

Extent of adoption of improved mango cultivation practices by the KVK trained farmers

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ABSTRACT

The research study was conducted in Gadag and Haveri districts of Karnataka with sample size of 60 respondents. The findings revealed that, 46.67 per cent of respondents of KVK Hulakoti belonged to high adoption category with respect to mango cultivation practices, where as 43.33 per cent of respondents of KVK Hanumanamatti were belonged to low adoption category. The respondents of Hulakoti KVK registered significantly higher adoption scores in mango cultivation practices compared to their counterparts in other KVK. The computed 't' values were tested for significance at 1 and 5 per cent. More than 50.00 per cent of the respondents had fully adopted the practices like variety (60.00% and 50.00%), materials used for pit filling (60.00% and 40.00%), pit size (60.00% and 40.00%) and spacing (53.33% and 53.33%) in case of Hulakoti and Hanumanamatti KVK, respectively, whereas more percentage of Hanumanamatti respondents had partially adopted the practices like soil type 60.00 per cent, pit size 60.00 per cent, materials used for pit filling 60.00 per cent, irrigation 56.67 per cent, respectively. Further, it was observed that very meagre percentage of respondents of KVK Hulakoti and Hanumanamatti fully adopted pest control (23.33% and 13.33%) and disease control (26.67% and 13.33%). All the respondents of both the KVKs had not used the growth regulator.

Key words : Variety, Intercropping, Fertilizer, Pest control, Pit size, Growth regulator

INTRODUCTION

Fruits are of great importance in human nutrition. At present, next to China, India is the second largest producer of fruits. Diversified agroclimate across the country provides a unique advantage for fruit production through extended period of availability and differential quality. Mango is world's leading fruit-crop. India occupies 1.62 million hectares area under mango fruit with a production of 12.78 million tonnes, which is 37.6 per cent of total production under fruits. Today, India is the largest producer of mango and it has been estimated that Andhra Pradesh is the largest producing state contributing approximately 28.2 per cent of the total production in the country followed by Uttar Pradesh 19.70 per cent, Karnataka 7.7 per cent and West Bengal 5 per cent. In general, mango is consumed as dessert fruit. Its demand is increasing day by day because of its high nutritive value. Looking to the importance of mango fruit, it is essential that farmers should be motivated for decision to adopt recommended cultivation on a large scale.

The training of farmers is a critical input for the rapid transfer of agricultural technologies. The present rate of agricultural production can be doubled if the available technologies are brought to bear with the production process and programmes focusing more and more on transferring our new technologies away from the confines of laboratories and research institutions to the farmers and make them more result and work oriented. In this

context, training plays an important role to the farming community in boosting their farm production. Vocational training for the farmer proved to be a significant input in accelerating our farm production. Information regarding agriculture inputs like improved seeds, suitable manures and fertilizers, plant protection measures, credit requirements etc. need urgent attention for fulfilling these tasks.

Agricultural research and education has been considerably advanced in our country. Research contributions in preceding decade had been enormous in all the areas of agricultural production, processing and marketing. The extension machinery however has not been able to cope up with the scientific advances. A gap still exists between the production technologies available and their rapid transfer to the farmers. Unless this gap is filled, the production technologies now available in agriculture and allied fields cannot be properly harnessed for accelerated production. This is a matter of great concern to all departmental and Non-Governmental Organizations committed to agricultural development in the country.

ICAR had launched the scheme after finding the fact that the training institutes in the country were not sufficient to meet the training needs of the farmers and consequently the process of transfer of technology had been slowed down. Based on the recommendations of the Education Commission (1964-66) and the Inter Ministerial Committee (1973), the ICAR decided to

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establish Krishi Vigyan Kendras in the country, as they observed the KVKs are of national importance and would help in accelerating the agricultural production and also in improving the socio-economic conditions of the farming community. On the basis of Education Commission Report the first KVK was established at Pondicherry under the management of Tamil Nadu Agricultural University, Coimbatore in 1974.

Looking at KVKs growth and their increasing demand and utility, it was felt necessary to undertake a study on extent of adoption of mango cultivation practices by the trained farmers. The findings of the study will be useful for making modifications in the KVKs programmes and their activities. The findings of the study would also help to understand the adoption behaviour of the trained farmer's about improved mango cultivation practices. Keeping these things in view, the present study was undertaken to study the extent of adoption of improved mango cultivation practices by the trained farmers.

MATERIALS AND METHODS

The present study was conducted in two KVKs, one managed by University of Agricultural Sciences, Dharwad and the other by NGO. KVK Hanumanamatti and KVK Hulakoti were selected, to represent University of Agricultural Sciences, Dharwad and NGO managed KVKs, respectively, as both of them were the oldest KVKs established in North Karnataka. During the year 2003 and 2004, KVKs had conducted 250 training programmes in the disciplines of Crop Science, Animal Science, Horticulture, Vermicompost, Plant Protection and Home Science. Among these courses, the important course *viz.*, Mango cultivation practices was considered for the study based on the highest numbers of training programmes conducted by both the KVKs. The list of respondents, who had undergone training programmes during 2003 and 2004 in the areas of Mango cultivation practices were obtained from the respective KVKs. Thirty respondents from each KVK were selected randomly for the study, thus constituting the total sample size of 60 respondents. In the light of the objectives set for the study,

the variables *viz.*, adoption on mango cultivation practices were the main items of investigation. In order to measure the adoption quantitatively, important improved practices recommended for mango cultivation practices were considered. There were eighteen practices for the adoption of mango cultivation practices by the respondents.

To measure level of adoption, recommended important practices were listed and responses for the adoption of each practice was obtained. A numerical score of 2 was assigned for full adoption, while a score 1 was assigned for partial adoption and 0 was assigned for non adoption. Scores of all identified practices were summed up. This sum total was indicative of adoption level of that particular individual respondent. The maximum and minimum adoption score that could be obtained by individual was 36 and 0 for Mango cultivation practices. A pre-tested interview schedule was used to collect the data through personal interview method. The data collected were tabulated and analyzed by using suitable statistical measures.

RESULTS AND DISCUSSION

The findings of the present study as well as relevant discussion have been presented under following heads :

Adoption level of the respondents about mango cultivation practices :

Adoption index of the respondents about Mango cultivation practices :

The distribution of respondents based on adoption index is presented in Table 1. It can be observed that, 46.67 per cent of respondents of KVK Hulakoti belonged to high adoption category with respect to mango cultivation practices, where as 43.33 per cent of respondents of KVK Hanumanamatti were belonged to low adoption category.

Further, among the categories of mango growers it was observed that in high adoption group, 10.00 per cent respondents were found to be from tribal farmers' category and 25.00 per cent respondents from non-tribal farmer's category. In the medium adoption group, 57.50

Category	KVK, Hulakoti Mango cultivation (n ₁ =30)		KVK, Hanumanamatti Mango cultivation (n ₂ =30)	
	Adoption index			
	F	%	F	%
Low	10	33.33	13	43.33
Medium	6	20.00	8	26.67
High	14	46.67	9	30.00
Total	30	100	30	100
Mean	56.66		46.51	

per cent respondents from tribal farmers' group and 70.00 per cent respondents from non tribal farmers' group. Where, in the low adoption group 32.50 and only 5.00 per cent respondents were in the tribal and non-tribal farmers' group respectively. From the above results it can be concluded that non tribal farmers possessed more level of adoption of mango cultivation technology than tribal farmers. It can be further concluded that 95.00 per cent respondents from non-tribal categories were to be observed either from medium or high adoption group. Whereas, 90.00 per cent tribal farmers adopted mango cultivation technology medium to lower level in the study area.

These findings are similar in line with the findings of Bhople *et al.* (1996 and 1998) who found that 62 per cent of orange growers had adopted recommended cultivation practices of low to medium extent. Only 16 per cent of them were found to be higher adopters. It was also noted that 22 per cent of mango growers were found to be low adopters.

Comparison of adoption level of KVK, Hulakoti and Hanumanamatti :

The data presented in Table 2 illustrates comparison of mean adoption scores of respondents of KVK, Hulakoti and Hanumanamatti about mango cultivation practices also their analysis for significance of difference using 't' test. The results shown that the respondents of Hulakoti KVK registered significantly higher adoption scores in Mango cultivation practices compared to their counterparts in other KVK. The computed 't' values were

tested for significance at 1 and 5 per cent.

This was mainly due to more number of respondents had adopted the practices learnt during training. In general the respondents of Hulakoti were found to have more knowledge and also adoption. This was mainly due to timely follow up visits by the scientists to the farmers fields to provide guidance. A comparison of mean adoption scores of the respondents of training programmes studied supported above findings. The respondents of KVK, Hulakoti had significantly higher mean adoption scores than those of KVK, Hanumanamatti (Table 2). Similar findings were observed by Mankar (2003), Moulasab (2004), Shashidhar (2004), Sunil Kumar (2004), Venkataramalu (2003) and Venkatashiva Reddy (2006).

Adoption of Mango cultivation practices :

The results presented in the Table 3 revealed that, more than 50.00 per cent of the respondents had fully adopted the practices like variety (60.00% and 50.00%), materials used for pit filling(60.00% and 40.00%), pit size (60.00% and 40.00%) and spacing (53.33% and 53.33%) in case of Hulakoti and Hanumanamatti KVK, respectively, whereas more percentage of Hanumanamatti respondents had partially adopted the practices like soil type 60.00 per cent, pit size 60.00 per cent, materials used for pit filling 60.00 per cent, irrigation 56.67 per cent, respectively. Further, it was observed that very meager percentage of respondents of KVK Hulakoti and Hanumanamatti fully adopted pest control (23.33% and 13.33%) and disease control (26.67% and 13.33%). All the respondents of both the KVKs had not used the growth

Enterprise	Mean adoption score		"t' value
	KVK, Hulakoti	KVK, Hanumanamatti	
Mango cultivation	56.66	46.51	2.99**

* and ** indicate significance of values at P=0.05 and 0.01, respectively

Sr. No.	Practice	Trainees of KVK Hulakoti						Trainees of KVK Hanumanamatti					
		Full adoption		Partial adoption		Non adoption		Full adoption		Partial adoption		Non adoption	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1.	Variety	18	60.00	0	00.00	12	40.00	15	50.00	0	00.00	15	50.00
2.	Soil type	14	46.67	16	53.33	00	00.00	12	40.00	18	60.00	00	00.00
3.	Spacing	16	53.33	0	00.00	14	46.67	16	53.33	0	00.00	14	46.67
4.	Pit size	18	60.00	12	40.00	00	00.00	12	40.00	18	60.00	00	00.00
5.	Materials used for the pit filling	18	60.00	12	40.00	00	00.00	12	40.00	18	60.00	0	00.00
6.	Irrigation	15	50.00	7	23.33	8	26.67	5	16.67	17	56.67	8	26.66
7.	Intercropping	15	50.00	5	16.67	10	33.33	12	40.00	11	36.67	7	23.33
8.	Fertilizer	11	36.67	12	40.00	7	23.33	6	20.00	14	46.67	10	33.33
9.	Pest control	7	23.33	13	43.33	10	33.34	4	13.33	14	46.67	12	40.00
10.	Disease control	8	26.67	11	36.67	11	36.66	4	13.33	9	30.00	17	56.67
11.	Growth regulator	00	00.00	00	00.00	30	100.00	00	00.00	00	00.00	30	100.00

regulator.

The results regarding mango cultivation was quite encouraging. Over 50.00 per cent of respondents had adopted variety, pit size, materials used for pit filling and spacing as these are simple practices requiring less of purchased inputs and about 50.00 per cent had partially adopted pest control, and fertilizer application. The partial adoptions of few practices were mainly due to complexity of practices and cost involvement. It was very clear from the results that growth regulator practice was not adopted by any one, which needs to be reemphasized through proper extension educational activities. This was in conformity with the findings of the studies of Moulasab (2004).

REFERENCES

- Mankar, D.M. (2003).** A study on knowledge of Gram panchayat members about improved agricultural technologies and their Role Performance in Konkan Region of Maharashtra. Ph. D. Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).
- Moulasab, I. (2004).** A study on knowledge and adoption of improved cultivation practices by mango growers of North Karnataka, M.Sc. (Ag.) Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).
- Shashidhar, D.N. (2004).** A study on influencing factors and constraints in drip irrigation by horticulture farmers of Bijapur district of Karnataka M.Sc. (Ag.) Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).
- Sunil Kumar, G. M. (2004).** A study on farmers knowledge and adoption of production and post harvest technology in tomato crop of Belgaum district in Karnataka M.Sc. (Ag.) Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).
- Venkataramalu (2003).** A study on the knowledge level adoption and marketing behaviour of chilli growers in Guntur district of Andhra Pradesh. M.Sc. (Ag.) Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).
- Venkatashiva Reddy, V. (2006).** Knowledge and adoption of integrated pest management practices among vegetable growers of Gadag district in North Karnataka. M.Sc. (Ag.) Thesis, University of Agricultural Sciences, Dharwad, KARNATAKA (INDIA).

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