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Change in behavioral components of rural women in terms of level of knowledge after receiving value addition training

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Abstract

The present study was conducted by the Krishi Vigyan Kendra Sahibganj Jharkhand with an attempt to know the change in behavior in terms of knowledge of rural women. Three training programme were organized from 2014-2015 to 2016-17 on value addition of locally available fruits and vegetables and forest products. Thirty rural women from each training programme were selected and total sample for the study was 90. The data were collected with the help of interview schedule. A knowledge test was developed to ascertain the knowledge of the women on traditional food processing practices. The gain in knowledge was operationalized as the difference between the knowledge regarding various aspects of post harvest practices by the respondents before and after the exposure of training. Thus, the summation of all score treated as the knowledge of the respondents at pre-exposure state. Similarly, post-training knowledge score was calculated separately.

The study also revealed that Krishi Vigyan Kendra can play an important role in transforming rural India. It is important institutional mechanism for training and promotion of appropriate technology. This selected Krishi Vigyan Kendra had made a significant effect on enhancement of the knowledge of farmers on raw material, record keeping, preservation technique, quality control and food processing machine. Adequate knowledge on these aspects are prerequisite for value addition and post-harvest management.

Keywords: training, value addition, preservation, knowledge, fruits and vegetables, behavioral components

Introduction

Fruits and vegetables are among the most important foods of mankind as they are not only nutritive but are also indispensable for the maintenance of health. From the point of view of the agriculturist also, they are of great importance as he is assured of high returns from their cultivation even on a small area. The total estimated production of fruits in India is about 129 million pounds, but as a substantial quantity is wasted. Only about one ounce per individual per day is the net availability. This contrasts markedly with the consumption in other advanced countries with ranges between 4 to 16 ounces per day. Development of horticulture will be uneconomical in a country with poor communication and marketing facilities, unless the fruit and vegetable preservation industry keeps pace with the developmental work. Its progress in India has been rather slow, mainly because of lack of adequate scientific knowledge about the various processes of food preservation. It is, therefore very necessary that this knowledge should be disseminated on a country-wide scale.

It is only a hundred years since Pasteur's discovery of the microbes which cause spoilage of food revolutionized the canning industry in the West. But during this short period the industry has been developed to such a degree of perfection that fruits, vegetables and other food produced by any country in any season are available all over the world at all times. Over 350 different kinds of canned foods are found in the market, and the total annual pack of the major producing countries of the world is estimated at more than 15,000 million pounds. The production of canned fruits and vegetables in the USA alone is over 7 million tons

The canning industry in India has yet to exploit its full potentialities. A number of entrepreneurs have no doubt established modern plants for the manufacture of various food products, but considering the great scope which exists for the development of the industry, the pace of progress is not as fast as it should be. The central food Technological Research Institute, Mysore, is striving hard to find solution for the problems which stand in the way of development of the industry.

Krishi Vigyan Kendra designs different types of training courses for farmers/farm women and rural youths.

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Training is an important aspect of the entrepreneurship development and it is considered as part of strategy for growth and development of an organization. Basically, training is intended to help individuals to learn and to bring the desired standard of efficiency, condition and behavior. Thus, it is sustained, coordinated and focused effort to enhance individual's competence for enduring success. Courses are based on the information received through family and village survey. No specific qualification is required to be the participation of the training programme. After conducting the training programmes, follow up programmes are organized for converting the obtained skills of the trainees into practice. While designing the training programmes, the concept of the farming system is taken into account to make the enterprises commercially viable. The training programmes take into account all methods and means will result in skill development in rural women in the areas of their interest.

Methodology

The present study was conducted by the Krishi Vigyan Kendra Sahibganj Jharkhand with an attempt to know the change in behavior in terms of knowledge of rural women. Three training programme were organized in 2015-2016 on value addition of locally available fruits and vegetables and forest products. Thirty rural women from each training programme were selected and total sample for the study was 90. The data were collected with the help of interview schedule. A knowledge test was developed to ascertain the knowledge of the women on traditional food processing practices. The gain in knowledge was operationalized as the difference between the knowledge regarding various aspects of post harvest practices by the respondents before and after the exposure of training. Thus, the summation of all score treated as the knowledge of the respondents at pre-exposure state. Similarly, post-training knowledge score was calculated separately.

Quantification of the data each 'yes' and 'Correct' answer was given a score of one and 'No' and 'Incorrect answer' a score of Zero. Altogether, there were 30 questions and 90 responses included in the test. Therefore, total possible score that a respondent could obtain vary from 0 to 90. In order to ascertain the impact of training programme on gain in knowledge, paired 't' test was employed. Improvement in knowledge and adoption level was calculated using the following standard formula given by Ansari and Chanargi (2000)

$$\text{Percentage of Improvement} = \frac{\text{Post training test} - \text{Pre training test}}{\text{Pre training test}} \times 100$$

Results and Discussion

To assess the effects of food processing training the knowledge of the respondents was measured with the help of standardized test at the three period of interval i.e. pre training, immediately after training and 7 days after the training. A score of one was given for each correct answer. On the basis of score, respondents were classified as high level (60% and above), Medium level (30% to 60%), and Low level (0% to 30%) of knowledge.

Table 1: Pre-training knowledge score of respondents

Sl. No.	Knowledge level	No. Of respondents	Percentage
1.	Low level (0% to 30%)	78	86.66
2.	Medium level (30% to 60%)	12	13.33
3.	High level (60% and above)	00	00.00

The data presented in Table 1 revealed that the majority (86.66%) of the respondents had low level of knowledge about value addition of fruits and vegetables followed by medium (13.33%), While none of the respondents obtain high level of knowledge score before participating in training programme conducted by the Krishi Vigyan Kendra.

Table 2: Post-training knowledge score of respondents

Sl. no.	Knowledge level	No. of respondents	Percentage
1.	Low level (0% to 30%)	00	00.00
2.	Medium level (30% to 60%)	30	33.33
3.	High level (60% and above)	60	66.66

It is clear from the Table 2 that after the exposure of training on value addition, majority of the respondents (66.66%) had high level of knowledge score followed by medium level of knowledge score (33.33%), while none of the respondents obtain lower level of knowledge score related to value addition. These results show that the importance of training in the change of knowledge and skill of the personal and in turn it helps in adoption of technologies learned in the training programmes. These findings are in accordance with the study of Sing *et al.* (2010).

Table 3: Knowledge score of respondents after 7 days of training

Sl. no.	Knowledge level	No. of respondents	Percentage
1.	Low level (0% to 30%)	00	00.00
2.	Medium level (30% to 60%)	48	53.33
3.	High level (60% and above)	42	46.66

The perusal of the data presented in Table 3 clearly shows that after 7 days of training, 53.33 per cent of respondents had medium level of knowledge followed high level (46.66%), while, the none of the respondents obtained low level of knowledge after 7 days of training.

Table 4: Mean knowledge score of respondents during all the years

Year	Mean knowledge scores		
	Pre-training	Post-training	7 days after the training
2014-15	08.20	31.88	29.56
2015-16	12.36	40.52	39.52
2016-17	14.08	31.84	31.04

The data presented in table 4 shows that the mean knowledge scores of trainees of three years at three stages i.e. at pre-training phase, immediately after the training and 7 days after the training. It is clear from the table that immediately after the training, there was sharp increase in the knowledge score. When the trainees were observed after 7 days of training it was found that in 2014-15 the knowledge retained was 29.56 while in the 2015-16 and 2016-17 the knowledge level declined slightly as is evident from the reduced mean knowledge score i.e. (39.52 and 31.04) respectively.

Table 5: Comparative knowledge scores of pre-training and post-training knowledge of respondents

Aspects of value addition training programme	Pretraining (mean)	Posttraing (mean)	Difference	't'-value
Raw material available	1.98	4.05	2.07	15.65**
Traditional and processed food	1.63	3.76	2.13	16.51**
Record keeping	1.76	4.05	2.29	18.12**
Preservation technique	1.06	3.86	2.26	18.75**
Hygiene	1.68	3.85	2.17	17.49**
Quality control	1.46	3.66	2.20	20.80**
Food processing machine	1.28	3.58	2.30	18.87**
Marketing	1.33	3.16	1.83	14.11**

**Significant at 1 percent level

In order to ascertain the impact of training programme on gain in knowledge paired 't' test was employed. The pre and post mean knowledge scores of the recipients of the training was calculated and paired 't' value are presented in table 5. Statistically significant differences were found among pre and post training mean score of all the aspects of food processing and value addition training programme. The significant difference between pre-training and post-training mean score i.e. before and after the training programme confirms the fact that the respondents were able to gain sufficient knowledge at post training programme.

Conclusion

The study reveals that Krishi Vigyan Kendra can play an important role in transforming rural India. It is important institutional mechanism for training and promotion of appropriate technology. This selected Krishi Vigyan Kendra had made a significant effect on enhancement of the knowledge of farmers on raw material, record keeping, preservation technique, quality control and food processing machine. Adequate knowledge on these aspects are prerequisite for value addition and post-harvest management.

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