

CONSTRAINTS IN PRODUCTION AND MARKETING OF CLUSTER BEAN IN HISAR DISTRICT OF HARYANA

SUBODH AGARWAL^{1*}, SURESH KUMAR², S. K. GOYAL¹ AND NAVEEN KUMAR²

¹Department of Business Management

²Department of Agronomy

CCS Haryana Agricultural University, Hisar

*(e-mail : subodh.agarwal47@gmail.com)

(Received: 20 May 2019; Accepted: 25 June 2019)

SUMMARY

Haryana, with a share of 18 to 30 per cent, is the second largest producer state of Guar (cluster bean) after Rajasthan. This study aims to assess the critical constraints in production and marketing of cluster bean in Hisar district. Hisar block was selected, having highest area under cluster bean, to collect the required information. From the study, it was found that the major constraints in production of cluster bean were variability in weather/ lack awareness of weather forecasting (90.91%) and labour scarcity during peak season of sowing (81.82%) along with crop protection, viz., problem of weeds (79.55%), insect-pests (45.45%) and diseases (22.73). Whereas, the important constraints in the marketing of cluster bean were lack of export facility (100%), high commission charges (100%), more number of intermediaries (100%), lack of processing facilities (95 %), problem of fluctuations in prices (89 %), lack of storage facility (86 %), lack of buyers in the market (77 %) and lack of regulated and cooperative marketing for cluster bean (95 %). Minimum Support Price (MSP) and lack of farmer-industry linkage were the major constraints reported by all the sample farmers.

Key words : Cluster bean, constraints, production, marketing

Cluster bean (*Cyamopsis tetragonoloba*) also known as Guar, Gavar, Guwar, or Guvar bean is native to the Indian subcontinent belongs to the family *Leguminaceae* and is grown mainly in India, Pakistan, United States and some part of Africa and Australia (Dhananjaya Swamy and Naveena, 2015). Cluster bean production in India is subject to high year to-year fluctuations because of variability in intensity and pattern of monsoon rainfall. India is the largest producer of cluster bean and accounts for about 80 per cent of the global cluster bean production followed by 15% in Pakistan (Midha *et al.* 2015). It is grown in India indigenously as fodder, feed, food and cover crops mainly in complex, diverse, risky and under-invested rainfed (arid and semi-arid) regions. However, a vast range of value added products or derivatives appeared in the market with more than one lakh patents globally and cluster bean has become an important commercial crop grown during *Kharif* season in north-western states of India (NRAA, 2014). Cluster bean production in India is subjected to high year-to-year fluctuations because of variation in intensity and pattern in monsoon rainfall. Haryana is the second largest producer state of cluster bean after Rajasthan. Share of Haryana in cluster

bean production in India varies from 18 to 30% in different years (Sharma and Gummagolmath, 2012). The districts in Haryana involved in the production of cluster bean are Bhiwani, Dadri, Gurgaon, Mahendragrh, Rewari and Hisar. After seeing great revenues with the crop during previous years in Rajasthan and Haryana, farmers of Andhra Pradesh have also started the cultivation of this crop for seeds in more than 1000 ha (NRAA, 2014).

Low cost is involved in production of cluster bean but high risk is associated in its production due to dependence on the monsoon. Moreover, there is also high marketing risk due to lack of processing facilities for cluster bean producers and high fluctuation of prices. The large farmers are in a position to take the decision towards the production and marketing of cluster bean crop but small farmers are not capable to take proper decision, due to their low risk bearing ability. If the constraints in production and marketing are minimised, then the production and profit of the growers can be increased.

Keeping in view the above facts, the present study was under taken to examine the constraints in production and marketing of cluster bean in Hisar

district and also to provide appropriate suggestion to overcome them these constraints.

Haryana is the second largest producer state of cluster bean among all the states. Hisar district is selected purposely as it is the major market of cluster bean in Haryana. From the selected district, Hisar block was selected, having highest area under cluster bean, to collect the required information on constraints of production and marketing aspects of this crop. Data from growers were collected through personal interview with the help of schedule. In all, data was collected from 44 growers selected randomly during the year 2014-15.

General characteristics of the sample farmers:

General characteristics of the sample farmers like land holding pattern, sector-wise purchase Pattern, purpose of sowing and method of sowing are presented in Table 1, which shows that 63.44 percent of the sample farmers were in the category of land holding more than 2 hectare. One fourth i.e. 25 percent of the sample farmers were having land between 1-2 hectare and 11 percent of the sample farmers were having land less than 1 hectare. All of the growers surveyed were above matriculation in education level. Among the surveyed growers, 65.91 percent sample farmers believed in the university and other government agencies for the purchase of seeds and 34.09 percent growers purchased from private agencies. The majority of the growers *i.e.*, 97.73 percent grew cluster bean

for grain purpose and only one farmer (2.27%) grew it for fodder purpose. Further it was found that majority of the sample farmers *i.e.* 77.27 percent used line sowing method and remaining 22.73 percent farmers used broadcasting method for sowing of cluster bean in the study area. Sowing of the crop was done manually by 95.45 percent and mechanically by only 4.55 percent of sample farmers, whereas, harvesting was done manually and threshing mechanically by all the sample farmers.

Constraints in production

The data pertaining to the response of the sample cluster bean growers under study on various constraints faced is presented in Table 2.

1. Socio-economic constraints

The perusal of the data presented in Table 2 indicated that variability in weather/ lack awareness of weather forecasting is the major constraint (90.91%) in the production of cluster bean followed by labour scarcity during peak season of sowing (81.82%) and harvesting (18.18%). Lack of financial resources was a constraint for 45.45 percent of sample growers of this crop. Other socio-economic constraint faced by the growers was land scarcity due to other crops (9.09%).

2. Technical constraints

The most important technical constraints faced by the sample cluster bean growers were related to crop protection, *viz.*, problem of weeds (79.55%) followed by insect-pests (45.45%) and diseases (22.73). It is important to mention that there is no recommendation of any herbicide for the control of weeds in the State for this crop. There are only a few insecticide molecules recommended for the control of the insect pests in this crop. Also, the incidence of white fly damaged a very large area under this crop during the year 2014-15. For the control of bacterial leaf blight, a major disease of this crop, effective recommendation has been given in the package of practices of the university (Anon., 2018). Lack of farm machinery (54.55 %) and lack of quality seeds (54.55%) are the other two important constraints faced by the growers. Lack of latest technical knowledge was reported by 34.09 per cent while lack of improved varieties by 22.73 per cent.

TABLE 1
General characteristics of the sample farmers

Size of land holding	Number of farmers
< 1 hectare	5 (11.36)
1-2 hectare	11(25.00)
>2 hectare	28 (63.64)
Total	44 (100.00)
Sector-wise purchase pattern	
University/Govt. agencies	29 (65.91)
Private	15 (34.09)
Total	44 (100.00)
Purpose of sowing	
Grain	43 (97.73)
Fodder	1 (2.27)
Total	44 (100.00)
Method of sowing	
Broadcasting	10 (22.73)
Line sowing	34 (77.27)
Total	44 (100.00)

Note : Figures in parenthesis indicate percentages to total.

Constraints in marketing ;

All the marketing constraints were subdivided into three categories presented in Table 2.

reported by 86 percent of the sample farmers followed by problem of lack of transportation cost (56.82%), losses during storage (54.55%) and losses during transportation (45.45%).

1. Infrastructure constraints

As high as about 95 percent of the sample farmers reported that lack of processing facilities was the main infrastructural marketing constraint. Next infrastructural constraint was lack of storage facility

2. Business constraints

As far as business constraints are concerned all the sample growers reported that lack of export facility, high commission charges and more number of intermediaries are the major constraints. About 77

TABLE 2
Constraints in cluster bean production and marketing in Hisar

S. No.	Particulars	Yes		No	
		Number	Per cent	Number	Per cent
Production constraints					
Socio-economic constraints					
1	Lack of financial resources	20	45.45	24	54.55
2	Problem of Labour scarcity during peak season of Sowing	36	81.82	8	18.18
3	Problem of Labour scarcity during peak season of harvesting	8	18.18	36	81.82
4	Problem of Land scarcity due to other crops	4	9.09	40	90.91
5	Problems due to variability in weather/ Lack of awareness of weather forecasting	40	90.91	4	9.09
Technical constraints					
6	Problem of soil salinity	13	29.55	31	70.45
7	Lack of latest technical knowledge	15	34.09	29	65.91
8	Lack of recommended packages and practices	5	11.36	39	88.64
9	Lack of quality seeds	24	54.55	20	45.45
10	Lack of improved varieties	10	22.73	34	77.27
11	Lack of farm machinery	24	54.55	20	45.45
12	Problems of insect pests	20	45.45	24	54.55
13	Problems of diseases	10	22.73	34	77.27
14	Problems of weeds	35	79.55	9	20.45
Marketing Constraints					
Infrastructure constraints					
1	Lack of processing facility	42	95.45	2	4.55
2	Lack of storage facility	38	86.36	6	13.64
3	Problem of high transportation charges	25	56.82	19	43.18
4	Losses during transportation	20	45.45	24	54.55
5	Losses during storage	24	54.55	20	45.45
Business constraints					
6	Lack of market information	16	36.36	28	63.64
7	Lack of buyers in the markets	34	77.27	10	22.73
8	Lack of export facility	44	100.00	0	0.00
9	High commission charges	44	100.00	0	0.00
10	More no of intermediaries	44	100.00	0	0.00
11	Lack of on-farm sale	40	90.91	4	9.09
Policy constraints					
12	Lack of regulated and cooperative marketing	42	95.45	2	4.55
13	Fluctuation of prices	39	88.64	5	11.36
14	Lack of MSP	44	100.00	0	0.00
15	Lack of farmer-industry linkages	44	100.00	0	0.00

percent of the sample farmers were of the opinion that lack of buyers in the market was the next business constraints, while, lack of market information was reported by 36 percent sample farmers.

3. Policy constraints

Concerning policy constraints, Minimum Support Price (MSP) and lack of farmer-industry linkage were the major constraints reported by all the sample farmers. Further almost all the sample farmers *i.e.* 95 percent pointed out lack of regulated and cooperative marketing for cluster bean. About 89 percent sample farmers reported about facing of the problem of fluctuations in prices of cluster bean.

Important Suggestions for enhancing productivity in Hisar

- Weather forecasting should be scaled up and a programme for the awareness of weather forecasting needs to be taken up.
- Efforts should be made to provide solution to the problems of weeds and insect-pests.
- Extension activities are to be strengthened by the university as well the agriculture department for bridging the gap between potential and actual yield of the crop.
- New varieties suitable for the region should be developed continuously to fit into the changing climate scenario.
- It is possible to have two crops in a year in certain areas, where irrigation facilities are available. Second crop can be taken as summer crop (April-July) but short duration varieties would be needed which should mature before onset of the monsoon.

Important Suggestions for improving marketing

- Since cluster bean crop is highly dependent

on monsoon rainfall, and there is no risk cover for farmers in case of production failure. Therefore, cluster bean should be included in *Pradhan Mantri Fasal Bima Yojna* and MSP scheme of the government.

- More attention should be given to this crop by the State Agriculture Departments and Agricultural Universities equivalent to crops like cereals, oil-seeds and pulses.
- Cooperative marketing should be encouraged to enable the growers to fetch remunerative prices as per the domestic and international demand-supply scenario.
- Warehousing facilities for storage of cluster bean seed is inadequate thus needs more storage structures to be built.

REFERENCES

- Anonymous. 2018 : Package of practices for kharif crops. Directorate of Publication, CCSHAU, Hisar.
- Dhananjaya Swamy, P. S. and K.P. Naveena. 2015. An analysis of production performance and yield variability of guar (Cluster bean) in India. *J. Progr. Agric.* **6** : 44-49.
- Midha, L. K. , B. S. Duhan and U. N. Joshi. 2015 : Effect of time and mode of nitrogen application on quality, yield and yield attributes in cluster bean (*Cyamops tetragonoloba* L.). *Har. J. Agron.* **31** : 84-87.
- NRAA. 2014 : Potential of Rainfed Guar (Cluster beans) Cultivation, Processing and Export in India. Policy paper No.3 National Rainfed Area Authority, NASC Complex, DPS Marg, New Delhi-110012, India : 109 p.
- Sharma, P. and Gummagolmath, K. C. 2012 : Reforming guar industry in India: Issues and strategies. *Agricultural Economics Research Review* **25** : 37-48.