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Constraints in production, marketing and processing of cauliflower (*Brassica oleracea*) in Sonipat district of Haryana

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Abstract

Cauliflower (*Brassica oleracea*) is one of the important cruciferous vegetable crops of India. It is widely cultivated throughout the sub-tropical parts of north India. The present study was conducted in Sonipat district of Haryana on the basis of highest production of cauliflower among other districts of the state. The Rai block was selected for sampling and a total of thirty cauliflower farmers from various villages in this block were selected randomly. The primary data for the agriculture year 2017-18 were collected by personal interviews of the selected farmers with the help of specially designed schedule. The results of the study was indicated that 86.67 per cent of the respondents were claiming high cost of seed, high cost of pesticide (86.67%), lack of knowledge of recommended fertilizer doses (80.00%), high cost of fertilizer (76.67%), lengthy procedure for getting credit from government institutions for marketing purpose (83.33%), existence of large number of intermediaries in marketing process (80.00%), absence of minimum support prices (76.67%), inadequate of appropriate credit facilities (63.33%), higher rate of charges power and fuels (76.67%), lack of good quality packaging material (73.33%), fluctuation in raw material and procurement (70.00%), shortage of electricity power for processing (66.67%).

Keywords: Cauliflower, constraints, production, marketing and processing

Introduction

Vegetable growing is the most remunerative enterprise as it is adopted by small and marginal holders with high production in short duration. Being a source of farm income it creates impact on the agricultural development and economy of the country. Vegetables are cheap source of minerals, vitamins and high calorie. There is a lot of demand for fresh vegetables and their processed products both in domestic as well as in export markets which can earn valuable exchange for India (Patel and Pundir, 2016) [8].

Cauliflower (*Brassica oleracea*) is one of the important cruciferous vegetable crops of India. It is widely cultivated throughout the sub-tropical parts of north India. In India, the area under cauliflower was 459.00 thousand hectares with a production of 8844.00 thousand metric tonnes and productivity 19.30 metric tonnes per hectare (Anonymous, 2020) [1-2]. Cauliflower is one of the major vegetables produced in Haryana and during 2018-19 area, production and productivity of cauliflower was 43.61 thousand ha, 931.64 thousand tonnes and 21.36 MT/ha respectively (Anonymous, 2020) [1-2].

Marketing of the vegetables plays an important role as they are highly perishable and high-value products; good and well-structured markets are required. Farmers sell their produce to the commission agents or to the middle man and these are the main reasons for the high marketing costs of vegetables (Pavithra and Singh, 2020) [9].

Marketing costs and margins assume particular importance in predominating agricultural country like India where agricultural price policy aims at safeguarding interest of both farmers and consumers. In this regard, economic analysis of horticultural produces assumes great significance.

Materials and Methods

The present study was conducted in Sonipat district of Haryana on the basis of highest production of cauliflower in this district. Further block named Rai was selected randomly a total of thirty cauliflower farmers from various villages in this block were selected for the study. The primary data for the agriculture year 2017-18 were collected by personal interviews of the selected farmers with the help of specially designed schedule. The information about the

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problems faced by the cauliflower growers were ascertained from the selected respondents as well as from selected intermediaries on various aspects of cauliflower marketing. The information regarding problem faced by the producer in production, marketing and processing of cauliflower were also collected from the selected respondents.

Results and Discussion

Production problems expressed by cauliflower growers

The major problems faced by the farmers in the production of cauliflower are presented in Table 1 and it was indicated that 86.67 per cent of the respondents were claiming high cost of seed, high cost of pesticide (86.67%), lack of knowledge of recommended fertilizer doses (80.00%), high cost of fertilizer (76.67%), difficulty in identifying the pests and diseases (76.67%), lack of knowledge about the control measures for

various pests and diseases (73.33%), lack of the knowledge about improved varieties, their seed/planting materials (63.33%), labour problem during harvesting (63.33%), lack of knowledge about seed/seedling treatment (56.67%), weeding is time consuming and labour intensive (56.67%) and water shortage in summer (40.00%). These results coincide with the study of Maru and Gibramu (2014) [7] reported the major constraints of onion production. The study indicates that from all respondents, 59 per cent of them revealed that onion disease was the major constraints, 32 per cent of the respondents responded that water shortage was the major constraints of onion production and 6 per cent were responded climatic suitability is the major constraints of onion production and 3 per cent were responded marketing of onion bulb is the major problems. Similar constraints were also found by Gupta *et al.* (2017) [10].

Table 1: Production constraints expressed by cauliflower growers

| Sr. No. | Constraints | Respondents (N=30) | |
|---------|---|--------------------|------------|
| | | Frequency | Percentage |
| 1. | High cost of seed | 26 | 86.67 |
| 2. | High cost of pesticides | 26 | 86.67 |
| 3. | Lack of knowledge of recommended fertilizer doses | 24 | 80.00 |
| 4. | High cost of fertilizer | 23 | 76.67 |
| 5. | Difficulty in identifying the pests and diseases | 23 | 76.67 |
| 6. | Lack of knowledge about the control measures for various pests and diseases | 22 | 73.33 |
| 7. | Lack of the knowledge about improved varieties, their seed/planting materials | 19 | 63.33 |
| 8. | Labour problem during harvesting | 19 | 63.33 |
| 9. | Lack of knowledge about seed/seedling treatment | 17 | 56.67 |
| 10. | Manual weeding is time consuming and labour intensive | 17 | 56.67 |
| 11. | Water shortage in summer | 12 | 40.00 |
| 12. | Inadequate irrigation facilities | 11 | 36.67 |
| 13. | Labour problem for weeding | 11 | 36.67 |
| 14. | Poor quality of seed | 9 | 30.00 |
| 15. | Lack of knowledge about improved method of harvesting | 9 | 30.00 |
| 16. | Non availability of seed and planting materials in time | 5 | 16.67 |
| 17. | Lack of knowledge about grading | 5 | 16.67 |
| 18. | Non availability of fertilizer in time | 3 | 10.00 |

Marketing problems expressed by cauliflower growers

It is evident from Table 2 that 86.67 per cent of the respondents experienced that high cost of transportation, too much fluctuation in prices (83.33%), lengthy procedure for getting credit from government institutions for marketing purpose (83.33%), existence of large number of intermediaries in marketing process (80.00%), absence of

minimum support prices (76.67%), inadequate of appropriate credit facilities (63.33%), long distance from the production point to market (53.33%) and lack of market information (43.33%) which were the major problems in marketing of cauliflower. Similar constraints were also found by Kumar *et al.* (2020) [5] and Kumar *et al.* (2019) [4].

Table 2: Marketing problems expressed by cauliflower growers

| Sr. No. | Problems | Respondents (N=30) | |
|---------|---|--------------------|------------|
| | | Frequency | Percentage |
| 1. | High cost of transportation | 26 | 86.67 |
| 2. | Too much fluctuation in prices | 25 | 83.33 |
| 3. | Lengthy procedure for getting credit from government institutions for marketing purpose | 25 | 83.33 |
| 4. | Existence of large number of intermediaries in marketing process | 24 | 80.00 |
| 5. | Absence of minimum support prices | 23 | 76.67 |
| 6. | Inadequate of appropriate credit facilities | 19 | 63.33 |
| 7. | Long distance from the production point to market | 16 | 53.33 |
| 8. | Lack of market information | 13 | 43.33 |
| 9. | Unorganized marketing system | 11 | 36.67 |
| 10. | Commission agents not maintaining the proper records of sale and rate | 11 | 36.67 |
| 11. | Lack of infrastructure facility | 10 | 33.33 |
| 12. | Open auction sale fetches low price for produce | 8 | 26.67 |
| 13. | Heavy losses in the market | 8 | 26.67 |
| 14. | Lack of suitable packaging material | 7 | 23.33 |

Processing problems expressed by cauliflower growers

The processing related problems reported by cauliflower growers are given in Table 3 which revealed that 83.33 per cent of the respondents faced the problem lack of technical manpower, higher rate of charges power and fuels (76.67%), lack of good quality packaging material (73.33%), fluctuation

in raw material and procurement (70.00%), shortage of electricity power for processing (66.67%), problems in the arrangement of finance (60.00%) and constraints in marketing of processed product (56.67%) which were the major constraints that limit the processing of cauliflower. Similar constraints were also found by Khunt *et al.* (2008)^[3].

Table 3: Processing problems expressed by cauliflower growers

| Sr. No. | Problems | Respondents (N=30) | |
|---------|--|--------------------|------------|
| | | Frequency | Percentage |
| 1. | Lack of technical manpower | 25 | 83.33 |
| 2. | Higher rate of charges power and fuels | 23 | 76.67 |
| 3. | Lack of good quality packaging material | 22 | 73.33 |
| 4. | Fluctuation in raw material and procurement | 21 | 70.00 |
| 5. | Shortage of electricity power for processing | 20 | 66.67 |
| 6. | Problems in the arrangement of finance | 18 | 60.00 |
| 7. | Constraints in marketing of processed product | 17 | 56.67 |
| 8. | Lack of processing unit | 14 | 46.67 |
| 9. | Constraints regarding location of site | 13 | 43.33 |
| 10. | Problems in repair and maintenance of processing machinery | 12 | 40.00 |
| 11. | Lack of suitable variety for processing | 11 | 36.67 |

Conclusions

Cauliflower (*Brassica oleracea*) is one of the important cruciferous vegetable crops of India. It is widely cultivated throughout the sub-tropical parts of north India. The present study was conducted in Sonipat district of Haryana on the basis of highest production of cauliflower. The major problems faced by the farmers in the production of cauliflower were claiming high cost of seed, high cost of pesticide, lack of knowledge of recommended fertilizer doses, high cost of fertilizer, difficulty in identifying the pests and diseases, lack of knowledge about seed/seedling treatment, weeding is time consuming and labour intensive and water shortage in summer. The major problems faced by the farmers in the marketing of cauliflower that high cost of transportation, too much fluctuation in prices, lengthy procedure for getting credit from government institutions for marketing purpose, existence of large number of intermediaries in marketing process, absence of minimum support prices and lack of market information. The major constraints that limit the processing of cauliflower were lack of technical manpower, higher rate of charges power and fuels, lack of good quality packaging material, fluctuation in raw material and procurement, shortage of electricity power for processing, problems in the arrangement of finance and constraints in marketing of processed product.

Suggestions and policy implications

Keeping in view the findings of the present study it is suggested that cauliflower growers, policy makers and researchers to make profitable enterprise by taking these steps.

- The marketing infrastructure should be developed to increase the producer's share in consumer's rupee in a way to emerge either direct sale or co-operative sale by the producers to the consumers.
- Processing agro-industries units should be established to reduce the distress sale and glut in the market in the peak harvesting period.
- There should be timely payment of farmers produce especially by the commission agents.
- Adequate and timely credit facilities should be provided

to the growers at lower interest rate.

- The government should make adequate arrangement for timely supply of necessary inputs at reasonable prices to the growers so as to increase per hectare productivity as well as net returns.

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