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Performance and Knowledge of Rural Women in Banda District About Kitchen Gardening After Training and Demonstration

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ABSTRACT

The present investigation was carried out by Krishi Vigyan Kendra, Banda, Uttar Pradesh. The aim of the study was to assess the extent of knowledge gained and changes in production of vegetables due to the intervention of establishment of model Kitchen garden, accompanied trainings (on campus as well as off campus) and demonstrations by selected farming families of Banda district. Total 50 rural women were randomly selected for the study. Kitchen garden Kit developed by Indian Institute of Vegetable Research, Varanasi was also supplied as critical input among rural women for nutritional farming. The study highlighted that after the training and demonstration on model kitchen garden, there was a significant increase in production of vegetables i.e. 145.12 percent. 47.6 percent changes in knowledge was observed and family size, land holding, experience and training were found significantly correlated with gain in knowledge. It can be concluded that Kitchen gardening has proved a feasible livelihood strategy for rural people in terms of nutrient as well as calorie intake and economic performances.

Keywords: Livelihood, Nutritional status, Kitchen garden, Nutritional Security, Crop production

INTRODUCTION

In rural areas of India malnutrition and poor health status among women and children is a common problem. It retards growth, increases the risk and duration of illness, reduces work output and slows social and mental development. For poor households, vegetables and fruits are often the only sources of micronutrients in the family diet (Chayal *et al.*, 2013). The health benefits of vegetables are well recognized by nutritional and medical communities. Vegetables occupy an important place in Indian diets as they increase their nutritive value and palatability. India is the second largest producer of vegetables and the third largest producer of the fruits in the world (Kalloo, 1998). Despite its abundance, the costs of vegetables and fruits are increasing and hence are getting out of reach of majority of Indian population. The daily per capita intake of vegetables in India is 135g (Kalloo, 1998). For a balanced diet, an adult should have a minimum daily intake of 100g of fruit and 300g of vegetables (NIN 1999). Though this level is optimum for the prevention of deficiencies, a higher daily consumption i.e.500-700g is required for the prevention of the life style diseases such as diabetes, obesity, cancer and cardiovascular diseases.

There has been a rapid increase in the oxidative stress associated disorders such as prevalence of diabetes, cataract and cardiovascular diseases, due to the rapid changes in diet and life style. The natural strategies such as increased intake of antioxidants rich food could be a valuable tool in coping up with the stress (FAO, 2004). To fulfill the daily requirement of fruits and vegetables, Kitchen garden is an important strategy to increase the

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production as well as the consumption of fruits and vegetables. On the basis of above facts, present study was planned to assess the performance and adoption of model nutrition garden among rural women of Banda district.

METHODOLOGY

The present investigation was carried out by Krishi Vigyan Kendra, Banda, Uttar Pradesh. Total 50 rural women were randomly selected from the various villages for the interventions. On and off campus trainings and front line demonstration were conducted to increase adoption and to assess performance of kitchen garden in rural areas. Data regarding demographic profile were collected personally, from participants. Pre-survey was conducted to obtain information regarding profile and dietary food habits of the respondents. After six months of establishment of nutritional garden, a post-survey was conducted to analyze the impact of kitchen gardening on nutritional status and dietary pattern of selected families. Knowledge test developed by Meena (2005) with some modification was used to assess the training impact. Experimental research design (before-after) has employed to test the effectiveness of training and front line demonstration through knowledge gained and pre-post score of respondents on effectiveness of kitchen garden. z-test assuming unequal variances was performed among the respondents to find out whether there is any significant difference between the pre-exposure and post-training and demonstration exposure knowledge. Statistical analysis was performed using the statistical package IBM SPSS statistics (Version =20).

RESULT AND DISCUSSION

Table 1 depicts that more than 50 per cent of the respondents were young (upto 35 years). Total 82 per cent respondents were having low level of education which shows high rates of illiteracy. Besides this, majority of the families (86%) belonged to nuclear family, 42 per cent respondents worked as labour and 38 per cent respondents were dependent on agriculture for livelihood. A large number of respondents (88%) reported that they did not get any training regarding kitchen garden previously.

Table 1: Demographic Profile of the respondents (n=50)

Variables	Categories	F	%
Age	Young (upto 35 years)	26	52.0
	Middle aged (36-50 years)	18	36.0
	Old aged (>50 years)	6	12.0
Gender	Male	-	-
	Female	50	100
Education	Low	41	82
	Medium	4	8.0
	High	5	10.0
Family Size	Small (0-4 members)	10	20.0
	Medium (5-8 members)	31	62.0
	Large (9 to above)	9	18.0
Type of Family	Nuclear	43	86.0
	Joint	7	14.0
	Extended	-	-
Land holding	Small	12	24.0
	Medium	14	28.0
	Large	24	48.0
Occupation	Agriculture	19	38.0
	Labour	21	42.0
	Animal Husbandry	6	12.0
	Job	3	6.0
	Other	1	2.0
Family Income	Up to 1 lakh	3	6.0
	1-5 lakh	20	40.0
	5-10 lakh	17	34.0
	10-15 lakh	9	18.0
	More than 15 lakh	1	2.0
Experience	Low (< 5 yrs)	15	30.0
	Medium (5-10 yrs)	29	58.0
	High (>10 yrs)	6	12.0
Training	No training	44	88.0
received	<2 training	5	10.0
	2-3 training	1	2.0
	>3 training	-	-

It is evident from Table 2 that before training and demonstration on model kitchen garden, the production rate of vegetables was very low. The major reason behind low vegetable productivity was lack of knowledge and awareness among women about the role and importance of vegetables in daily diet. Along with this, non-availability

Table 2: Percent change in production of vegetables

Vegetable crops	Pre training and demonstration (kg/150 m^2)	Post training and demonstration (kg/150 m^2)	Percent change (%)
Tomato	4.0	15.0	73.33
Lady Finger	2.5	9.0	72.22
Pumpkin	3.5	14.5	75.86
Bottle Guard	8.0	17.0	52.94
Chili	1.0	3.5	71.42
Carrot	5.0	0.10	50.00
Coriander	1.25	4.0	68.75
Reddish	3.75	9.5	60.52
Spinach	4.5	12.5	64.00
Brinjal	2.5	8.25	69.69
Cucumber	1.75	7.0	75.00
Bitter guard	2.0	5.5	63.63

of good quality seeds and seedlings of vegetables in rural areas of Banda was another reason. Locally available seed and seedlings of vegetables were used to produce vegetables which negatively affect the crop growth. But after training and demonstration the level of knowledge and awareness among women was significantly increased and they started to cultivate vegetable in effective manner. For higher productivity of vegetables, kitchen gardening kit developed from Indian Institute of Vegetable Research, Varanasi was distributed among the rural women.

The range of score of initial knowledge about kitchen gardening varied from 18-37 with an average score of 26.94 whereas as after the training and demonstration sessions about nutrition gardening the range varied from 20-45 with the mean value of 39.81. The overall percent change in knowledge after the exposure of training and demonstration was 47.60. However, the improvement was found to be significant as Z value was 18.36 which is greater than table value (Table 3).

Zero order correlation coefficient was applied between independent variables and knowledge level of the respondents. Data depicted that independent variables i.e. family size, land holding, experience and training were significantly correlated with gain in knowledge. The respondents who were having nuclear family and less number of family members were benefited more (Table 4).

Table 4: Zero order correlation coefficient between independent variables and knowledge level of the respondents

Independent Variable	Post- training and demonstration knowledge	Post-training and demonstration knowledge	Gain in knowledge
Age	0.144	0.198	0.095
Gender	0.137	0.215	0.089
Education	0.098	0.178	0.075
Family Size	0.146	0.378	0.037**
Type of Family	0.094	0.137	0.074
Land holding	0.159	0.279	0.089**
Occupation	0.142	0.158	0.042
Family Income	0.085	0.251	0.067
Experience	0.071	0.188	0.038**
Training received	0.068	0.174	0.093**

** indicate significant at the level of 1 percent

CONCLUSION

On the basis of above findings, it was concluded that there was significant impact of training and demonstration on gain in knowledge of the respondents with respect to kitchen garden. After the training and demonstration, the dietary pattern and food habits of the respondents were changed positively. The amount of fruits and vegetables in daily diet of the respondent were increased. Establishment of nutritional garden at home can easily combat the serious problem of malnutrition and micro

Table 3: Gain of knowledge through training and demonstration on kitchen gardening

Particulars	Range of score obtained	Mean Score	Overall changes (%)	Z value
Impact of nutritional gardening on nutritional status and dietary pattern of selected families				
Pre training & demonstration	18-37	26.97	47.60	18.36**
Post training & demonstration	20-45	39.81		

** indicate significant at the level of 1 percent

nutritional diseases among women and children of Banda district. Higher production of fruits and vegetables can give the opportunity of the income generation and livelihood security to the rural women.

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