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### **Knowledge and adoption of rural women and effect of different constraints on their adoption about homestead technology (fruit and vegetable preservation technology) communicated by Krishi Vigyan Kendra**

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#### **Abstract**

A study was conducted in Krishi Vigyan Kendra (KVK), Masodha district of Faizabad with the objective to find out the correlation between adoption of fruits and vegetables preservation technology and different constraints towards this adoption and the effectiveness of training programme of KVK. Present study was conducted on 120 purposively cum random selected trained and untrained rural women. self prepare interview schedule was used to assess effectiveness of training programme of KVK and correlation between adoption of fruits and vegetable preservation technology and different constraints toward this adoption. The data revealed that trained rural women have more knowledge and adoption about the fruit and vegetable preservation technology in the comparison of untrained farm women. Some constraints such as economic constraint have less impact on the trained farm women in the comparison of untrained farm women.

**Keywords:** Trained Rural Women, Untrained Rural Women, Knowledge, Adoption, Constraints, Homestead Technology, Fruits and Vegetable Preservation, Effectiveness, Krishi Vigyan Kendra (KVK). Economic constraints (E.C), Social Constraints (S.C), Transportation Constraints (T.C), Technical and Resource management constraints (T&RMC).

#### **Introduction**

In rural India country has remained undeveloped. Poverty and unemployment are the major area of concern for the rural society. The heavy pressure of poverty exist in rural women due to in efficient participation in rural development programme and transfer of technology, Induction of appropriate technology holds rapid development and transformation of rural society in a sustainable manner. The transfer of technology among the rural women is the challenging task facing the country. The KVK is a district farm science centre established by the Indian Council of Agricultural Research (ICAR) for speedy transfer of technology to the farmer's field (Yadav & Pareek, 2014) [2]. In India rural women are actively contributing in activities related to animal husbandry and home science. In fact women constitute 87.7 percent of India's total labor force engaged in agriculture and animal husbandry. Rural women spend much of their time in unpaid activities like working in the family farm and other domestic work. They were the main responsible person for domestic and house hold work which included child care and nutrition, consumption and preservation of milk, processing of milk, processing and preservation of fruits and vegetables. The KVK Masodha, Faizabad (U.P), conducts many training programmes exclusively for farm women with the aim to make them competent in performing various activities related to agriculture and home science. KVK conducted training in fruits and vegetable preservation technologies for rural farm women in adopted villages for their needs.

**Objective of the study:** To find out the correlation between adoption of fruits and vegetables preservation technology and different constraints towards this adoption and the effectiveness of training programme of KVK.

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**Methodology:** The study was conducted in the site KVK Masodha, district of Faizabad. The research design was selected as non experimental (descriptive) and comparative study in the case of studying food preservation knowledge in farm women which is communicated by KVK Masoda. The study was conducted having the purposive as well as random sampling of trained and untrained rural women. There were 60 trained farm women and 60 untrained farm women were selected from Masoda block of Faizabad.

The size of sample were the selected 120 respondent trained and untrained rural women. The interview schedule have the four parts comprising, general information, schedule for knowledge level of respondent, schedule for adoption extent of respondent, and schedule for computing constraints in fruits and vegetable technology.

### Result and Discussion

The data was tabulated and analyzed in the table 1.

**Table 1:** Level of knowledge about different fruit and vegetables preservation techniques among rural women.

S.N	Statement	Trained Women		Untrained Women	
		Frequency (n=60)	Percentage	Frequency (n=60)	Percentage
1.	Knowledge about preparation methods of different preserved food.	60	100%	52	86.66%
2.	Knowledge about use of preservatives during preparation of different preserved food.	60	100%	47	78.33%
3.	Knowledge about different preservation methods of different fruits and vegetables.	60	100%	33	55%
4.	Knowledge about different types of equipment used for fruits and vegetables preservation.	60	100%	28	46.66%

Table 1 explained that trained rural women have 100% knowledge about different fruits and vegetables preservation techniques in the comparison of untrained rural women. Trained rural women of KVK know all preparation method of different preserved food such as- juice, squash, tomato sauce, jam, jelly, murabba, chutney and, pickle bottled food etc. whereas untrained rural women know preparation methods only of some preserved food very well such as- papad and chips, juice, chutney and pickles etc. They did not know all kind of preservatives while trained rural women know about all kind of preservatives such as- acetic acid, citric acid,

benzoic acid and so on. Trained rural women of KVK have good knowledge about different types of equipments used for fruits and vegetable preservation techniques such as- Ph meter, pulper, cooker, refractometer, bottle washer, crown capper, filter, heat sealer, pulper finisher, pulper cooker, cutting board, dryer etc. but untrained rural women do not have knowledge about these equipments.

So, it was concluded the training of KVK had a great effect on the knowledge level of these rural women who were trained from there.

**Table 2:** Level of adoption of different fruit and vegetables preservation techniques among rural women.

S. N	Statement	Trained	Untrained
		Mean ± S.D	Mean± S.D
1.	Adoption of different preservation methods for fruit and vegetables.	28.6±5.1	25.4±7.6
2.	Adoption of different equipments for preservation of fruits and vegetables.	26.7±5.3	21.4±5.8
3.	Adoption of different preservatives for fruits and vegetable preservation.	27.4±4.1	24.6±7.6
4.	Adoption of different fruit and vegetable preservation methods.	26.9±4.8	17.0±6.3

Table number 1 revealed that the highest value of mean score in the case of trained respondents was to be found in the statement no.1 that was “adoption of different preservation methods for fruits and vegetables” and least value of mean score was to be found in the statement number 2 that was “Adoption of different equipments for preservation of fruits and vegetables”.

The highest value mean score in the case of untrained rural women was to be found in the statement no.1 that was

“Adoption of different preservation methods for fruits and vegetables” and least value of mean score was to be found in the statement no.4 that was “Adoption of different fruit and vegetable processing methods”. Hence it was concluded that both trained and untrained rural women adopted different preservation methods for fruits and vegetables the most, because they live in farm area where production of fruits and vegetables are very high so they want to keep fruits and vegetables for long time by using preservation methods.

**Table 3:** Constraints in fruit and vegetable technology adoption among rural women.

S.N	Statement	Trained Women	Untrained Women
		Mean± SD	Mean± SD
1.	Economic Constraints	21.5±5.4	19.7±5.3
2.	Social Constraints	23.1±5.0	25.9±4.8
3.	Transportation Constraints	20.5±5.6	18.6±7.9
4.	Technical and Resource Management Constraint	20.2±6.3	19.8±6.9

Table 3 concluded that the mean value of trained rural women was found to be higher than mean value of untrained rural women. The three areas of constraints that was economic constraints, transportation constraints and technical and

resource management constraints. Whereas the lower value of mean score of trained women was found in the social constraints.

**Table 4:** Correlation coefficient between adoption about fruit and vegetable preservation and different constraints towards this adoption.

S. N	Adoption	Trained rural women				Untrained rural women			
		E.C	S.C	T.C	T&RMC	E.C	S.C	T.C	T&RMC
1.	Adoption of different preservation methods for fruits and vegetables.	0.0508	-0.3377**	-0.0973	-0.1268	-0.1300	-0.0177	-0.3838**	-0.0434
2.	Adoption of different equipments for preservation of fruits and vegetables.	-0.3331**	-0.0301	-0.0936	-0.3421**	-0.4220**	-0.0210	0.0520	-0.3021*
3.	Adoption of different preservatives for fruits and vegetable preservation.	0.0431	-0.2784*	0.0331	0.0407	-0.2990*	-0.2912*	0.0231	-0.2774*
4.	Adoption of different fruits and vegetable processing methods.	0.2946*	0.0511	-0.3229*	-0.2739*	-0.3562**	-0.2859*	-0.2921*	-0.2865*

\*stands for 5 percent level of significance.

\*\*stands for 1 percent level of significance.

Table 4 shows that in the case of trained rural women the negatively significant relationship was found at 1 percent of level of significance between statement no:1 of adoption with social constraints (-0.3377\*\*), statement no.2 with economic constraints and T&RMC(-0.3331\*\*, -0.3421\*), where as the negatively significant relationship was found at 5 percent level of significance between the statement no.3 with social constraints (-0.2784\*), statement no 4 with T.C and T & RMC (-0.3229\*, -0.2739\*).

In the case of untrained rural women the negatively significant relationship was found at 1 percent level of significance between statement no.1 with T.C (-0.3838\*\*), statement no.2 with E.C(-0.4220\*\*), statement no.4 with E.C (-0.3562\*\*), where as the negatively significant relationship was found at 5 percent level of significance between statement no.2 with T & RMC (-0.3021\*), statement no.3 with E.C, S.C and T & RMC(-0.2990\*, -0.2912\*, -0.2774\*) and statement no. 4 with S.C, T.C and T & RMC (-0.2859\*, -0.2921\*, -0.2865\*). Hence, it is concluded that adoption of different preservation methods, equipments for preservation, preservatives and fruits and vegetable processing methods are decreases when different constraints (E.C,S.C,T.C and T&RMC) increases in daily life of rural women either they are trained or untrained.

**Conclusion:** The higher level of knowledge and adoption of different fruits and vegetable techniques may be attributed due to the higher knowledge gain by the trained rural women. Adoption levels of untrained rural women were less due to lack of knowledge. Adoption of different preservation methods for fruits and vegetables, different preservatives, different fruits and vegetable processing methods have negative correlation with different constraints faced by trained and untrained rural women such as economic constraints, social constraints, transportation constraints and technical and resource management constraints but economic constraints have positive correlation with adoption of different preservation methods for fruits and vegetables and adoption of different fruits and vegetable processing method in the case of trained rural women. Because they have sufficient knowledge about cheap preservatives and credit facilities for farm rural women which they have gained from KVK training programme. It may be concluded from the above results that KVKs training on fruit and vegetable preservation was effective in enhance the knowledge and adoption of fruits and vegetables preservation technology (Sharma *et al.*, 2013) [1].

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