

ROLE OF WOMEN IN VEGETABLE PRODUCTION: A CASE STUDY OF FOUR SELECTED VILLAGES OF DISTRICT ABBOTTABAD

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ABSTRACT

The present study was carried out to find role of women in vegetable production area of SRSP. SRSP develops intuitional and technical models for poverty alleviation, sustainable and equitable development and raise the income and quality of people by providing them training in various aspects of agriculture to supplement food and income. This study was conducted in five villages i.e. Beer, Bodla, Poswal, Jungi Mohri and Banda Sheikhan of district Abbottabad during 2002. Main target groups were women community organizations engaged in vegetable production and marketing. Eighty female respondents each of the selected four villages were interviewed. The results of the personal characteristics showed that majority of respondents were in age group of 20-40 years, 54% of the total respondents were educated, 73% of the respondents had barani type of land. Education and adoption of vegetable growing practices were positively correlated. The results further showed that 54% of the respondents grew vegetable inside their houses, among which 47.5% grew vegetable for profit purpose and 47% of the female respondents grew vegetables themselves. Major constraints in vegetable production found in the study were lack of capital, credit availability and lack of marketing facilities.

Keywords: Agriculture, Extension, GDP, Pakistan, SRSP, Women

INTRIDUCTION

Pakistan is basically an agricultural country. Majority of its population lives in rural areas and are engaged in agricultural based activities. Agriculture accounts for 25% of Gross Domestic Product (GDP), employ more than 50% of labor force and contributes about 56% of total export of country.

NWFP is one of the four provinces of Pakistan administratively divided into six divisions and twenty-four districts. Abbottabad was one of the districts selected for this study. Abbottabad is a hilly area and most of its cultivated land is steep where irrigation is not possible. Being a pleasant place to live, especially in summer, its population has increased tremendously. However, there is always an acute shortage of vegetables. Vegetables can be grown in and around most of the houses; however women role in this respect is dormant.

According to 1999-2000 statistics the total cultivated area of NWFP was 32640 hectare and production was 354145 tones, while in Abbottabad total area under cultivation was 202 hectare and production was 2713 tones (Govt. of Pak. 2000)

Vegetable production is one of the human basic skills. The level of success and productivity of vegetables production depend on the local climate and season and the range of species cultivated. Also, successful vegetable production is very much dependent upon supply of satisfactory seeds.

The purpose of vegetable production varies from large-scale farm enterprises to private home gardening, where vegetables are essential elements to supplement their diets and income. In some

communities vegetables are grown as physical recreation or even as pass time hobby.

Commercial production of vegetables has extended considerably during the past few decades in many parts of the world as large-scale enterprises to provide for fresh market and export. There are some relatively small-scale producers who aim at self-sufficiency in vegetables for the sale or exchange in village communities. NWFP women are involved in vegetable production on limited scale. Here, there are several reasons for growing vegetables, but the most important is for food. As vegetables are essential in diet, provide fiber, trace minerals, vitamins, carbohydrates and proteins.

Pakistani women play a key role in agriculture production. They are essential components for the development of the nation. Women participate in all operations related to crop production. They make 49% of the total population of Pakistan and majority of them live in rural areas. 79.4% of rural women are engaged in agriculture as against 60.8% of rural men. (FAO Report)

Agriculture extension plays an important role in the development of agriculture. The ultimate objective of extension is to promote the spiritual, mental and social growth of farmers and their families. Awareness has been created through the efforts of extension department and NGOs in rural communities of NWFP about new technologies. Sarhad Rural Support Program (SRSP) is busy alongside with agriculture extensions to help rural people in poverty alleviation.

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The main purpose of SRSP is to build the capacity of local communities through participatory community based organizations for sustainable social and economic development. Presently SRSP is working in six regions of nine districts of NWFP including Abbottabad and Haripur. Since 1997, SRSP has mobilized the community specially women in Abbottabad region and the rest of NWFP. The women program of SRSP has the mandate to take women into the mainstream of village development by improving their social and economic conditions. To achieve these objectives, SRSP has established different areas with proactive participation of women. The WCOs (Bodla Poswal, Beer, Jungi Mohri, and Band Sheikhan) are among the community organization organized in collaboration with SRSP where the current study has been conducted to investigate the role of women in vegetable production.

MATERIALS AND METHODS

Abbottabad is one of 24 districts of NWFP. There are a total of 46 union councils in district Abbottabad. Women community organizations of SRSC exist in seven Union Councils. The study was conducted in the working area of SRSC in district Abbottabad during 2002. Main target groups were women community organizations engaged in vegetable production and marketing. For the present study four villages i.e. Beer, Bodla, Poswal, Jungi Mohri and Banda Sheikhan, from three union councils, were selected. From each village 20 female were selected through equal allocation using purposive sampling technique with the hope of representing the whole area.

For this study a well design questionnaire was developed and pre-tested. Primary data was collected with the help of a questionnaire. Eighty female respondents of the selected four villages were interviewed in November and December 2002. The respondents were interviewed in their houses and farm. These places were selected for the convenience of respondents and for creation of suitable situation, where both sides (researcher and respondent) exchanged their views frankly and informally. The questionnaire mostly contained closed end questions. The questionnaire was designed in English but the questions were asked in local language (Hindko) in order to avoid confusion. During interview every effort was made to explain the questions and its purpose, so that correct and reliable information could be gathered.

To verify and support the results of primary data, the secondary information was used which were

collected from published and unpublished sources. After collection of data, a tally sheet was prepared which facilitated the enumeration of answer of each question. By using descriptive statistics the data was analyzed by calculating simple percentages.

RESULTS AND DISCUSSION

Personal Characteristics (Age group, Education Level and Income Sources of the Respondents)

Age of respondents play an important role in adoption or rejection of a practice. The data collected in the survey (Table I) indicates that 22% of the respondents were below 20 years of age, while 62% were in the age group of 20-40 years and 16% above 40 years of age group. During field survey it was observed that women between the ages of 20-40 were mature and involved in agricultural activities side by side with their males.

Family composition showed number of males, females and children in the study. In the survey 23% of the family members were females, 21% males, while 56% were children. Adult females were more than adult males. Adult females of the study area were involved in vegetable production for financial support of household and economic stability of their family.

Education is one of the most important factors in acceptance, rejection, adoption and dissemination of useful information to other fellows for their benefits. The data in table-I indicates that 46% of the respondents in the study area were illiterate, while 54% were literate. Out of the literate, 30% were educated up to primary level, 10% middle level, 9% Matric and 5% secondary level and above. Earlier studies have shown that education has a significant effect on farmer's behavior towards adoption of improved agricultural practices (Tarar, 1983), Chaudhry, 2004, Asfaw and Admassie, 2004).

Income may be defined as the total money value of the services received by an individual from all sources. For this purpose occupational distribution of the family of sample respondents is given in the Table I, which shows that 31% of the respondents were laborer, 30% government servants, 19% involved in agriculture, 5% doing their own business and 15% were involved in other miscellaneous occupations. Although the Land holding in the study area consisted of the hilly area of the district where water sources are far away from the hilly lands. Majority of the respondents

(72%) had Barani land, while 28% irrigated type of land (Table I).

Islam *et al.* (1996) concluded that age and family size had no significant relationships with women income generating activities (vegetable production, livestock and fish culture) but education, mass media exposure, contact with extension agent, women respondent attitude and their husbands attitude were found to be significantly associated with women participation in women income generating activities.

Farouque and Anwar (1998) reported that correlation analysis reveal that female education and knowledge of homestead farming, hobby, extension contact and attitude toward technology has positive significant relationships with their selected self-employment activities (including vegetable production). They further stated that vegetable cultivation was the preferred activity of the majority of the female rural youth. It was 288 points on a range scale of 0-300 only next to rearing modern poultry, which were 294 on the scale.

Type and Duration of Training Received

Training play an important role in human resource development and ultimately it contributes to the productivity of the area where it is conducted. Table II indicates that the extension staff of SRSP provided kitchen gardening training to 62% and other agriculture training to 38% of the sample respondents.

Duration of training is important factor in determining the quality of training, which ultimately affects the performance of trainee and production of vegetable/crops. There are different levels of training primary, secondary and higher level. The data in Table II indicates that 28% sample respondents received primary level training, 50% secondary level and 22% higher-level training.

Visit of female extensions workers provide basic guideline in the desired direction and influence the training purpose of the vegetable growers. According to the results in table II, 87.5% of the sample respondents reported visit of the extension staff of SRSP.

According to Williams (1994) women played an important role on the farm by tending to the vegetable garden, as well as the keeping of cows, while the men were often absent from the farm. Farmer's wives should thus be included in the extension programs. Extension staff should contact the husband and wife jointly, paying the necessary

respects to the husband but ensuring that the wife is involved and fully understands the advice and encouragement, which is given. This will enable the wives make better decisions when the husband is not present. Michalowski *et al.*, (1995) reported that main sources of information for women growing vegetables in their gardens were brochures, articles, instructions and books and the role of advisers was less important

Awareness and Adoption of Improved Agricultural Practices

Recommended agricultural techniques include the knowledge of sowing techniques, row to row distance, plant to plant distance, irrigation, chemical fertilizer, fertilizes doses, pesticide, pesticides doses, picking, grading, storage and pest and degasses. Table IV shows that about 31.25% of the respondents were aware of sowing techniques, 61.25% of row to row distance, 48.75% of plan to plant distance, 61.25% of irrigation, 57.5% of chemical fertilizer, 23.75% of fertilizer doses, 35% of pesticides, 31.25% of pesticides doses, 25% of picking, 5% of grading, 60% of storage and 25% of pest and diseases.

Ahmed and Philip (1999) evaluated four types of training program: kitchen gardening, mushroom cultivation, layer farming and freshwater sericulture. Before and after experimental design was followed for measuring knowledge gain, skill acquisition and symbolic adoption. About 50% of the trainees gained a medium level of knowledge and acquired a medium skill level in all the training programs. Overall 35% of trainees and a medium level of symbolic adoption and 31% a high level of symbolic adoption.

Length, Purpose of Vegetable Production and Who Grow Vegetables

It was found that generally male and female community both were involved in agricultural practices and female were specifically involved in vegetable production (Table IV). It is advantageous for female as vegetable fields were nearer to their houses and that was the reason for their involvement in vegetable production besides their household activities.

The respondents of study area were involved in growing vegetable for quite some time. About 25% of the respondents were growing vegetable for the last 3-4 Years, 31% for 5-6 Years, 5% for 7-8 Years and 11% for the last 8 years. The results further showed that for 47.5% respondents the purpose of vegetable production was profit, for 42.5% as saving, for 36.25% as hobby and for 23.75% to pass time. As regarding to who grow vegetables, 47% were

growing vegetables by themselves, 22% engaged labor and 31% involved other family member for vegetable growing.

The results in Table IV also depicts that 42% of the respondents grew vegetable indoor, 34% outdoor while 24% practiced mixed vegetable growing (both indoor and outdoor). Regarding types of vegetable production, 78.75% of the respondents grew vegetables in summer and 70% in winter. The reason for growing less winter vegetables as compared to summer was that severe cold and frost in winter damage the crop.

According to Ozkan *et al.* (2000) women farmers provided the majority of labor, input in planting, hoeing and harvesting activities. Women are faced with serious constrains in carrying out vegetable production activities. They have less access to information, technology, inputs and credit than men. Women need a more effective and better-targeted agricultural extension service.

Karim and Wee (1996) reported that women in small land holdings have the highest involvement in agriculture. Besides most household vegetable gardens that supplement the family food consumption become the women's responsibility. They reported that one-third to one half of vegetables spices and fruits grown in the homestead were sold to supplement the family income.

Constraints in Vegetable Production

The results in Table V shows the problems faced by the respondents of the study area in vegetable production, where 32.5% had time constraints problem, 56.25% capital, 21.25% marketing, 57.5% credit availability, 12.5% of restriction, 25% transportation, 33.75% of distance from market, 73.75% water deficiency and 21.25% reported some other problems. As the respondents were also

involved in household activities so they have time constraints for the fieldwork.

In rural areas poverty is also a major problem due to the lack of capital. Farmers face difficulties in obtaining credit, which is generally due to the lengthy and time-consuming procedure, illegal demands of revenue staff and bank functionaries. Market plays a dual role i.e. demands and supply of inputs and farmers surplus produces. There was no formal proper market available in the study area that would enable the farmers to sell their products in time. Lack of transportation was the main hurdle in marketing. Availability of input supply, seedlings, pesticides, fertilizers was greatly affected due to the distance from market. Lack of irrigation water and dependency on irrigation water was a big constraint in raising vegetables. Cultural and social barriers also restricted female community from farm activities.

CONCLUSION AND RECOMENDATIONS

Raising vegetables for supplementing diets as well as income is an important activity that women of the rural area perform to play their part in agricultural production and to develop nation. A number of women of the project area were involved in vegetable production. Women can do a better job of vegetable production if they are provided with proper training, suitable technological package and with proper inputs. This will enable them to increase their efficiency in vegetable production and income and will thus alleviate poverty. To help them with their genuine problems like water deficiency, transportation, credit and marketing are very much needed it is therefore recommended that:

- i. Women should be provided proper training near their homeland.
- ii. Proper credit and marketing facilities should be extended to female vegetable growers.
- iii. Wherever possible water for irrigation and other purposes should be made available.

Table I. Personal characteristics of the respondents in five villages of Abbottabad District

Age of the Respondents (Years)	Percentage respondents (%)
Less than 20	22%
Between 20 – 40	62%
More than 40	16%
Family Composition	
Female	23%
Male	21%
Children	56%
Educational Level	
Illiterate	46%
Primary Level	30%
Middle Level	10%
Matric	9%
Secondary & Above	5%
Income Sources	
Agriculture	19%
Business	5%
Labor	31%
Govt. Servant	30%
Others	15%
Types of Land Holding	
Irrigated	72%
Barani	28%

Table II. Types and duration of training received

Types & Duration of Training Received	Respondents (%)
Types of Training	
Kitchen gardening	62%
Other agricultural training	38%
Duration of Training	
Primary	28%
Secondary	50%
High	22%
Visit of the Female Extension Workers	87.5%

Table III Awareness and adoption of improved agricultural practices

Recommended Practice	Respondents (%)
Sowing Tech.	31%
Row to Row Distance	61.3
Plant to Plant Distance	49%
Irrigation	61%
Chemical Fertilizer	57.5%
Fertilizer Doses	23.8%
Pesticides	35%
Pesticides Doses	31.3%
Picking	25%
Grading	5%
Storage Grading	60%
Pest & Disease	25%

Table IV. Length, Purpose of vegetable production and Who Grow Vegetables

Length of Producing Vegetables	Years	Respondents (%)
	1- 2 Years	28%
	3-4 Years	25%
	5-6 Years	31%
	7-8 Years	5%
	> 8 years	11%
Purpose of Vegetable Production		
	Profit	47.5
	Saving	36.25
	Pass time	23.75
Who Grow Vegetable		
	Themselves	47%
	Labor	22%
	Family Members	31%
Site and Type of Vegetable		
	Indoor	42%
	Outdoor	34%
	Both in/out	24%
Types of Vegetables		
	Summer	78.75%
	Winter	70%

Table V. Constraints in Vegetable Production

Constraints	Respondents (%)
Time Constraints Problems	32.5
Capital Problem	56.25
Marketing problems	21.25
Credit Availability	57.5
Restrictions	12.5
Transportation	25
Distance from Market	33.75
Water Deficiency	73.75
Others Problems	21.25

REFERENCES

- Ahmad, S.K.Z. and H. Philip. 1999. Effectiveness of training on farm-women of Andaman & Nicobar Islands. *Madras Agric. J. Publication.* 86:1-3, 154-157.
- Asfaw A. and A. Admassie. 2004. The role of education on the adoption of chemical fertiliser under different socioeconomic environments in Ethiopia. *Agric. Econ. The J. Int'l. Assoc. Agric. Econ. (IAAE).* 30(3): 215.
- Chaudhry A. G. 2004. Socio-economic factors associated with various categories of adopters of new groundnut varieties. www.knowledgebed.com. Socio-Economic Factors and Innovative Behavior.htm
- Islam, M.S., A.K.M.A.H. Bhuiyan and A.M.A. Karim. 1996. Women's participation in agricultural income generating activities. *J. Asiatic Soc. of Bangladesh Sci.*, 22:2, 149-153.
- FAO Report. Asia's women in agriculture, environment and rural production. <http://www.fao.org/sd/wpdirect/WPre0111.htm>
- Farouque, M.G. and A.B.M.N. Anwar. 1998. Preference of female rural youth for selected activities in self-employment. *Bangladesh J. Training & Dev.* 11:1-2, 9-14.
- Govt. of Pak. 2000. *Agric. Statistics of Pakistan.* Ministry of Food, Agric. & Livestock (Econ. Advisor's Wing), Islamabad.
- Karim, N.A. and M.M.B. Wee. 1996. Role of women in vegetable agribusiness. *Vegetable crops agribusiness. Proc. Workshop held at BARC, Farmgate, Dhaka, Bangladesh, 2-4 May 1995.* 177-182; Publication No. 97-457.
- Ozkan, B., D. Ediz, V. Ceyhan, P. Goldey and J.P. Ogier. 2000. Women's role in the vegetable farming systems in Antalya, Turkey: a gender analysis of labour participation and decision-making in the agricultural sector. *Acta-Horticulturae.* 536: 419-438.
- Tarar, U.H. 1983. A study into the extent of adoption of plant protection measures against rice borer by the farmers in Tehsil Wazirabad, District

- Gujranwala, M.Sc.(Hons) Thesis, Deptt. Agric. Ext., Univ. of Agric., Faisalabad. pp. 5-8.
- Williams, J.L.H. 1994. The role of women in agricultural development and its implications for extension: experiences at the Keiskammahoek irrigation scheme Ciskei. South Africa. J. of Agric. Ext. 23: 78-90.
- Michalowski, C., M. Ochal, T. Pawelec, B. Czlonka and L. Szafranski. 1995. The acceptance of innovation by country housewives (the example of growing little known vegetables). Annal. Unive. Mariae Curie Sklodowska. Sectio-E, Agricultura. 50: 29-34.

