



Effect of Vocational Training Programme on Preservation of Fruits and Vegetables for Self Help Group members

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ABSTRACT

The value addition of fruits and vegetables helps in improving the diet quality by supplying essential nutrient (vitamins, minerals, flavonoids, antioxidants) needed for healthy life style. India is processing only 2-3 per cent of fruits and vegetables for value addition of seasonal food items in the form of jam, pickles, beverages, marmalades, squashes etc. on a commercial scale. Therefore, a vocational training was conducted for the self help group members of rural women (18-45 yr) of Shaheed Bhagat Singh Nagar, Punjab for a period of 10d at the Krishi Vigyan Kendra campus. The skills regarding the food preservation were imparted to a group of 18 farm women through lectures, demonstration and hand on training for different food products namely mixed fruit jam, pickle, chutney, marmalades, nuggets, papad and squash etc. After completion of the training course, the outcome was evaluated through a questionnaire using appropriate statistical tools like frequency and percentage. The study revealed that 50 per cent of the trainees of self help group adopted value addition of fruits and vegetables on a commercial scale.

Key Words: Food items, Fruits, Income, Preservation, Self help group, Training, Vegetables.

INTRODUCTION

The food preservation implies to prevention or spoilage of perishable food items from the pathogens, microbes or any nutritional loss so that it can be processed and stored for future consumption. A number of food items can be preserved and processed by using different methods like drying, canning, freezing, dehydration, extrusion etc. Different products like jam, jelly, squash, beverages, chips, fruit leather, pickles etc can be prepared by these methods. The advantage of food preservation is to meet the demand during the off season.

The food processing sector in India has great growth potential domestically and has export prospects (Singh, 2012; Rais *et al*, 2013). Despite the fact that India being the world's second largest producer of fruits and vegetables, only processes 2 per cent of total produce (Goyal, 2011). Moreover, food processing helps farmers to manage their yields and get better returns since processed foods fetch comparatively higher rates than the raw produce itself. Therefore, by adopting food preservation

techniques, farmers can increase their income and reduce the unnecessary wastage which is prevalent in India (Dhiman and Rani, 2011). However, India is the largest producer of fruits in the world but the production per capital is only about 100 g/d whereas more than 20-22 per cent of the total production of fruits is lost due to spoilage at various post harvest stages. Thus, the per capita availability of fruits is further reduced to around 80 g/d which is almost half the requirement for a balanced diet (Goel *et al*, 2007). Hence, the present study was undertaken to upscale the preservation of fruits and vegetables skills of self help group (SHG) members enabling them to adopt those products on commercial scale in order to increase their family income of SHG members.

MATERIALS AND METHODS

Selection of the Participants and Skills Imparted

A group of 18 rural farm women (18-45yr) were selected out of which 12 participants were

member of two self help groups (Baba Sri Sri Chand, 2017 & Sukhmani Self Help Group, 2011). In order to sharpen their skills, a vocational training programme on preservation of fruits and vegetables of 10d duration was conducted during the month of May, 2018 at the Krishi Vigyan Kendra (KVK) Campus. The various products developed by the trainees were jam, squash, chutney, pickle, beverages, squash, papad, marmalades and nuggets (Table 1).

Table 1. Preparation of different food products during vocational training programme.

Sr.No.	Food Product	Food Items
1	Jam	Mango, apple, pear and mix fruit jam
2	Chutney/Sauce	Imli&jaggery, Tomato ketchup
3	Pickle	Mango, lemon, chilli, garlic, mix veg pickel
4	Papad	Semolina
5	Marmalades	Pumpkin, Bael
6	Squash	Mango, lemon, orange
7	Beverages	Jaljeera, lemon soda
8	Nuggets	Ash Gourd

The data related to demographic profile (age, caste, income and education etc.) of the selected participants were collected on an interview questionnaire.

Intervention of training course

To evaluate the intervention of training course among participants post-testing was done using the well structured questionnaire and the impact of training was used to explore the new opportunities for food processing products at grass root level to generate income. In order to make improvement in the conductance of vocational training programme during near future, an attempt was made to get the feedback from training in which teaching, demonstration and duration of training were evaluated.

RESULTS AND DISCUSSION

Demographic Information

The data (Table 2) on age wise distribution revealed that majority of the participants were above the age of 20 yr and only 5.55 percent were in the age group of 15-20 yr. The age profile showed that most of the women were married and wants to empower them through self help group by running small business through adoption of different preservation techniques. The distribution of trainees on basis of caste revealed that majority belonged to Scheduled Caste (72.2%) followed by general category (27.8%).

Table 2. Demographic profile of selected Trainees (n=18).

Sr. No.	Characteristic	Percentage
A. Age (years)		
1.	15-20	5.5
2.	20-25	22.2
3.	25-30	16.7
4.	30-35	22.2
5.	35-40	16.6
6.	>40	16.6
B. Caste		
7.	General	27.8
8.	SC	72.2
C. Education		
9.	Illiterate	0
10.	Primary	5.5
11.	Middle	5.5
12.	Matric	22.2
13.	Senior secondary	50.0
14.	Graduate to PG	11.1
15.	Post Graduate	5.5
D. Total monthly income(Rs.)		
16.	Less than 10,000	0
17.	10,000-20,000	22.2
18.	20,000-30,000	38.9

Effect of Vocational Training Programme

19.	30,000-40,000	11.1
20.	40,000-50,000	27.8
21.	>50,000	0
E	Member of SHG	
22.	Yes	66.7
23.	No	33.3
F	Adoption of Training	
24.	Domestic scale	50
25.	Commercial sale	50

Regarding the education status, data revealed that none of the trainees were illiterate and 5.5 percent of the subjects have passed up to primary level and middle standard, respectively. The data further showed that 22.2 percent of the trainees have passed up to matriculation level but majority were educated up to senior secondary (50%) and 11.1 per cent were educated up to graduate and only 5.5 percent were up to post graduate level, respectively.

The data (Table 2) showed that only 27.8 per cent of the families were having average monthly income >Rs.40, 000/- and 11.1 per cent of the trainees were having between Rs.30,000-40,000/-. It was found that majority of the selected trainees were having average family monthly income ranged from Rs.20, 000-30,000/- (38.9%) followed by 22.2 per cent having in the range of Rs.10,000-20,000/-. The data further revealed that only 66.67 percent of the subjects were member of Self Help Group trained by Krishi Vigyan Kendra, Langroya, district Shaheed Bhagat Singh Nagar and response related to adoption of preserved food products by trainees at domestic and commercial scale was 50 per cent for each, respectively.

Adoption of Preserved Food Products

The response (Fig 1) to prepare chutney (72.2%) was highest as compared to papad, marmalades and jam (66.7%). The least response observed in case of nuggets and squash (38.9%) at domestic level. On the contrary at commercial scale, adoption of marmalades, jam, pickle, papad, chutney, squash and nuggets was 50 percent.

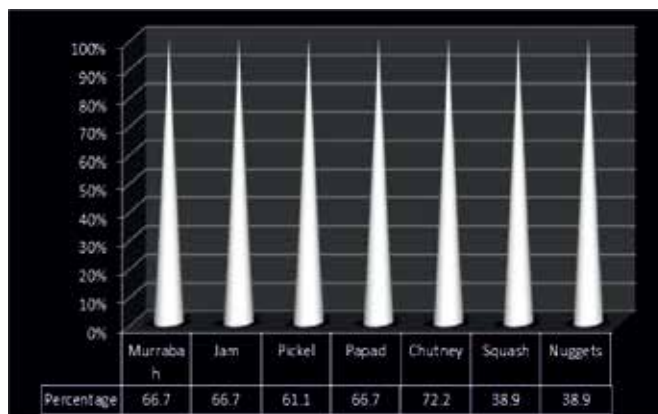


Fig. 1 Adoption of Preserved Food Products at domestic level

Feed Back

The data (Table 3) on post testing revealed that majority of the trainees found that method of training was very good (88.9%) and rest 11.1 per cent were found good. Similarly, 66.7 per cent of the trainees evaluated practical demonstration as very good while 27.8 per cent evaluated as good and rest as average (5.5%).

Table 3. Post Testing of training by trainees (n=18).

Sr.No.	Characteristic	Percentage
1.	Method of Teaching Theory	
a	Very Good	88.9
b	Good	11.1
c	Average	-
d	Poor	-
2.	Method of Practical Demonstration	
a	Very Good	66.7
b	Good	27.8
c	Average	5.5
d	Poor	-
3.	Need Based	
a	Yes	100
b	No	-
4.	Time (5hrs)	
a	Adequate	94.4
b	More	5.6
c	Less	-

The training was found 100 per cent need based by the trainees. Related to timings of training 94.4 per cent of the trainee found it was adequate to acquire new skills for practical while rest (5.6%) were found inadequate.

CONCLUSION

It was inferred from the study that preference for Marmalades, jam, chutney and papad was highest among the trainees due to low cost and ease of methods but preference for nuggets was found low due to high cost of the raw material and laborious process for making nuggets. Moreover, the raw material for making nuggets was not easily available in the market. Therefore, trainees don't prefer to go for those products of which were in high demand and extra labour involved to procure the raw material. Overall, it was inferred that the net effect of this vocational training programme was 50 per cent for the preparation of various food products.

REFERENCES

- Dhiman P K and Rani A (2011). Problems and prospects of small scale agro based industries: An Analysis Of Patiala District – ZENITH. *Int J Multidisciplinary Res* **1**: 129-142.
- Goel A K, Kumar R and Mann S S (2007). *Postharvest Management and Value Addition*. Daya Publishing House, Trinagar, New Delhi - 110 035.
- Goyal S K (2011). Potential in Agribusiness – Fruit and vegetable processing industry in India. *J Int Farm Mgt* **3**:15-29.
- Rais M, Acharya S and Sharma N (2013). Food Processing Industry in India: S&T Capability, Skills and Employment Opportunities. *Food Process Tech* **4**:260. doi:10.4172/2157-7110.1000260
- Singh S P (2012). The Food processing industry in India: Challenges and Opportunities. *JFd Distri Res* **43**: 81-89.

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