

Women empowerment through nutritional kitchen garden in district Raebareli, U.P.

Deepali Chauhan and K.K. Singh

1. Department of Home Science, C.S.A.U.A.&T., Kanpur, U.P.

2. K.V.K., Raebareli, U.P.

Received March 6, 2019 and Accepted June 16, 2019

ABSTRACT : Vegetables are the only source to increase not only the nutritive values of foods but also their palatability. Kitchen gardens are often controlled by women, they can increase their access to food and sales of surplus, and since these gardens occupy small areas, low-income households with little land can participate too. From the five randomly selected villages of randomly selected Rahi block of Raebareli, total fifteen farm women of rural households (three women from each selected village) have been purposively cum randomly selected on the basis of their medium family size (having 7 members). For the assessment of suitable plot area of kitchen garden for fulfilling daily vegetable requirements of medium size rural households, vegetable production of three different plot area ;100 m², 150 m², 200 m² has been measured through weighing balance. Findings suggest that average annual vegetable production was maximum 821kg in 200m² plot area followed by 664kg in150m² plot area and minimum 431kg in 100m² plot area. 200 m² plot area had produced vegetables more than the annual requirements of 766.5kg for medium sized family. Thus by selling surplus of vegetables produced, women can also earn money and can give economic support to their family. Further, average annual saving in family budget of farm women was maximum of Rs.10,795 in 200m² area followed by Rs.9,055 in150 m² area and minimum saving of Rs. 5,475 in 100 m² area.

Key Words : Kitchen garden, plot area, saving, farm women, vegetables.

Despite the fact that there is enough food for everyone, almost 870 million people go hungry every night. 2.3 million children die needlessly because of malnutrition each year and 165 million more have their future potential permanently damaged because they don't receive the right nutrients at the start of life. This is a human tragedy, with a clear moral imperative for world leaders to act. Vegetables occupy an important place in our daily life particularly for vegetarians. Vegetables are the only source to increase not only the nutritive values of foods but also their palatability. For a balanced diet, an adult should have an intake of 85g of fruits and 300 g of vegetables per day according to the dietary recommendation of nutrition specialists. But the present level of production of vegetables in our country can permit a per capita consumption of only 120 g of vegetables per day. In India one of the consequences of the green revolution was that it brought in mono-cropping leading to a drastic reduction of crop diversity of farm lands. This shift in agriculture focusing on a market-driven economy where cash crops took precedent, had its toll; household needs for a range of cereals, pulses and vegetables were not met from the farm but purchased from the market. Women have been consistently found to be more likely to invest in their children's health and wellbeing, and the income and resources that women control wields disproportionately strong effects on health and nutrition out-

comes generally, World Bank (2007). From the evidence, reaching women farmers is particularly important in contexts where women are becoming more responsible for agricultural work traditionally done by men as men migrate to urban areas for other work Lastarria-Cornhiel (2008). A study of developing countries by the International Food Policy Research Institute in 2000 found that as much as half of the reduction in hunger from 1970 to 1995 could be attributed to improvements in women's status in society. Progress in women's education (which explained 43 percent of gains in food security) was nearly as significant as increased food availability (26 percent) and health advances (19 percent) put together, IFPRI (2000). Overall, the FAO estimates that closing the gender gap in agriculture could reduce the number of hungry people in the world by 12 to 17 percent, or by 100-150 million Action Aid (2012). Kitchen gardens are often controlled by mothers, they can increase their access to food and incomes from sales of surplus, and since these gardens occupy small areas, low-income households with little land can participate too. And they are proven to work FAO (2012). In a review of 30 agricultural programmes that recorded nutritional impact, kitchen garden were very likely-seen in 11 out of 13 cases to improve nutrition Berti *et al.* (2004).

For the purpose of empowering farm women through improving their health as well as economical status by the means of kitchen garden, K.V.K. Raebareli

Table-1 : Annual average vegetable production and annual average gross income of three different modules of kitchen darden.

S. No.	Crop	Production (kg)			Rate (Rs/kg)	Gross Income(Rs.)		
		100 m ²	150m ²	200m ²		100 m ²	150m ²	200m ²
1	Brinjal	40	45	60	15	600	675	900
2	Cabbage	26	40	50	20	520	800	1000
3	Onion	25	45	60	20	500	900	1200
4	Peas	15	30	45	20	300	1200	900
5	Potato	40	50	70	20	800	1000	1400
6	Chilli	5	10	16	15	75	150	240
7	Spinach	15	25	32	20	300	500	640
8	Garlic	40	40	60	30	1200	1200	1800
9	French beans	20	45	47	20	400	900	940
10	Tomato	30	50	0	10	300	500	600
11	Cauliflower	15	40	44	20	300	800	880
12	Beans(Sem)	20	34	42	20	400	680	840
13	Raddish	20	25	31	10	200	250	310
14	Carrot	20	30	35	10	200	300	330
15	Coriander	15	25	30	15	225	375	450
16	Bottlegourd	30	35	40	10	300	350	400
17	Ridgegroud	10	25	28	10	100	250	280
18	Pumpkin	50	70	73	20	1000	1400	1460
Total		431	664	821		7,720	12,230	14,550

has planned an on farm trial to assess the impact of kitchen garden on the vegetables intake of farm women and to assess the impact of kitchen garden on the family budget of farm women.

Materials and Methods

Purposive cum random sampling has been used for the selection of rural households of farm women. Rahi block has been selected purposively because of Krishi Vigyan Kendra, Dariyapur come under this block. Total five villages namely Belabhela, Belagusisi, Kucharia, Sultanpur aima, Bhuamau and Dariyapur has been selected purposively on the basis of their distance from K.V.K. center. List of the rural households having medium size family (7 members in family) of each selected village has been prepared. From the list of the rural households having medium size family, three farm women from each selected village have been randomly selected. Thus total fifteen farm women of medium size family has been selected for on farm trial. Three different plot size of kitchen garden i.e. 100m², 150m², 200m² has been used for on farm trial to find out the suitability of different plot size of the kitchen

garden in fulfilling the daily vegetables requirement of medium size family of the rural households. Seeds and seedlings of selected vegetables i.e. brinjal, chilli, cabbage, spinach, onion, garlic, peas, potato, French beans, tomato, cauliflower, beans, reddish, carrot, coriander bottle gourd, Ridge gourd, pumpkin have been provided to farm women. Training has also been provided to farm women on kitchen gardening. Weighing balance has been used for measuring vegetable produce of different plot size of kitchen garden. Interview method has been used for data collection.

Results and Discussion

Average annual vegetable production and average annual gross income from three different modules of kitchen garden

From the Table-1, it is clear that maximum average annual vegetable production was 821 kg for the farmwomen of medium sized family having 200m² of kitchen garden followed by 664 kg for the farmwomen of medium sized family having 150m² of kitchen garden. Further, minimum annual average annual vegetable production was 431 kg for the farmwomen of me-

Table-2 : Average gap between annual average vegetables produced and annual average vegetables required for medium sized (7 members) rural households of the farmwomen.

S. No.	Modules of Kitchen Garden	Requirement (kg)	Vegetables produced (kg)	GAP (kg)
1	100m ²	766.5	431	-335.5
2	150m ²	766.5	664	-102.5
3	200m ²	766.5	821	+54.5

Table-3 : Annual Percentage vegetables Requirement of medium sized (7 members) rural households of the farm women fulfilled through three modules of kitchen garden.

S. No.	Modules Kitchen Garden	Requirement (kg)	Vegetables produced (kg)	Percentage of Requirement fulfilled
1	100m ²	766.5	431	56.23
2	150m ²	766.5	664	86.63
3	200m ²	766.5	821	107.11

Table-4 : Annual average cost of production, annual average gross income and annual average net income of medium sized (7 members) rural households of farmwomen fulfilled through 3 modules of kitchen garden.

S. No.	Modules of Kitchen Garden	Cost of production (Rs.)	Gross Income (Rs.)	Net Income (Rs.)
1	100m ²	2,245	7,720	5,475
2	150m ²	3,175	12,230	9,055
3	200m ²	3,745	14,550	10,795

dium sized family having 100m² of kitchen garden.

Table-1 depicts that maximum average annual gross income of the farmwomen belonging to medium sized family was Rs.14,550 having 200m² of kitchen garden followed by Rs.12,230 having 150m² of kitchen garden. Further, minimum average annual gross income of farm women belonging to medium sized family was Rs.7,720 having 100m² of kitchen garden.

Average gap between average annual vegetables produced and average annual vegetables required for medium sized (7 members) rural households of the farmwomen

Table-2 depicts that average gap between average annual vegetables produced and average annual vegetables required was found maximum in 100m² of kitchen garden which was 335.5 kg lesser than 766.5 kg average annual vegetable requirement followed by 102.5 kg lesser vegetable produced in 150m² of kitchen garden than the average annual vegetable requirement of medium sized rural household of the farm women. Further, average gap between average annual veg-

etables produced and average annual vegetables required was found minimum in 200m² of kitchen garden which was 54.6 kg more than 766.5 kg average annual vegetable requirement of medium sized rural household of the farm women. Thus by selling surplus of vegetables produced in 200m² of kitchen garden, women can also earn money and can give economic support to their family.

Annual percentage vegetables requirement of medium sized (7 members) rural households of the farm women fulfilled through three modules of kitchen garden

From the Table-3, it is clear that maximum 107.11 per cent of vegetables requirement of medium sized (7 members) rural households of the farm women was fulfilled by 200m² of kitchen garden followed by 86.66 per cent vegetables requirement fulfilled by 150m² of kitchen garden. Further, minimum 56.23 per cent of vegetables requirement of medium sized (7 members) rural households of the farm women was fulfilled by 200m² of kitchen garden

Average annual net income of medium sized (7 members) rural households of the farm women fulfilled through three modules of kitchen garden

Table-4 shows that maximum average annual net income of Rs. 10,795, maximum average annual gross income of Rs.14,550 and maximum average annual cost of production of Rs.3,745 was found among farm women of medium sized family having 200m² of kitchen garden. Further, average annual net income of Rs. 9,055, average annual gross income of Rs.12,230 and average annual cost of production of Rs.3,175 was found among farm women of medium sized family having 150m² of kitchen garden. Moreover, minimum average annual net income of Rs. 5,475 minimum average annual gross income of Rs.7,720 and minimum average annual cost of production of Rs.2,245 was found among farm women of medium sized family having 100m² of kitchen garden. Net income was saving in budget of the farm women

On the basis of above findings ,it can be concluded that kitchen garden has significant impact on daily vegetable intake of farm women ,thus very helpful in improving health status of farm women. Further,

kitchen garden has significant impact on family budget of farm women not only by reducing money expenditure on vegetables buying from the market but also providing means of family income by selling of vegetable surplus in nearby market. Thus, women empowerment in rural areas can be achieved through kitchen garden.

References

- ActionAid et al., 2012.** What works for women. Action Aid: London; De Schutter, 2011. Reports submitted by Special Rapporteur on the right to food, Oliver de Schutter, to the UN Human Right Council,26 December 2011 ,A/HRC /19/59
- Berti, P. et al., 2004.** A review of the effectiveness of agricultural interventions in improving nutrition outcomes. *Public Health Nutrition*, **7**(9):599-609.
- FAO, 2012. Combating micronutrient deficiencies:Food-base approaches,FAO:Rome.
- IFPRI, 2000. Explaining child malnutrition in developing countries: A Cross-country analysis, Research report111 IFPRI: Washinton; DeSchuttere (2011).
- World Bank, 2007. From Agriculture to Nutrition: Pathways synergies and outcomes, World bank: Washington.