



# Technological Gap Analysis of Cauliflower Growers towards Quality Production in Western Uttar Pradesh

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## Authors' contributions

*This work was carried out in collaboration among all authors. Authors SP and BS designed the study, performed the statistical analysis and wrote the first draft of the manuscript. Authors BS, KGY and SKL managed the survey work, data collection analysis of the study. Author RS managed the literature searches. All authors read and approved the final manuscript.*

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## ABSTRACT

Cauliflower is the main crop among the Cole crops. It is grown in all states of India. The Leading Cauliflower producing states are Karnataka, West Bengal, Punjab, Bihar and Uttar Pradesh. In Uttar Pradesh it is grown from June to March according suitability of their varieties. The varieties are recommended according the grown season. Some varieties are suitable to show in month of May and June and some varieties are suitable to show in the month of October and November, according to its growing season. To get the higher yield and good quality curds production technologies have been developed by the scientists. But due to some reasons the Farmers are not adapting the recommended practices during cultivation. They are facing many problems for quality curd production. Some physical disorder and disease decline the yield and quality both. Resulting y Cauliflower growers are not getting good returns. Keeping in view this study on Technological gap

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analysis of cauliflower growers towards quality production in western Uttar Pradesh was carried out. Study revealed that for higher yield and quality production technological practices should be adapted by the cauliflower growers. Bedre [1] also agreed.

*Keywords: Technologies; adoption gap; productivity.*

## 1. INTRODUCTION

Cauliflower is one of the most important winter vegetables in India. It was introduced to India in 1822 by Dr. Jenson at Saharanpur during the period of East India Company. In India, cauliflower is grown both in hills and plain from 11°N to 35°N during July to March in northern plain and from March to November in hills with separate recommended practices. It was originated in the island of Cyprus. The cauliflower got established around the Mediterranean region from where it moved to the countries like Syria, Turkey, Egypt, Italy, Spain and northwestern Europe. Cauliflower (*Brassica oleracea* var. botrytis) belong to the family of cruciferous vegetables. Cauliflower is a cold weather crop and perform best in the area with mild climate Kant et al. [2], Kumar et al. [3], Choudhary [4], Choudhary et al. 2016). It is grown for its tender head or curd. It is a delicate crop and need more care to grow successfully when compared to other vegetables. not adopting the recommended practices during crop production many physical disorder and disease deteriorate the yield and quality both. Contributing many genes to the Indian varieties like resistance to black-rot, self-incompatibility, curd flavor, open plant habit, exposed yellow loose curds etc. not adapting recommended techniques.)For higher yield and quality production of cauliflower technological gap should be minimized [5], (Goswami et al. 2014). With technological gap Waghmode, R. D. (2005 also agreed. During cauliflower production many physical disorders like browning, whiptail and buttoning are deteriorating yield and quality.

## 2. RESEARCH METHODS

This study was carried out in four district of western Uttar Pradesh i.e. Meerut, Hapur, Ghaziabad and Shamli. During 2018-19'.the four district comprises many blocks and of them eight blocks, two blocks from each district were selected on the area under cauliflower and its productivity. Three villages from each block total 24 villages and five cauliflower growers from each village were randomly selected. Thus the total sample size was 120. The primary data were collected on the basis of adopting production

techniques though personal interview during cauliflower production season with the help of structural developed Schedule, the data were analyzed and find out the mean value and percentage.

## 3. RESULTS AND DISCUSSION

Nursery Growing Technique, Plant Protection, Selection of Soil & its testing, Time of The results of present study along with relevant discussion have been presented as under. The data presented in Table 1 indicates that highest adoption gap (82.3%) was found in Selection of varieties according to its shown time in case of marginal cauliflower growers followed by 72.6, 68.5, 63.1, 48.2, 42.1, 34.6, 32.8 and 17.4 percent adoption gap regarding Nursery growing Technique, Plant Protection, Selection of Soil & its testing, Time of planting, Manures & Fertilizer application, Grading & packing, Time of Nursery Sowing and Seed rate respectively. Bedre [1] also agreed. In case of small cauliflower growers the highest adoption gap (81.5) was found in Selection of varieties according to its shown time followed by 63.5, 57.5, 56.2, 44.2, 37.8, 33.6, 28.3 and 22.8 percent adoption gap regarding planting, Manures & Fertilizer application, Time of Nursery sowing, Grading & packing, and Seed rate respectively. While the Large cauliflower growers The highest adoption gap (80.2%) was found in Selection of varieties according to its shown time followed by 59.1, 52.4, 48.3, 39.4, 32.7, 28.7, 26.6 and 24.6 percent adoption gap regarding Nursery growing Techniques, Plant Protection, Selection of Soil & its testing, Time of planting, Manures & Fertilizer application, Time of Nursery Sowing, Seed rate and Grading & packing respectively. Kumar et al. [3] also supported the study. The data presented in Table 2 indicates that Highest adoption Level (75.4%) was found in Grading and Packing in case of Large cauliflower Growers Followed by 73.4, 71.3, 67.3, 60.6, 51.7, 47.6, 40.9 and 19.8 percent adoption Level with respect to Seed rate, Time of Nursery sowing, Manures & Fertilizer application, Time of Planting, Selection of Soil & its testing, Plant protection, Nursery growing Techniques and Improved Varieties respectively. In case of Small cauliflower Growers Highest

**Table 1. Adoption gap in cauliflower production technology under different category of farmers**

S. no.	Cauliflower production tech.	Score assigned	Cauliflower growers		
			Marginal	Small	Large
1	Selection of Soil & its testing	10	63.1	56.2	48.3
2	Improved Varieties	8	82.3	81.5	80.2
3	Seed Rate	6	17.4	22.8	26.6
4	Nursery growing Techniques	9	72.6	63.5	59.1
5	Time of Nursery Sowing	7	32.8	33.6	28.7
6	Time of planting	11	48.2	44.2	39.4
7	Manures and Fertilizers appl.	12	42.1	37.8	32.7
8	Plant Protection	10	68.5	57.5	52.4
9	Grading and Packing	6	34.6	28.3	24.6
Average			51.29	47.27	43.55

**Table 2. Assessment of adoption level cauliflower production technology under different category of farmers**

S. no.	Cauliflower production tech.	Score assigned	Cauliflower growers		
			Marginal	Small	large
1	Selection of Soil & its testing	10	36.9	43.8	51.7
2	Improved Varieties	8	17.7	18.5	19.8
3	Seed Rate	6	82.6	77.2	73.4
4	Nursery growing Techniques	9	27.4	36.5	40.9
5	Time of Nursery Sowing	7	67.2	66.4	71.3
6	Time of planting	6	51.8	55.8	60.6
7	Manures and Fertilizers apply.	12	57.9	62.2	67.3
8	Plant Protection	11	31.5	42.5	47.6
9	Grading and Packing	6	65.4	71.7	75.4
Average			48.71	52.73	56.45

adoption Level (77.2%) was found in Seed rate Followed by 71.7, 66.4, 62.2, 55.8, 43.8, 42.5, 36.5 and 18.5 percent adoption Level with respect to Grading & packing.

Time of Nursery Sowing, Manures & Fertilizers Application, Time of planting, Selection of Soil & its testing, Plant Protection, Nursery growing Techniques and Improved Varieties respectively. While The Highest adoption Level (82.6%) was found in Seed rate in Marginal cauliflower Growers Followed by 67.2, 65.4, 57.9, 51.8, 36.9, 31.5. Manures & Fertilizer application, Technique, Time of Nursery sowing, Manures & Fertilizer application, Time of Planting, Selection of Soil & its testing, Plant protection, Nursery growing Techniques and Improved Varieties respectively. The average adoption Level of Large cauliflower Growers were found highest 56.45 percent and Lowest 48.71 percent of Marginal cauliflower Growers. The adoption Level of Small cauliflower Growers was found 52.73 percent respectively. This finding is in conformity with [6].

#### 4. CONCLUSION

It may be concluded that highest adoption Level was found in seed rate of all Categories of cauliflower Growers and Lowest in Improved varieties of all categories of cauliflower Growers. Bedre [1] also agreed. The average adoption Level of Large cauliflower Growers were found highest and Lowest by Marginal cauliflower Growers and the Selection of Improved varieties of all categories of cauliflower Growers and the also Lowest in Nursery Growing Techniques of all categories cauliflower growers. The average adoption gap of Marginal cauliflower Growers was found highest and Lowest of Large cauliflower Growers. Utpal et al. [2] also proved. The Finding of investigation may be used to provide Training's, demonstrations and Financial support for Improved varieties and for other gap as per gap analysis to The cauliflower Growers for increasing the quality production of cauliflower and maximum per hectare return and sustainability. Lithourgidis et al. [7] also proved.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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