protection measures. Fourth major constraint reported by the farmer was less availability of institutional Credit 54.17 per cent while least problem was labour problem on weeding time and harvesting 48.33 per cent. Kumar *et al* (2018)^[2]; Sinha *et al.* (2019)^[9] in their study also observed that the constraints in production of pulses inadequate knowledge of recommended packages and practices, unfavourable weather condition, non-availability of quality water for irrigation, lack of knowledge about latest production technology and lack of adoption of plant protection measures.

Marketing constraints in rapeseed & mustard and chickpea in Mahendragarh

As per Table 4, the major marketing constraints were analyzed in production of rapeseed & mustard and chickpea in Mahendragarh. Major marketing constraints were remunerative prices 62.50 per cent followed by wide fluctuation in prices 60.00 per cent and third problem was large number of intermediaries in marketing process 56.67 per cent. In addition to the above fourth problem was inadequate scientific storage facilities at reasonable price 53.33 per cent, procurement by government agencies at MSP with rank (V), Inadequate knowledge about market news and intelligence (VI), Non-existence cooperative marketing organization and high transportation cost have seventh rank. Sahu *et al* (2018)^[6]; Rathour *et al.* (2021)^[5] study main problem expressed by farmer were price fluctuations, lack of price information, malpractices by trader, problem of higher market charge and lack of market yard, late payment.

Conclusions

From the above discussion it concluded that various types of constraints faced by the rapeseed & mustard and chickpea grower such as technical problems, financial problems, managerial problems and miscellaneous problems. The findings of the present study indicated that heavy losses in production of pulses was due to insect's infestation mainly pod borer and aphids, socio-economic constraints such as less availability of institutional credit, labour problem at weeding and harvesting time and other than these are inadequate irrigation facilities, problems of less procurement by government agencies at MSP and lack of improved varieties etc. Chickpea and rapeseed & mustard are lucrative crops which can help the farmers in doubling their income in the study area.

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