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Adoption of Model Nutrition Garden by Farming Families of Punjab

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ABSTRACT

The present investigation was conducted to study the extent of adoption of model nutrition garden by selected farming families of Punjab. Ten districts were randomly selected with the help of respective KVKs. From each district, one village was purposively selected. Twenty farmers were randomly selected from each village. The study highlighted that large proportion of the respondents (73.2 %) used one kanal land for nutrition garden and nearly forty per cent respondents (47%) cultivated vegetables, pulses and fruits in their nutrition garden. Adoption quotient of land used for nutrition garden was 43 and adoption quotient of crops (vegetables, pulses and fruits) cultivated in nutrition garden was 80. The whole adoption of model nutrition garden was 61.5 per cent. The findings revealed that technological gap for practice I (area under nutrition garden) was 56.3 per cent and for practice II (crops cultivated in nutrition garden) was 19.6 per cent.

Key words: Nutrition Garden, Adoption, Discontinuance, Technological Gap.

INTRODUCTION

Indiscriminate use of chemical fertilizers and pesticides particularly in intensive agricultural areas like Punjab and Haryana has poisoned their crops, pulses, vegetables and fruits. Researches conducted under All India Coordinated Research Project revealed that 60% of different commodities have been found to be contaminated with pesticides residues. It is a shocking fact that more than 85% milk samples analyzed contained DDT and HCH residues exceeding their respective maximum residue limit. Not only milk but other commodities like butter, ghee, vegetable, oilseeds, fruits etc. were found to contain pesticide residues. Resultantly human beings are suffering from various diseases. (Kaur and Gill 2005). Punjab farmers have adopted wheat and rice cropping pattern and stopped cultivation of other crops. Hence production and consumption of cereals in farming families have increased whereas consumption of pulses, fruits and vegetables has decreased to an alarming level Every rural family including farming families are purchasing pulses, vegetables and fruits for its consumption. They not only loose in monetary terms by spending on purchase of these food items but also loosing on health front. According to National Institute of Nutrition, Hyderabad 2010 every man should consume 300 gms cereals, 60 gms pulses, 100 gms green leafy vegetables, 100 gms roots and tubers and 200 gms of other vegetables like (gourd species, pumpkin, brinjal, capsicum, ladyfinger, peas and tomatoes *etc.*) and fruits to lead a healthy life. But surveys revealed that average consumption of these food items in villages is very low. An adult man consumes only 40 gms of pulses, 80 gms of green vegetables, less than 100gms of other vegetables and consumption of fruits is negligible. So, health of rural population can be well imagined.(ICMR, 2010)

In light of such a depressing situation, the Punjab Agricultural University developed the concept of model nutrition garden including vegetables, pulses and selected fruit plants to meet the requirement of farming families in the year 2005. To popularize this model, the field demonstrations on 'Integrated Nutritional Garden' were laid out at farmers' field in 16 selected KVKs' districts during the year 2007-08 with the financial assistance from Sir Ratan Tata Trust, Mumbai. Agriculture experts of department of vegetable crops recommended one kanal land to meet the needs regarding vegetables and fruits of 6-7 family membersAdoption of this model of self sufficiency can lead to economic and health benefits on

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one hand and conservation of natural resources on the other hand. In this context present study explores the extent of adoption of model nutrition garden by selected farming families of Punjab.

METHODOLOGY

The study was conducted in randomly selected districts of Punjab state. Ten randomly selected districts were Ropar, Samrala, Amritsar, Moga, Bathinda, Sangroor, Noormahal, Fatehgarh Sahib, Hoshiarpur and Faridkot. From each selected district, one village was purposively selected where in the model nutrition garden was initially propagated by KVKs. For each selected village, the list of adopter farmers was collected from respective Krishi Vigyan Kendras. Twenty farmers were randomly selected from the list of adopter farmers from each selected village. Thus 200 farmers formed the sample for this study.

RESULTS AND DISCUSSIONS

Extent of adoption of model nutrition garden

It refers to cultivation of recommended vegetables, pulses and fruits on prescribed area of land with the specific model selected for the study. The extent of adoption was measured against two practices. These were land used i.e. one kanal, two kanal or three kanal and other for cultivation of vegetables, vegetables and pulses and vegetables, pulses and fruits.

Table 1: Distribution of respondents according to pattern of use of model nutrition garden

n=120

Pattern of use	Frequency	Percentage
Started nutrition garden on the recommendation of P.A.U.	200	100.0
Continued with nutrition garden	190	95.0
Discontinued with nutrition garden	10	5.0
Location of nutrition garden		
In the house premises backyard	93	46.5
Away from home	16	8.0
On-farm	81	40.5
Total area of nutrition garden		
kanal	139	69.5
kanal	44	22.0
kanal	7	3.5
Crops cultivated in nutrition garden		
Only vegetables	16	8.0
Vegetables + pulses	80	40.0
Vegetables + pulses + fruits	94	47.0

The data presented in table 1 revealed that 100 percent of the respondents started model nutrition garden on the recommendations of Punjab Agricultural University. But 95 per cent respondents continued with nutrition gardens and five per cent of the respondents discontinued with the nutrition garden. It might be due to the fact that these respondents were not motivated for nutrition garden and were not aware of its importance for health. Data further revealed that about 46.5 per cent respondents had their nutrition garden in the house premises backyard. It was also found that large proportion of the respondents (69.5%) had only one kanal area, 22 per cent respondents cultivated on two kanal area and 3.5 per cent respondents had three kanal area for nutrition garden as recommended by P.A.U. Majority of the respondents were small farmers, therefore they used only one kanal for nutrition garden. It was also found that 47 per cent cultivated vegetables, pulses and fruits in their nutrition garden. The reason cited for this was that respondents cultivated crops according to the requirements of their families and availability of seeds/ nursery.

Adoption Quotient and technological gap analysis

Extent of adoption of nutrition garden was studied in terms of area under nutrition garden and the crops cultivated. Further adoption quotient suggested by Chattopadhyay (1963) was calculated for nutrition garden. As per the formula two practices i.e. land used and crops cultivated were taken as practices for calculating adoption quotient as follows:

Table 2: Adoption quotient of practices

Practice I: Area under nutrition garden	1 Kanal (f) (%)	2 Kanal (f) (%)	3 Kanal (f) (%)	Extent of adoption score	Adoption Quotient (%)
	139 (69.5)	44 (22.0)	7 (3.5)	1.31	43
Practice II: Crops cultivated in nutrition garden	**(only veg) (f) (%)**	**(veg+pulses) (f) (%)**	**(veg+pulses+fruits) (f) (%)**		
	16 (8.0)	80 (40.0)	94 (47.0)	2.41	80

(Range of score 1-3)

The data revealed that adoption quotient for practice I (Area under nutrition garden) was 43 per cent with 1.31 score for extent of adoption which indicates that majority of the respondents used only one kanal land. Adoption quotient for practice II (Cultivation of crops) in nutrition garden was 80 per cent with 2.41 score for extent of adoption. This shows that majority of the respondents adopted the recommended practice for cultivation of crops. On the whole adoption of nutrition garden model was found to be 61.5 per cent. Further gap analysis in adoption of model nutrition garden was also calculated as given by Chattopadhyay (1963). Gap analysis of adoption of practice I (area under nutrition garden) revealed the technological gap of 56.33 per cent. It is inferred from results that 56 per cent respondents did not follow the recommendations for practice I of nutrition garden.

CONCLUSION

It may be concluded from the results that majority of the respondents continued with nutrition garden only on one kanal land although they perceived that recommended practices were better. Since the adoption of model nutrition garden was found to be 61.5 per cent with technological gap for recommended area under nutrition garden 56.33 per cent and for crops 19.66 per cent but its adoption can be improved by enhancing the availability of improved seeds and nurseries as well. Moreover concerted efforts for demonstrating the nutrition garden and educating farming families regarding importance of vegetables and fruits for healthy life are required.

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