



International Journal of Research in Agronomy

E-ISSN: 2618-0618

P-ISSN: 2618-060X

© Agronomy

www.agronomyjournals.com

2024; SP-7(1): 186-188

Received: 01-11-2023

Accepted: 09-12-2023

Jayalaxmi B Pawar

a. Ph.D. Scholar, Department of Extension and Communication Management, College of Community Science, University of Agricultural Sciences, Dharwad, Karnataka, India
b. Assistant Professor of Agricultural Extension, College of Horticulture, Kolar, University of Horticultural Sciences, Bagalkote, Karnataka, India

Surekha Sankangoudar

Professor, Programme Officer & Head, Krishi Community Radio Station, Directorate of Extension, University of Agricultural Sciences, Dharwad, Karnataka, India

Uma Kulkarni

Professor and Head, Department of Food Science and Nutrition, College of Community Science, University of Agricultural Sciences, Dharwad, Karnataka, India

Corresponding Author:

Jayalaxmi B Pawar

a. Ph.D. Scholar, Department of Extension and Communication Management, College of Community Science, University of Agricultural Sciences, Dharwad, Karnataka, India
b. Assistant Professor of Agricultural Extension, College of Horticulture, Kolar, University of Horticultural Sciences, Bagalkote, Karnataka, India

Assessment of knowledge level of farm women in value addition of tomato in Kolar district of Karnataka state

Jayalaxmi B Pawar, Surekha Sankangoudar and Uma Kulkarni

DOI: <https://doi.org/10.33545/2618060X.2024.v7.i1Sc.257>

Abstract

Tomato can be called as “Poor Man’s orange” as it is rich in food nutritive value; 100 gm fresh tomato contains 3.5 gm carbohydrate, 0.98 gm protein, 0.50 gm B carotene, 0.35 mg iron and 10-100 mg ascorbic acid. The problem of loss during uncertainties can be controlled by adapting suitable scientific method of value addition and establishing proper post-harvest management may fetch remunerative prices. Therefore the present study was carried out to assess the knowledge level of farm women involved in tomato farming before and after value addition tomato training programmes with a sample size of 150 in five talukas of Kolar district. It was indicated that about 79.00 per cent of the respondents found in low category of knowledge level before interventional programmes where as 80.00 per cent of them were found in high knowledge category after the interventional programmes on value addition. The computed (t^*) value was 80.64 which is positive and highly significant ($p < 0.01$). The variable organisational participation, extension contact, social and mass media participation and training exposure exhibited positive significant relationship with knowledge gain at 5% level of significance. The results also revealed that, Srinivaspur taluk had significantly greater influence of value addition training programmes on respondents gain in knowledge. Around one fourth of the respondents were preparing tomato chutney and twelve per cent of them preparing tomato gojju at home level. Therefore simple cost effective and easily available equipments may be designed and fabricated for large scale production of value added products of tomato.

Keywords: Knowledge level, farm women, value addition, post-harvest, training programmes

Introduction

Horticulture has emerged as the priority area in agricultural development of India. Tomato is the third most widely grown vegetable in India after Potato and onion with year round production and consumption. Karnataka is the leading producer of tomato in the country (Indian Horticultural Database 2011) which supplies to the neighbouring districts and far off states with a total production of 2,081.59 thousand metric tonnes in the year 2017-18.

Fruits and vegetables have a significant role in the human diet in terms of food. Due to their perishability and limited shelf lives, most of the vegetables like tomato require processing to create products with added value. The tomato has a limited shelf life and is offered year-round in markets. The fruit is a great source of carotene, lycopene and vitamin C and contains 94% moisture. In southern states of India, a day’s meal doesn’t complete without tomatoes. Tomatoes are primarily utilised to make *sambhar* (curries) and other food items including soups, pickles, jam, sauce, juice and chutneys. It is advised in the diet for skin problems, stunted growth and night blindness and is considered to have medicinal properties. In Karnataka, particularly southern regions use tomato everyday in their food especially tomato bath and other food preparations. It can be that women of south Karnataka cannot think of a dish without tomatoes and cuisines are incomplete without tomatoes. But, tomatoes contain high moisture because of this highly perishable in nature. Fluctuation in price during glut periods calls for establishment of processing units.

Once farm produce is brought home, the responsibility rests with women folk. Women play an active role in various production and postproduction activities of horticultural crops. The number of women engaged in agriculture has increased continuously in the past two - three decades due to various factors such as migration of men to urban areas, increase in the demand

of labour force in construction and other sectors. The data on the women involved in horticulture sector are scanty however the involvement of women in various operations of cultivation and post-harvest handling and storage is very high.

Materials and Methods

One of the most appreciated and commonly cultivated vegetables in India is the tomato. It contains a lot of vitamins and minerals. The top producers in Karnataka are Kolar, Belgaum, Mandya, Haveri, and Mysore. The state's southern-most region, Kolar, which is bordered by the states of A.P. and T.N., grows 16% of the state's tomato crop. The main tomato producers in Kolar are the Talukas of Malur, Mulbagilu, and Srinivasapur. The primary source of tomatoes for states like West Bengal, UP, Kerala, Tamil Nadu, and Andhra Pradesh as well as for exports to nations like Bangladesh, Pakistan, Afghanistan, and China is the APMC tomato market in Kolar.

“Ex post facto design” was employed in the present research study as the events have already occurred and design was considered. Experimental research design is also considered for the study. A list of villages was prepared considering that each taluk should have minimum of 30 farm women involved in tomato farming and thus forming a sample of 150 for the interventional study. Therefore the study was conducted in 5 talukas of Kolar district namely Malur, Bangarpet, Mulbagal, Srinivaspura and Kolar to know the knowledge level of farm women involved in tomato farming before and after interventional programmes.

Results and Discussion

It is clear from the Table 1 that knowledge level of respondents on value addition was low, about 78.67 per cent of them found in low category before interventional programmes. Only four per cent of the respondents possessed high knowledge. Where as 80.00 per cent of them were found in high knowledge category after the interventional programmes on value addition.

Table 1: Knowledge level of farm women on value addition activities of tomato.

n = 150

Category	Knowledge			
	Before n = 150		After n = 150	
	f	%	f	%
Low (< 10)	118	78.67	11	7.33
Medium (11-22)	26	17.33	19	12.67
High (23-45)	6	4.00	120	80.00

f = Frequency % = percentage

The data regarding impact of interventional programmes on knowledge gain with respect to value addition are presented in Table 2. The computed ('t') value was 80.64 which is positive and highly significant ($p < 0.01$). There was a huge difference between pre knowledge and post knowledge test mean value of interventional programmes. This might be due to reason that the respondents had less exposure to value addition training programmes on tomato.

Table 2: Pre training knowledge and post training knowledge of respondents on value addition practices of tomato
n=150

	Mean value	Paired 't' value
Pre Test	8.19	80.64**
Post Test	37.97	

** Significant at 1% level

NS-Non-significant

The results observed from table 3 depict that variables namely age, education, landholding, annual income and research extension linkage did not exhibit relationship with knowledge gain. The variables namely family type, family size, organisational participation, extension contact, social media participation exhibited positive significant relationship with knowledge gain at ($p < 0.05$) level of significance. Training programmes attended was positively correlated at ($p < 0.01$) level of significance.

Table 3: Relationship of independent variables with knowledge gain of respondents

n=150

S. No	Independent variable	Computed 'r' value
1	Age	0.083 ^{NS}
2.	Education	0.091 ^{NS}
3.	Family type	0.138*
4.	Family size	0.147*
5.	Occupation	-0.123*
6.	Land holding	0.0491 ^{NS}
7.	Annual income	0.107 ^{NS}
8.	Organizational participation	0.177*
9.	Extension Contact	0.207*
10.	Social media participation	0.197*
11.	Training programmes attended	0.197**
12.	Research Extension linkage	0.046 ^{NS}

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

It is revealed from the table 4 that the calculated 'F' value ($F=10.565$) was found to be significant at one per cent level of significance. This revealed that there was a significant variation in the different taluks on knowledge gain of the respondents. The differences in the mean knowledge gain scores between any two given taluks were compared with the computed value of critical difference (20.633) at ($p < 0.05$) level of probability. The results revealed that, Srinivaspur taluk had significantly greater influence of value addition training programmes on respondents gain in knowledge immediately after exposure. This indicates that interventional programmes played an important role in imparting knowledge and skill in the preparation of value added products of tomato.

Table 4: Analysis of variance for the knowledge gain after exposure to training programmes

Source of variation	Df	SS	MS	F	F critical value
Between Groups	4	200.84	50.21	10.565**	2.434
Within Groups	145	689.13	4.752		
Total	149	889.97			

** Significant at 1% level

CD at 5% level of probability= 20.633

Conclusion

Cent per cent of the respondents were not aware of preparation of value added products like tomato puree, sauce, ketchup, powder, candy, *shendige* and tomato flakes. Only few were preparing tomato pickle, tomato *gojju* and chutney for their home purpose. The respondents didn't consult any of the information sources about value addition of tomato. Although various line departments conducted trainings on plant protection involving farmers. Therefore farm women remained unaware of value addition of tomato.

But the value addition trainings have helped in positive orientation in terms of capacity building of farm women through

gain in knowledge, acquisition of skills and interest to adopt the technologies provided. Hence, it can be concluded that intervention has made a significant impact on knowledge of the respondents.

Reference

1. Anonymous, 2018, Horticultural statistics at a glance 2020, National Horticulture Board, Government of India.
2. Pawar Jayalaxmi, Rajesh AM, Pushpa P, Chikkanna GS, Tulasiram K, Ambika DS. Impact of Value Addition Training Programmes of KVK in Kolar District, Karnataka Int. J Curr. Microbiol. App. Sci. 2020;9(12):1475-1481.
3. Thejaswini CN, Chandrashekhara V, Narayana Gowda K. Performance of Farm Women in Agriculture and Income Generating Activities. MANAGE Extension Research Review, 2004, p. 68-73.
4. Tripathi SP, Patel RP, Somvanshi SPS, Singh HP, Dubey B. Impact of Value Added Tomato Based Product for Income Generation of Farm Women. Plant Archives. 2017;17(2):1329-1331.
5. Maruthi I, Reddy BV. Documentation of Success Stories of Food Processing units in Karnataka. Institute for social and economic change; c2018.