

Constraints in the Production and Marketing of Pulses in Haryana

Kamal Kumar, Jitender Bhatia and Mohit Kumar*

Department of Agricultural Economics, College of Agriculture, CCSHAU Hisar (Haryana), India

*Corresponding Author E-mail: thisismohitchauhan@gmail.com

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ABSTRACT

Pulses 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 Haryana since inception, as a consequence of green revolution and is a cause of great concern. Therefore, an attempt has been made in the present study to identify major constraints in the production and marketing of pulses.

To derive the inferences of the study, the primary data were collected from 90 farmers i.e. 45 each from Bhiwani and Hisar district. The main production constraints noticed were inadequate knowledge of recommended packages and practices, unfavorable weather condition and non-availability of quality water for irrigation. The main marketing constraints were price fluctuation, small quantity of marketable surplus, non-availability of reliable market information system and involvement of large number of intermediaries in the marketing.

Key words: Constraints, Gram, Moong costs, Production, Marketing

INTRODUCTION

In post-independence era, India has experienced many changes in agricultural development and green revolution was most spectacular. Food grains production increased manifold due to increase in irrigated area, cropping intensity, consumption of chemical fertilizers, insecticides, pesticides, high yielding varieties of seeds and management practices. The production of cereals has registered higher positive compound growth rate as compared to the production of pulses in India during the last five decades. Thus, though India has made a significant headway in increasing agricultural production in general, pulses have continued to evade

solutions for people diet. As a result, largest producing country continuously becomes deficient in pulses production.

In India, the production of pulses has not been able to keep pace with their domestic demand, resulting in imports of 4-5 million tonnes of pulses per annum, especially from the countries like Canada, Myanmar and Australia to meet its domestic requirement, however exports a large quantity of chickpea to countries like Pakistan, Turkey etc. In pulses, no intensive irrigation is required and these are mostly grown under rainfed conditions thus, pulses are grown in areas left after satisfying the demand for cereals/cash crops.

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Even in rainfed conditions, pulses give a better benefit-cost ratio. In comparison to vegetables, pulses have several other qualities like higher protein content, suitable in various cropping methods as an inter-crop, mixed crop, crop rotations, improve soil chemical and physical property, green pods can be used as vegetables and provide nutritious fodder for animals as well.

Pulses constitute an essential part of the Indian diet for nutritional security and environmental sustainability. Pulses are the cheapest source of proteins and Indians fulfill 20 to 30 per cent of their protein requirement from pulses, rich in calcium and iron also. Per capita net availability of pulses in India, however, has reduced from 69.0gm/day to 47.2gm/day as against WHO recommendation of 80gm/day.

Haryana is the most progressive agricultural state with only 1.4 per cent of the total geographical areas of India. The acreage and production of pulses in Haryana have shown a continuous decline. The pattern of growth performance of agriculture has indicated a pronounced shift in favour of wheat-paddy rotation. A major share of crucial inputs (irrigation and fertilizers) became reserved for the high profitability of wheat and rice which occupied 42.45 and 21.0 per cent of area respectively during years 2014-15. Pulse crops however, experienced a poor status in crop pattern of Haryana and only 1.68 per cent of Area was devoted to pulse sector during the year 2014-15. Haryana has ninth rank in area and production, 1.99 per cent and 2.71 per cent respectively and the third rank in productivity after Tamil Nadu and Gujarat, in total pulses. In Haryana, the area under pulses was 11.5 lakh hectares with production of 5.63 lakh tonnes during the year 1966-67 which declined to 83.8 thousand hectares with 54.5 thousand tonnes production in 2014-15².

Gram, green gram, pigeon pea, masar, mash are the most important pulse crops grown in Haryana. The neglect of pulses is reflected in their declining share in total food grains output from over 21.72 per cent five decades ago to just 0.35 per cent in the year

2014-15 because farmer cultivates pulses in the most marginal conditions and provide least inputs.

Gram (*Cicer arietinum* L.) is commonly known as “Bengal gram” occupies about 77.68 per cent of the area under pulses and contributes about 77.06 per cent of the total pulse production of Haryana, sogram is the most important pulse crop grown in Haryana. Gram presently occupies an area of 65.1 thousand hectares with 42 thousand tonnes production in Haryana. The major gram growing districts in Haryana are Bhiwani, Hisar, Mahendergarh, Sirsa, Jhajjar including Rewari, Fatehabad etc. Higher productivity of chickpea is obtained in Sirsa district (962 kg per hectare). Green gram (*Vignaradiata*) is popularly known as “moong” presently occupies an area of 6.8 thousand hectares with 3.3 thousand tonnes production in Haryana and the productivity of green gram is 509kg/ha. The green gram growing districts are Hisar, Bhiwani, Sirsa and Fatehabad². Keeping in view the above factors, the present study was planned to see the major constraints faced by the growers in the production and marketing of pulses in Haryana.

MATERIAL AND METHODS

Sampling design:

For studying the problems faced by the pulse crops growers in production and marketing, primary data were collected from the sample respondents by conducting personal interview on a specifically designed pretested schedule. Bhiwani & Hisar districts of Haryana were selected purposely having highest area under pulse crops cultivation. One major pulse growing block from each district was selected on the basis of maximum area and production i.e. Siwani and Hisar II from Bhiwani and Hisar, respectively. Three villages were selected randomly from each block. From the selected villages, random samples of 15 respondents from each village were selected. Then, selected farmers were divided into three categories i.e. small, medium and large farmers based upon their operational size of land holding by using standard

classification given by Department of Land Resources, Government of India.

Constraints faced by the growers

In order to study the constraints, a schedule was developed in accordance with the available literature. Accordingly, constraints were identified and sub divided into production and marketing constraints and

thereafter the response of the sample farmers were recorded.

The ranks given by the respondents were then converted into percentage position with the help of formula given by Garrett. Garrett's formula for converting ranks into per cent is:

$$\text{Percent position} = \frac{100(\text{Rij} - 0.5)}{N}$$

Rij = rank given to ith constraint by jth individual

N = number of constraints ranks by individual

The per cent position of each rank thus obtained was converted into scores by referring the table given by Garrett. Then for each reason the scores of individual respondents were added and divided by the total number of respondents. Thus the mean score for all the constraints were arranged in descending order and then rank were assigned to individual constraints.

RESULTS AND DISCUSSION

Production constraints faced by pulse growers

The major constraint faced by most of the farmers was inadequate knowledge of recommended packages and practices of pulse crops with a score of 66.39 (rank 1). Keeping this in view, there was a strong need to strengthen extension services amongst the pulse growers in the study area. The second most important constraint faced by the pulse growers was unfavorable weather condition (overall Garrett score 64.49) i.e. delayed

precipitation during *kharif* season or excessive rainfall or prevalence of winter rains. The other most important constraints reported by the pulse growers were non-availability of quality water for irrigation (overall Garrett score 60.71), lack of knowledge about latest production technology (overall Garrett score 55.53) and lack of adoption of plant protection measures (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 HYV seed (VII) and credit (VIII). It is also clear from the table 1 that the problem of labour availability is not so prominent and the quality of land is good for the cultivation of pulse crops. Pandey *et al.*, in their study also observed that the constraints in production of pulses were lack of knowledge about recommended dose of fertilizers, lack of improved variety seeds, lack of knowledge of recommended practices and lack of irrigation facilities.

Table 1 Production constraints faced by the pulse growers (N=90)

Sr. No.	Constraints	Score	Rank
1.	Inadequate knowledge of recommended packages and practices	66.39	1
2.	Unfavorable weather condition	64.49	2
3.	Non-availability of quality water for irrigation	60.71	3
4.	Lack of knowledge about latest production technology	55.53	4
5.	Lack of adoption of plant protection measures	52.16	5
6.	Low productivity of pulses	44.46	6
7.	Non-availability of HYV seed	37.95	7
8.	Non-availability of Credit	36.76	8
9.	Shortage of labour	22.04	9
10.	Poor quality land	18.71	10

Marketing problems expressed by pulse growers

From the contents of Table 2, it was indicated that price fluctuation was ranked as the most important constraint among the pulse growers with mean score value of 61.98 followed by small quantity of marketable surplus (overall Garrett score 59.46). Market news and intelligence were not available for most of farmers which got rank III with a score of 56.02. Fourth major constraint reported by the pulse growers was involvement of large number of intermediaries in the marketing which resulted in decrease of farmer's share in consumer's rupee (overall Garrett score 54.71).

In addition to the above problems, lack of proper scientific storage facilities at reasonable price (V), prices offered in the markets were not remunerative (VI), lack of processing unit in local area (VII), lack of cooperation among farmers (VIII), higher transportation charges per unit of produce (IX) and lack of demand for produce in local market (X) were some other minor problems reported by pulse growers in study area. Shashikant *et al.*⁷, in his study also observed that inadequate transportation facility, high market fees and charges, high transportation cost, lack of storage facilities were the important constraints faced by the farmers.

Table 2 Marketing constraints faced by pulse growers (N=90)

Sr. No.	Constraints	Score	Rank
1.	Price fluctuations	61.98	1
2.	Problem faced due small quantity of marketable surplus	59.46	2
3.	Lack of availability about market news and intelligence	56.02	3
4.	Existence of large number of intermediaries in market	54.71	4
5.	Lack of proper scientific storage facilities at reasonable price	50.23	5
6.	Farmers are not getting remunerative prices	40.07	6
7.	Lack of processing unit in local area	38.44	7
8.	Lack of cooperation among farmers	33.93	8
9.	Higher transportation charges per unit of produce	31.6	9
10.	Lack of demand of produce	21.76	10

Suggestions:

There is a fear as the trends show that the area and production of pulses in Haryana state will decline further in the coming time and the pulses are very important food for human and feed for live stocks, therefore following suggestions are made to improve the performance of pulses in Haryana:-

- ✓ Pulse crops should be introduced as an inter-crop/mixed-crop/rotational crop in the cropping system. Some financial incentives should be given to the farmers for bringing more area under

pulses.

- ✓ There is a need to aware the farmers about various schemes like NFSM-Pulse, under which Government provides incentives to the farmers to enhance production of pulses.
- ✓ High yielding varieties of pulses suited to dry farming/moisture-stress conditions need to be evolved and should make available to the farmers.
- ✓ Proper guidance should be provided to the pulse growers about the use of recommended practices and production techniques.

- ✓ Quality inputs like improved seeds, adequate credit facility must be available timely and at village level (sometimes even at block levels)
- ✓ Adequate storage facilities should be provided to the farmers, to spread the sale throughout the year with minimum quantitative and qualitative losses.
- ✓ Procurement of pulses must be done by some institution like HAFED, NAFED etc. especially in the peak market period of respective pulse commodities.
- ✓ Focus should be made on providing the market information like prices, arrivals etc. to the farmers through SMS.

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