

## Impact Analysis of Farm Technology Training Centre on Knowledge of Cucurbitaceous Growers

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### ABSTRACT

*This study was carried out in Kheda district of middle Gujarat to impact of Farm Technology Training Centre on knowledge of cucurbitaceous growers majority of untrained whereas vast majority of trained cucurbitaceous growers possess enough knowledge regarding cultural practices but they had medium to low level of knowledge regarding chemical measures of weed, insect and disease management in case of untrained cucurbitaceous growers while trained respondents had very high to medium level of knowledge regarding chemical measures of weed, insect and disease management whereas significant differences were found among training mean scores of trained and untrained respondents*

**Keywords:** Knowledge, Cucurbitaceous Growers, Impact, Technology

### INTRODUCTION

A number of agricultural improvement programmes have been introduced in India to increase the agricultural production and income of the farming community, but the outcome of these programmes is not satisfactory in terms of achieving higher agricultural production. The most important factor identified for this poor outcome was lack of understanding by the farmers about various technological recommendations made by the research institutes. As a result, more emphasis on farmers training activities is being given by the ICAR, SAUs along with the respective State Department of Agriculture. It

is a known fact that training to farmers increases the technical efficiency of an individual. Cucurbits belong to family *Cucurbitaceae*, includes about 118 genera and 825 species. In India, a number of major and minor cucurbits are cultivated, which share about 5.6 % of the total vegetable production. They are consumed in various forms *i.e.*, salad (cucumber, gherkins, long melon), sweet (ash gourd, pointed gourd), pickles (gherkins), and deserts (melons). In many developing countries, a majority of the population still produces cucurbits for their own food and depends on small-scale farming for income and livelihoods.

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Cucurbit crops are very important for small land holding farmers and this is the cash crop for several rural families. In India, a number of major and minor cucurbits are cultivated in several commercial cropping systems and also as popular kitchen garden crops. Cucurbits share about 5.6 % of the total vegetable production of India and according to FAO estimate, cucurbits were cultivated on about 4,290,000 ha with the productivity of 10.52 t/ha. According to an estimate, India will need to produce 215,000 ton of vegetables by 2015 to provide food and nutritional security at individual level and, being a large group of vegetables, cucurbits provide better scope to enhance overall productivity and production. In the research area, majority farmers grow cucurbitaceous crops for commercial basis as well as for their home consumption. However, get very low yields due to use of low yielding varieties and poor knowledge about scientific cultivation. In order to bring out the lacunas from farmers the present study was undertaken.

## MATERIALS AND METHODS

Farm Technology Training Centre (FTTC)-Nenpur was purposively selected for the study. The enquiry was conducted on 60 trainees and 60 non-trainees from the covering area of the FTTC. In this study, cucurbitaceous crops *viz.*, bottle gourd, bitter gourd and sponge gourd were considered for the investigation. The study was carried out in twelve villages of Kheda districts under the domain of FTTC Nenpur, where most of the farmers are growing cucurbitaceous crops. In order to measure the impact of the training programme, the farmers were grouped as ‘trainees’ and ‘non-trainees’ and a random sample of 60 farmers from each group thus 120 farmers was drawn from twelve villages for testing their level of knowledge by means of a well structured interview scheduled. The interview schedule was prepared in accordance with the objectives. The data were collected personally, tabulated, analyzed and interpreted with frequency, percentage and using of t-test.

## RESULTS AND DISCUSSION

**Table 1: Characteristics of the cucurbitaceous growers**

**n= 120**

Sr. No.	Characteristics	Frequency	Per cent
<b>1</b>	<b>Age</b>		
	i. Young Age ( up to 30 years)	23	19.16
	ii. Middle Age (31 to 50 years)	62	51.67
	iii Old Age (Above 50 years)	35	29.17
<b>2</b>	<b>Education</b>		
	i. Illiterate	02	01.67
	ii. Primary education (up to vii std.)	30	25.00
	iii.Secondary education(viii to x)	41	34.16
	iv.Higher secondary(xi to xii)	29	24.17
	v. Graduate	18	15.00
<b>3</b>	<b>Extension contact</b>		
	i. Very low	13	10.84
	ii. Low	22	18.33
	iii. Medium	52	43.33
	iv. High	28	23.33
	v. Very high	05	04.16
<b>4</b>	<b>Mass media exposure</b>		
	i. Very low	23	19.16
	ii. Low	15	12.50
	iii. Medium	32	26.67
	iv. High	24	20.00
	v. Very high	26	21.67
<b>5</b>	<b>Land holding</b>		
	i. Up to 1 hectare	34	28.33
	ii. 1.1 to 2 hectares	48	40.00
	iii. Above 2 hectares	38	31.67

Table 1 shows that more than half (51.67 per cent) of cucurbitaceous growers were belonging to middle age group. More than two fourth (59.16 per cent) of cucurbitaceous growers had secondary to primary level of education followed by 39.17 per cent from them had graduation to higher secondary level of education. Two third (66.66 per cent) of respondents had high to medium level of

extension contact while slightly less than half (46.67 per cent) of respondents had high to medium mass media exposure. Two fifth (40.00 per cent) of cucurbitaceous growers had up to two hectare land holding followed by 31.67 per cent and 28.33 per cent of respondents had above two hectare and up to one hectare of land holding respectively.

**Table 2: Knowledge of cucurbitaceous growers about cultivation practices in cucurbitaceous crops n=120**

Sr. No.	Particulars	Knowledge	
		Frequency	Per cent
1	Land Preparation	72	72.00
2	Improved variety	79	79.00
3	Seed rate	62	62.00
4	Seed treatment		
	Name of fungicide	58	58.00
	Dose of fungicide	41	41.00
5	Time of sowing	58	58.00
6	Spacing	56	56.00
7	Gap filling	60	60.00
8	Fertilizers		
A	Basal application		
	i. Organic Manure	64	64.00
	ii. Nitrogen	34	34.00
	iii Phosphorus	26	26.00
	iv Potash	28	28.00
B	Top dressing		
	Urea	34	34.00
9	Weed Management		
	Manual	78	78.00
	Chemical		
	-Name of herbicide	60	60.00
	-Quantity of herbicide	46	46.00
10	<b>Insect/Disease Management</b>		
	<b>1. Sphinx Moth</b>		
	-Nature of damage	70	70.00
	Control Measure		
	-Name of pesticide	34	34.00
	-Dose of pesticide	49	49.00
	<b>2. Sesamum Gall Fly</b>		
	-Nature of damage	83	83.00
	Control Measure		
	-Name of pesticide	58	58.00
	-Dose of pesticide	51	51.00
	<b>1. Leaf Spot Disease</b>		
	-Nature of damage	68	68.00
	Control Measure		
	-Name of fungicide	40	40.00
	-Dose of fungicide	32	32.00
<b>2. Sesamum Phyllody</b>			
-Nature of damage	74	74.00	
Control Measure			
-Name of fungicide	30	30.00	
-Dose of fungicide	34	34.00	
11	<b>Irrigation</b>		
	No. of irrigation	66	66.00

A perusal of data presented in Table 2 reveal that more than two fourth (56.66 per cent) of the untrained cucurbitaceous growers had knowledge regarding land time of sowing. In case of trained cucurbitaceous growers majority (75.00 per cent) of respondents had knowledge regarding time of sowing. Slightly more than half (51.66 per cent), 45.00 per cent and 36.66 per cent of untrained respondents had knowledge about improved variety of bottle gourd, bitter gourd and sponge gourd respectively while majority (73.33 per cent, 70.00 per cent and 60.00 per cent) of respondents had knowledge about improved variety of bitter gourd, bottle gourd and sponge gourd respectively. Less than half (43.33 per cent, 40.00 per cent and 38.33 per cent) of untrained cucurbitaceous growers had knowledge about sowing distance in case of bottle gourd, bitter gourd and sponge gourd respectively whereas majority of trained respondents (73.33 per cent, 66.66 per cent and 56.66 per cent) had knowledge about sowing distance in case of bottle gourd, bitter gourd and sponge gourd respectively. Concerned to FYM (Farm Yard Manure), 55.00 per cent of untrained cucurbitaceous growers had knowledge regarding application of FYM while in case of trained farmers vast majority (80.00 per cent) of respondents had knowledge regarding application of FYM in cucurbitaceous crops. Moving to fertilizer application in case of untrained farmers, 35.00 per cent, 40.00 per cent and 28.33 per cent of respondents had knowledge about application of nitrogenous, phosphatic and pottasic fertilizer respectively whereas 56.66 per cent, 51.66 per cent and 41.66 per cent trained farmers had knowledge about application of nitrogenous, phosphatic and pottasic fertilizer respectively. As far weed management is concerned more than half (58.33 per cent) of untrained cucurbitaceous growers had knowledge about manual weed management followed by 36.66 percent and 35.00 per cent from them had knowledge about name of herbicide and its recommended dose to control weeds whereas majority (85.00 per cent) of trained respondents had knowledge regarding

manual weed management followed by 68.33 per cent and 65.00 per cent of them had knowledge regarding name of herbicide and its recommended dose. Slightly more than two third (68.33 per cent) of untrained respondents had knowledge about nature of damage of fruit fly whereas 36.66 per cent and 31.66 per cent of untrained respondents had knowledge regarding name of insecticide and its proper dose to control fruit fly. While in case of trained cucurbitaceous growers vast majority of respondents (80.00 per cent) had knowledge about nature of damage of fruit fly whereas 53.33 per cent and 55.00 per cent from them had knowledge about name of insecticide and its recommended dose to control it. Slightly more than two third (71.66 per cent), 36.66 per cent and 31.66 per cent of untrained respondents had knowledge about nature of damage of white fly, name of insecticide and its proper dose to control it while overwhelming majority (88.33 per cent), 58.33 per cent and 61.66 per cent from them had knowledge regarding nature of damage, name of insecticide and its recommended dose to control white fly. More than two forth (61.66 per cent), 28.33 per cent and 23.33 per cent of untrained respondents knowledge regarding nature of damage of downy mildew, name of fungicide and its recommended dose respectively to control it whereas in case of trained respondents, majority of respondents (76.66 per cent), 53.33 per cent and 48.33 per cent of trained respondents had knowledge about nature of damage of downy mildew, name of fungicide and its recommended dose respectively to control it. In case mosaic disease, majority (65.00 per cent), 20.00 per cent and 23.33 per cent of untrained cucurbitaceous growers had knowledge about nature of damage, name of fungicide/insecticide and its recommended dose to control it whereas vast majority (80.00 per cent), 58.33 per cent and 51.66 per cent of trained respondents had knowledge about nature of damage, name of fungicide/insecticide and its recommended dose to control mosaic disease. Slightly more than two forth (56.66 per cent) of untrained

respondents had knowledge about numbers of irrigation require in cucurbitaceous crops while in case of trained respondents

overwhelming majority (81.66 per cent) had knowledge regarding it.

**Table 3: Comparative mean score of knowledge of trained and untrained cucurbitaceous growers**

n=120

Sr. No.	Cucurbitaceous Growers	Mean score	Difference	t-value
1	Trained	65.94	20.94	8.48*
2	Untrained	45.00		

\* Significant at 5 percent level of probability, df = 118

In order to ascertain the impact of training programme on the knowledge of trained and untrained respondents 't' test (two sample assuming equal variance) was employed. The knowledge mean scores of trained and untrained respondents were calculated and 't' value are presented in table-4. Statistically significant differences were found among training mean scores of trained and untrained respondents.

### CONCLUSIONS

To encapsulate the results it can be said that majority of the farmers belonged to middle age group, having secondary to higher secondary level of education, had small to medium size of land holding, high to medium level of extension contact as well as mass media exposure. As far as knowledge about cucurbitaceous cultivation practices is concerned majority of untrained whereas vast majority of trained cucurbitaceous growers possess enough knowledge regarding cultural practices but they had medium to low level of knowledge regarding chemical measures of weed, insect and disease management in case of untrained cucurbitaceous growers while trained respondents had very high to medium level of knowledge regarding chemical measures of weed, insect and disease management as well as statistically significant differences were found among the training mean scores of trained and untrained

respondents for almost majority aspects of cropping practices of cucurbitaceous crops.

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### REFERENCES

- Choudhury, B. (2006). *Vegetables*, 2nd Edition, National Book Trust, India.
- Gandhi, V. (2002). Knowledge level and adoption behaviour of vegetable growers with respect to IPM of tomato crop in Kolar district of *Karnataka M. Sc. (Agri.) Thesis*, University of Agricultural Sciences, Dharwad.
- Sahu, R.P., Sachan, V.K., Singh, R.J., & Singh, K. (2009). Knowledge gap of farm women in vegetable cultivation. *Journal of Communication Studies* 27(2), 83-87.
- Sakuntala, M., & Chaman, F., (2000). Socio-economic characteristics of rural families. *Maharashtra J. Extn. Edn.*, 19, 325-328.
- Yadav, A.K. (1997). A study on constraints in adoption of recommended package of practices of vegetable crops by the farmers of Panchayat Samiti Pasangan, district Ajmer (Rajasthan). MSc (Agric) thesis, Rajasthan Agricultural University, Bikaner, Rajasthan.