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## **A Study of Various Constraints in Lentil Production and Marketing in District Lakhimpur (Kheri) of Uttar Pradesh**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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### **ABSTRACT**

**Background:** Lentil pulse crop on account of their vital role in nutritional security and soil ameliorative properties have been an integral part of sustainable agriculture since ages. The decrease in production and shrinkage in the area of pulse crops in Lakhimpur (Kheri), Uttar Pradesh is a cause of great concern. Keeping in view the importance of lentils, the study was carried out to examine the various constraints faced by the different groups of farmers.

**Aims:** To study the various Constraints in lentil production and marketing.

**Place and Duration of Study:** Lakhimpur (kheri) district of Uttar Pradesh, between year 2020 and 2021.

**Methodology:** A total of 100 respondents were selected randomly from the Mitauli block of Lakhimpur (kheri) district, Uttar Pradesh and a pre-structured questionnaire was used to collect the data from the farmers. Respondents were classified into three categories based on their size of land holdings.

**Results:** It is revealed by the Garrett scores that the major production constraint faced by most of the farmers was unfavorable weather condition (score of 66.39) and major marketing constraint faced was small quantity of marketable surplus (score of 61.98).

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**Conclusion:** From the findings of the study, it has been stated that there was a high level of constraints associated with production and marketing of lentils. Highly responded constraints for production were unfavorable weather condition(rank I), non-availability of quality water for irrigation(rank II),inadequate knowledge of recommended packages and practices (rank III).Similarly small quantity of marketable surplus(rank I),availability of reliable market information system (rank II) and price fluctuation(rank III)were the major constraints in case of marketing of lentils. Due to having these constraints, farmers faced a lot of troubles which hampered agricultural activities, increased quantum of credit assistance and led to selling of agricultural crops at low prices.

**Keywords:** Production; marketing; constraints; lentils; pulses.

## 1. INTRODUCTION

In India pulses markets are thin which leads to high market prices but the production of pulses has not increased [1-6]. This is due to lack of input investment and dynamic weather conditions that led to crop's vulnerability to biotic and abiotic stress. Other main reason due to which Indian farmers remained unattractive to produce pulses was indeterminate growth of crop and lack of government policies [7-13]. The gap between supply and demand frameworks has been increasing with increase in population [14-19]. The high price of pulses clearly reflects the demand pressure on the pulses.

In Lakhimpur (Kheri) Uttar Pradesh, pulses/lentils are grown on a huge scale. There has been large scale increase in area under lentils in the recent years and such a phenomenon is likely to create the problems relating to production and marketing aspects. Consequently, the rationality of the pattern of existing resource allocation has to be evaluated to find out the best combination that could be suggested to maximize the yield. In the production and marketing of lentils farmers face many problems like transfer of technology, supply of quality seeds, arrangement of industrial credit, fertilizers and other inputs, market arrangements, frequent price fluctuations in markets, lack of transport facilities during peak periods, etc. For solving such problems, it is necessary to first identify the problems and reasons thereof so that corrective measures may be resorted to tackle them.

## 2. MATERIALS AND METHODS

Out of 15 Blocks of Lakhimpur (Kheri) District1, Mitauli was selected purposively as Lentil growers were found in large numbers. 5 villages namely Khundehra, Janakinagargrant, Lohanna, Pipariakhagi and Bichiyanagar were selected

purposively where production of lentils was found to be highest.

Out of the total farmers in the selected villages a list was prepared on the basis of land holding and out of that 10% farmers were selected from each selected village. Then a separate list of lentil growers of selected villages was prepared along with their size of holding and further it was grouped into three categories *i.e.*

Small farmer (< 1 ha)  
Medium farmer (1-2 ha)  
Large farmer (2-4 ha)

At last 100 respondents were selected randomly for study purpose.The structured and pilot-tested questionnaire was used to collect the data, and then collected data was calculated and analyzed by using average and percentage and Garrett ranking technique was used.The period of the study was: 1st December 2020 –31st May 2021.

## 3. RESULTS AND DISCUSSION

To know the acceptance of respondents and constraints in processing and marketing of lentils Garrett's ranking technique can be used. Basically it gives the change of orders of constraints and advantages into numerical scores. The major advantage of this technique as compared to simple frequency distribution is that the constraints and advantages is arranged based on their importance from the point of view of respondents. Hence the same number of respondents on two or more constraints may have been given different rank (Kumar and Pandey, 1999).

Per cent position =  $100 (R_{ij} - 0.5) / N_j$

Where,

$R_{ij}$ = rank given for  $i^{th}$  factor by  $j^{th}$  individual

$N_j$  = number of factors ranked by  $j^{\text{th}}$  individual

The per cent position of each rank is then converted into scores referring to the Table given by Garret and Woodsworth (1969). For each factor, the scores of individual respondents was added together and divided by the total number of the respondents for whom scores was added. These mean scores for all the factors were arranged in descending order, ranks were given and most important factors were identified. Garrett's ranking technique was adopted for studying problems faced by borrowers regarding credit utilization.

The major constraint faced by most of the farmers was unfavorable weather condition with a score of 66.39 (rank 1). The second most important constraint faced by the lentil growers was quality water for irrigation (overall Garrett score 64.49). The other most important constraints reported by the growers was non-availability of inadequate knowledge of recommended packages and practices of lentil

(overall Garrett score 60.71), lack of knowledge about latest production technology (overall Garrett score 56.53) and shortage of labour (overall Garrett score 52.16). In addition to the above problems, the farmers also faced the minor problems of low productivity of pulses (VI), non-availability of credit (VII) and HYV seed (VIII). It is also clear from the table that the problem of lack of adoption of plant protection measures is not so prominent and the quality of land is good for the cultivation of lentils.

From the contents of Table 2, it was indicated that small quantity of marketable surplus was ranked as the most important constraint among the lentil growers with mean score value of 61.98 followed by problem faced due to market news and intelligence not available for most of farmers (overall Garrett score 59.46). Price fluctuation got rank III with a score of 56.02. Fourth major constraint reported by the lentil growers was involvement of large number of intermediaries in the marketing which resulted in decrease of farmer's share in consumer's rupee

**Table 1. Production constraints faced by lentil growers**

**Total no. of Respondents=100**  
**S+M+L=80+17+3=100**

S. no	Constraint	Mean score	Rank
1	Unfavorable weather condition	66.39	I
2	Non-availability of quality water for irrigation	64.49	II
3	Inadequate knowledge of recommended packages and practices	60.71	III
4	Lack of knowledge about latest production technology	56.53	IV
5	Shortage of labour	52.16	V
6	Low productivity of pulses	44.46	VI
7	Non-availability of Credit	37.95	VII
8	Non-availability of HYV seed	36.76	VIII
9	Lack of adoption of plant protection measures	22.04	IX
10	Poor quality land	18.71	X

**Table 2. Marketing constraints faced by lentil growers**

**Total no. of Respondents=100**  
**S+M+L=80+17+3=100**

S. no	Constraint	Mean score	Rank
1	Small quantity of marketable surplus	61.98	I
2	Lack of availability about market news and intelligence	59.46	II
3	Price fluctuations	56.02	III
4	Existence of large number of intermediaries in market	52.71	IV
5	Lack of proper scientific storage facilities at reasonable price	50.32	V
6	Higher transportation charges per unit of produce	40.07	VI
7	Lack of cooperation among farmers	38.44	VII
8	Lack of processing unit in local area	33.93	VIII
9	Farmers are not getting remunerative prices	31.6	IX
10	Lack of demand of produce	21.76	X

(overall Garrett score 52.71). In addition to the above problems, lack of proper scientific storage facilities at reasonable price (V), higher transportation charges per unit of produce (VI), lack of cooperation among farmers (VII), lack of processing unit in local area (VIII), prices offered in the markets were not remunerative (IX) and lack of demand for produce in local market (X) were some other minor problems reported by lentil growers in the study area.

#### 4. CONCLUSION

From the findings of the study, it has been stated that there was a high level of constraints associated with production and marketing of lentils. Highly responded constraints for production was unfavorable weather condition (rank I), non-availability of quality water for irrigation (rank II), inadequate knowledge of recommended packages and practices (rank III). Similarly small quantity of marketable surplus (rank I), availability of reliable market information system (rank II) and price fluctuation (rank III) were the major constraints in case of marketing of lentils. Due to having these constraints, farmers faced a lot of troubles which hampered agricultural activities, increased quantum of credit assistance and led to selling of agricultural crops at low prices.

Major suggestion received from the respondent side to overcome the mentioned problems were to strengthen the extension services improvement of input supply system and financial support from financial institution. Detail knowledge about decision making crops planning and budgeting as well as disposal of farm produce along with market information should be extended. The channels involved in marketing of lentils should be made more organized and integrated. May be awareness on support prices and various schemes of the government, better connectivity of roads and scientific management of the produce.

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#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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