Level of Knowledge and Extent of Adoption of Farmers on Recommended Gladiolus Production Practices

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ABSTRACT

The study was conducted in Nadia district of West Bengal with 80 gladiolus growers to measure the level of knowledge and extent of adoption of the recommended gladiolus production practices among the farmers. Most of the respondents were found lying in medium level of knowledge and adoption category. Knowledge level and extent of adoption had shown some significant correlations with extension agency contact and mass media exposure and from the study it is clear that extension agencies have to be more active to enhance the knowledge level and extent of adoption of the flower growers.

Key words : *Level of knowledge; Extent of adoption; Risk orientation; Economic motivation*

*T*he advancement of scientific techniques in flower cultivation has given an impetus to the growth of flower industry in various parts of the world, including India. In India the area under production of flowers is around 106,000 hectares (Horticulture database, 2005) concentrated mostly in Tamil Nadu, Andhra Pradesh, Maharashtra, and West Bengal. Being a new concept, the requirements of scientific and commercial floriculture is not properly understood in the country. Commercial cultivation of flowers requires a thorough knowledge base of flower growers regarding recommended scientific flower production practices. Therefore a study was taken up to assess the level of knowledge and extent of adoption of farmers on recommended flower production technologies. Gladiolus was selected for the study.

METHODOLOGY

The Nadia district of West Bengal was selected purposively to conduct the study as Gladiolus is grown here commercially and extensively. Two blocks namely Ranaghat- I and Ranaghat- II of this district selected purposively where gladiolus is cultivated and two villages from each block were selected randomly by using the random number table. Twenty flower growers from each of the four villages (total 80) were selected as respondents by using simple random sampling technique. The modified index of Pradhan (2005) was used to measure the level of knowledge and extent of adoption of recommended flower production practices. A semi structured interview schedule was used to collect the data. Frequency, Percentage analysis, correlation, was used to study the level of knowledge and extent of adoption of the respondents.

RESULTS AND DISCUSSION

Practice wise knowledge level of the respondents regarding gladiolus production technologies: An attempt was made to understand the knowledge gaps on various aspects of improved gladiolus production practices by computing the number of farmers who possessed adequate knowledge on each of the twelve packages of practices on gladiolus. The results of such analysis are given in Table 1.

Table 1. Frequency distribution of level of knowledge of gladiolus production technology   N= 80

S.No.	Practices	f	%
1.	Improved varieties	29	36.25
2.	Method of sowing/planting	45	56.25
3.	Plant to plant distance	46	57.50
4.	Sowing time	68	85.00
5.	Seed rate / plants	33	41.25
6.	Seed treatment	39	48.75
7.	Fertilizers	41	51.25
8.	Irrigation	34	42.50
9.	Weeding and interculture	43	53.75
10.	Plant protection	32	40.00
11.	Plucking	74	92.50
12.	Storage	42	52.50

The results revealed that the respondents had proper knowledge about the sowing time and plucking of the flower crop. Regarding the remaining practices they had a moderate level of knowledge. The total knowledge score on improved gladiolus cultivation for each farmer was computed by adding up the scores of all correct answers. These knowledge scores were further analyzed and the results are given in Table 2.

The data showed that, the mean of the respondents' knowledge regarding the production technology of

gladiolus was 8.20 with a standard deviation 1.83. The range of the level of knowledge was 5 to 12. So the range varied a lot. The result showed that majority (78.75%) of the respondents belonged to medium knowledge level category. Twelve point five percent belonged to high knowledge level and 8.75 percent of the respondents belonged to low knowledge level category.

Table 2. Distribution of the gladiolus growers on level of knowledge N= 80

Categories	f	%
Low (<Mean-1SD)	7	8.75
Medium (Between Mean+1SD)	63	78.75
High (>Mean+1SD)	10	12.5
Total	80	100
Mean	8.20	
Standard deviation	1.83	
Range	5-12	

Extent of adoption of the respondents regarding scientific gladiolus production practices : An attempt was made to understand the adoption gaps on various aspects of improved gladiolus production practices by computing the number of farmers who adopted each of the twelve practices on gladiolus cultivation either in full or partially or not at all. The result of such an analysis is given in Table 3.

Table 3. Frequency distribution of extent of adoption of gladiolus production technology   N=80

Practices	Full adoption f (%)	Partial adoption f (%)	No adoption f (%)
improved varieties	0 (0)	80 (100)	0 (0)
Method of sowing/planting	4 (5)	76 (95.00)	0 (0)
Plant to plant distance	0 (0)	80 (100)	0 (0)
Sowing time	77 (96.25)	3 (3.75)	0 (0)
Seed rate / plants	73 (91.25)	6 (7.5)	1 (1.25)
Seed treatment	2 (2.5)	62 (77.5)	16(20.00)
Fertilizers	4 (5.00)	76 (95.00)	0 (0)
Irrigation	72 (90.00)	8 (10.00)	0 (0)
Weeding and interculture	78 (97.50)	2 (2.50)	0 (0)
Plant protection Plant protection	3 (3.75)	77 (96.25)	0 (0)
Plucking	78 (97.50)	2 (2.50)	0 (0)
Storage	71 (88.75)	9 (11.25)	0 (0)

As evident from the result in the Table, the gladiolus growers appeared to be traditionally growing them for long time and were found to adopt a few practices in full: sowing time, seed rate, irrigation, interculture and plucking. Most of the farmers were found to adopt such practices as improved varieties, method of sowing, plant-to-plant distance, seed treatment, fertilizers and plant protection partially. One significant feature was that about 20 percent of gladiolus growers were not at all adopting any seed treatment techniques. Thus it can be seen that

majority of farmers were adopting most of the improved gladiolus production practices either in full or partially.

The total adoption score on improved gladiolus cultivation for each farmer was computed by adding up the scores of all twelve items. These adoption scores were further analyzed and the results are given in Table 4.

Table: 4. Distribution of gladiolus growers on farmers' extent of adoption   N= 80

Categories	f	%
Low (<Mean-1SD)	14	17.50
Medium (Between Mean+1SD)	56	70.00
High (>Mean+1SD)	10	12.50
Total	80	100
Mean	10.90	
Standard deviation	3.22	
Range	5-18	

As can be seen from the table, the mean adoption score on improved practices of gladiolus was 10.90 with a standard deviation of 3.22. The adoption scores ranged from as low as 5 to as high as 18 thus indicating a wide variation among the extent of adoption of gladiolus cultivation among the respondent farmers. Seventy percent of the respondents were found lying in medium level of adoption, 12 percent in high level of adoption and 17.50 percent in low level of adoption.

Correlations were studied of level of knowledge and extent of adoption of recommended gladiolus production practices with other independent variables and the results are presented in table 5.

Table 5. Correlations of level of knowledge and extent of adoption with independent variables

Variable	Knowledge	Adoption
Age	-.103	-.270*
Education	.148	.255*
Land holding	.155	.493**
Annual family income	.101	.423**
Extension agency contact	.426**	.381**
Mass media exposure	.291**	.174
Risk orientation	.178	.623**
Economic motivation	.083	.501**

* Significant at 1% level of significance
** Significant at 5% level of significance

Some significant relationships had been found from the correlation study. Level of knowledge of recommended gladiolus production technologies was found positively correlated with extension agency contact and mass media exposure. Thus the respondents who kept close contact with extension agencies and had a mass media exposure gained a good knowledge about recommended gladiolus production practices.

Extent of adoption of recommended gladiolus

production practices was found positively correlated with education with one percent level of significance. It was also found positively correlated with land holding, annual family income, extension agency contact, risk orientation and economic motivation with five percent level of significance. Educated farmers used to gather information from various sources, they kept contact with extension agencies and as their economic motivation was more their extent of adoption was high. The respondents who possessed more land holding and whose family income was high they were found more risk oriented in adopting the recommended gladiolus production practices.

CONCLUSION

Target oriented training programme have to be formulated to enhance the level of knowledge and extent of adoption of recommended gladiolus production practices. Extension agencies have to be more active in providing several exposures to the flower growers regarding scientific flower production practices.

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