

International Journal of Agriculture Extension and Social Development

Volume 8; Issue 11; November 2025; Page No. 374-376

Received: 25-08-2025
Accepted: 29-09-2025

Indexed Journal
Peer Reviewed Journal

Knowledge level of farmers towards improved marigold production practices in Purba Medinipur District of West Bengal

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DOI: <https://www.doi.org/10.33545/26180723.2025.v8.i11e.2654>

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Abstract

The study was carried out in Purba Medinipur District of West Bengal during the 2023-24 period to find out the knowledge level of the respondents towards improved marigold production practices. A total of 120 respondents were selected from Dokanda, Meghadangar, Bakharabaj, Govinda Chak and Gajna villages within Panskura Community Development Block, based on the high number of farmers engaged in Marigold production. The primary data were gathered through personnel interviews using a pre-structured interview schedule and subsequently analysed using appropriate statistical tools such as frequency, percentage and correlation was used to interpret the findings and draw conclusion. The major findings were 59.17% of respondents have medium level of knowledge towards improved Marigold production practices whereas out of 12 variables i.e. age, occupation, annual income and family size was found positively significant correlation at 0.01 probability with overall knowledge level and caste, education level, land holding, family type, housing pattern, farm power, social participation and extension contact was found positively significant correlation at 0.05 probability with overall knowledge level towards improved marigold production practices.

Keywords: Knowledge level, improved production practices, Purba Medinipur District, West Bengal

1. Introduction

In India, marigold ranks first among the loose flowers followed by chrysanthemum, jasmine, tuberose, crossandra and barleria. Today, there is huge demand for natural colours of marigold, calendula, hibiscus, gomphrena, petunia etc. in the international market. Marigold is one such potential flower crops for natural colour extraction. Marigold (*Tagetes erecta* L.) is not only grown as ornamental cut flower and landscape plant but also as a source of natural carotenoid pigment for poultry feed. It is mainly cultivated for ornamental purposes all over the world. This is a native of Central and South America, especially Mexico, from where it spread to different parts of the world during the early 16th century, but marigold has been adapted so well to Indian conditions. In India, marigold was introduced by the Portuguese. It became popular and spread quickly because of its easy cultivation, adaptability to varying soils and climatic conditions. It can be grown throughout the year. The variable flower size and colours make marigold ideal flower for decoration as well as garden in marigold is also planted in pots. West Bengal is one of the major states for production of flowers and it ranks among the top cut flower producing states. Karnataka,

Tamil Nadu, Andhra Pradesh, West Bengal, Maharashtra, Uttarakhand, UP, Delhi, Haryana, Kerala, Himachal Pradesh and Northeastern States are the major flower growing states in India. Tamil Nadu is the largest loose flower producing state, while West Bengal is the leading cut flower producing state in India. Among the districts of West Bengal, Purba Medinipur district is one of the top flowers producing district.

Floriculture has emerged as an economically viable diversification option in the Indian agribusiness and has captured the interests of many entrepreneurs into agriculture sector in recent times. The domestic industry is growing at an impressive annual rate of 7- 10%. It is estimated that 248.41 thousand ha area is under flower cultivation is 2014-15 and is concentrated mainly in Tamil Nadu, Karnataka, Andhra Pradesh, Maharashtra and West Bengal (Raina *et al.*, 2017) ^[1]. India is the second largest flower grower after China. Tamil Nadu is the leading state in India, in terms of flower production followed by Karnataka. Floriculture has become a highly specialized and intensive form of agriculture in Purba Medinipur district of West Bengal. Two Blocks namely Panskura I and Kolaghat (Formerly Panskura II) have emerged as important flower growing region of the

district. During the past few decades' growth of floriculture in this region has assume national importance in terms of increase in production and variety, thus occupies a line share of the flower market of W.B. and India as well. This has a tremendous bearing on the socio economy of the region and has opened a new avenue towards economic prosperity of the region. Before 1990 percentage of floriculturists among the farmers was negligible but now more than 70% of the farmers in Panskura I and Kolaghat blocks are practicing flower cultivation along with paddy. This tremendous growth of floriculture in these two Blocks has strengthened the economic base and quality of life of the farmers (Sahu *et al.*, 2011) ^[8].

Objectives

- To determine the knowledge level of the respondents towards improved marigold production practices.
- To find out the association between socio economic profiles of the respondents with dependent variables.

2. Materials and Methods

The study employed a descriptive research design, which aimed to provide a comprehensive description of the phenomena under investigation. Multi stages sampling method was followed for the study for selecting the samples required. Out of 23 districts in West Bengal, Purba Medinipur district was selected purposively for the study as high numbers of farmers are engaged in marigold cultivation. One block from Purba Medinipur district was selected i.e. Panskura community development block was specially chosen and Dokanda, Meghadangar, Bakharabaj, Govinda Chak and Gajna villages was selected purposively. A total of 120 respondents were selected for the study. Personal interview schedule of structured questionnaire was used for the collection of data. The collected data were classified, tabulated and analyzed in the light of the objectives. Appropriate statistical tools such as frequency percentage, correlation was used to draw the inferences.

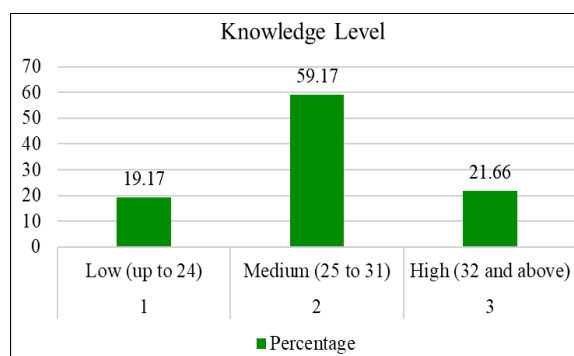
3. Results and Discussion

Table 1: Distribution of respondents according to their knowledge level towards improved Marigold production practices (n=120)

Sl.no.	Statements	Fully correct		Partially correct		Not correct	
		f	%	f	%	f	%
1	Land preparation						
	a) Plough	36	30.00	53	44.17	31	25.83
	b) Crossed plough and properly level						
2	Suitable soil	63	52.50	40	33.33	17	14.17
	a) Fertile sandy loam soil with good drainage						
3	Sowing or planting season is May - July	34	28.33	64	53.33	22	18.33
4	Planting method						
	a) Seed propagation	39	32.50	62	51.67	19	15.83
	b) Transplanting						
5	Spacing between plants should be kept	50	41.67	60	50.00	10	8.33
	a) 45cm X 35 cm						
6	Name of fertilizer used	32	26.67	65	54.17	23	19.17
7	Method of fertilizer Application						
	a) Broadcasting	28	23.33	66	55.00	26	21.67
	b) Foliar						
	c) Placement						
	d) Fertigation						
8	Types of manure used						
	a) green manure	37	30.83	52	43.33	31	25.83
	b) FYM						
9	Disease control used						
	a) Neem oil	22	18.33	53	44.17	45	37.50
	b) Use of fungicides						
10	Weeding Methods						
	a) Hand removal	29	24.17	71	59.17	20	16.67
	b) Mowing						
	c) Mulching						
	d) Cover crop						
11	Weed control						
	a) Glyphosphate (@16 liter per 150 liters of water)	28	23.33	66	55.00	26	21.67
12	Recommended harvesting time	36	30.00	58	48.33	26	21.67
13	Harvesting after attaining						
	a) Proper size	38	31.67	50	41.67	32	26.67
	b) Attractive colour						
	c) Proper timing						
14	Yield / ha	54	45.00	35	29.17	31	25.83

Table 2: Overall distribution of respondents on the basis of knowledge level towards improved marigold production practices (n=120)

Sl.no.	Knowledge level	Frequency (f)	Percentage (%)
1	Low (up to 24)	23	19.17
2	Medium (25 to 31)	71	59.17
3	High (32 and above)	26	21.66
Total		120	100

**Fig 1:** Overall distribution of knowledge level of respondents towards improved marigold production practices (n=120)

The data presented in the table 2 reveals that out of total 120 respondents, majority of respondents 59.17% were found in medium level of knowledge of improved Marigold production practices whereas 21.66 per cent respondents were observed in the high level of knowledge level group and remaining 19.17 per cent possessed low level of knowledge of improved Marigold production practices in study area.

Table 3: Association between socio economic profiles of the respondents with knowledge level towards improved marigold production practices

Sl.no.	Variables	Correlation coefficient(r)
1	Age	0.7804**
2	Caste	0.4664*
3	Educational level	0.5756*
4	Occupation	0.1074**
5	Annual income	0.9828**
6	Land holding	0.3987*
7	Family Type	0.0135*
8	Family Size	0.6114**
9	Housing Pattern	0.8862*
10	Farm Power	0.1534*
11	Social Participation	0.4010*
12	Extension Contact	0.1229*
* = Significant at 0.05 level of probability		
** = Significant at 0.01 level of probability		
NS = Non Significant		

It was observed from Table 3 that out of 12 variables the variables i.e. age, occupation, annual income and family size was found positively significant correlation at 0.01 probability with overall knowledge level and caste, education level, land holding, family type, housing pattern, farm power, social participation and extension contact was found positively significant correlation at 0.05 probability with overall knowledge level towards improved marigold production practices. Hence, it is concluded that positive and significant relationships had direct impact over overall knowledge level towards improved Marigold production practices. It meant that if the value of these variables

increases, the overall knowledge towards improved Marigold production will be increased.

4. Conclusion

The study was conducted Purba Medinipur district of West Bengal with 120 Marigold farmers, and it was revealed that majority 59.17% respondents were found to have medium level of knowledge towards improved marigold production practices followed by 21.66 per cent high level and 19.17 per cent respondents have low level of knowledge towards improved marigold production practices. Also, it was found that variables i.e. age, occupation, annual income and family size were found positively significant correlation at 0.01 probability with overall knowledge level and caste, education level, land holding, family type, housing pattern, farm power, social participation and extension contact were found positively significant correlation at 0.05 probability with overall knowledge level towards improved marigold production practices.

5. Acknowledgement

The authors acknowledged Dr. Jahanara (advisor), Professor & Head of Department Agricultural Extension & Communication for her involvement and encouragement at every stage of the study. I would like to take this opportunity to express my gratitude to my father Chandan Pramanik as well as my mother Barnali Pramanik and the respondents for helping and supporting in the research work to get results of good quality.

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