

WOMEN IN AGRICULTURE: RESULTS FROM A SURVEY OF OKARA DISTRICT OF PAKISTANI PUNJAB

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ABSTRACT: The study was designed to identify rural women's participation in different agricultural activities especially crop related involvement in the district Okara, Punjab, Pakistan. A multistage random sampling technique was used to collect the data from 480 respondents from three tehsils of the district. The results show that a vast majority of women were illiterate, having annual family income less than one lac, living in joint family system and having small land farms. A large proportion of the respondents reported that they remained engaged in cleaning of seeds, sowing, harvesting, weeding, etc. for corn, rice, wheat, sugarcane, and vegetables' production. It is concluded that women's participation in crop production extracted more vital role than their counterparts in rural areas.

Key Words: Agriculture; Women; Survey; Pakistan.

INTRODUCTION

Rural women comprises more than one quarter of the total world population and perform 30% of the agricultural work in industrialized countries, while this proportion is much higher in developing countries (FAO, 2000). In countries such as Egypt, Morocco, Somalia and Turkey, women constitute over 50% of the total labor engaged in agriculture, while in Pakistan, Cyprus, Sudan, Syria, Lebanon and Iraq at least one third of the labor required to sustain agriculture production is provided by women (Agha, 2005).

In the South Asian countries female employment ratio in agriculture is greater than male agricultural workers. Women participation in agricultural sector is very active, playing their varied roles as agriculture laborers, *dejure* landowners, *defacto* household heads, or as managers of their household activities. It is being observed that South Asian women worked four hours more than the men (Human Development Report, 2002).

Women contribution in the South Asian agriculture is extremely greater than men but, their role remains unacknowledged and unappreciated. Their economic and social values of work have frequently been under recorded and underestimated (Syal, 2004; Shahzad, 2004). Empowerment

of rural women is absolutely essential for raising their status in society. They need to be recognized and treated as workers and should be provided with safe and healthy working conditions (Zafar, 2005).

In Pakistan, rural women cover about half of the total population and an enormous proportion of agricultural labor force. About 70% of the female labor force is engaged in agriculture sector and contribute in all operations related to crop production such as sowing, transplanting, weeding and harvesting, threshing, winnowing, and livestock works like handling of milk production, animal care, fodder cutting etc (Rashidi, 2004). Women participation contributes 25-45% of labor input in rural economy. Women's share in agriculture or agriculture related activities are 69% compared to 38% of men in these activities. Nearly 36-38% of women work on their own family farms (ESCAP, 1997). Women's participation in the labor force has risen from 9.9% in 2001-2002 to 13.5% in 2005-2006 (Saeed et al., 2007).

This study was designed to identify the rural women's participation level at farms in Punjab, Pakistan. The findings of this study would be helpful in providing the existing situation of women's involvement in agricultural activities and revoking their vital role in agro-economy of the country.

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This, in turn, would facilitate the policy makers and the extension workers to make better strategies and policies to bring improvements in women labor force and their contribution towards agricultural production.

MATERIALS AND METHOD

The research was aimed to identify rural women's participation in different agricultural activities especially crop related involvement. For this study district Okara of Punjab province was randomly selected from seven major districts of the province. Okara is populated with 2.23 million people, according to 1998 Population and Housing Census, out of which 1.17 million are males and 1.07 million are females. Okara is 4,377km² with population of 510 persons km², while rural and urban population is 77% and 23% respectively (GoP, 2006). Okara is considered an important city for its agricultural base and particularly famous for its fertile land. Major crops of district Okara are wheat, cotton, rice, maize and sugarcane. Different kind of vegetables are also grown in the district Okara especially potatoes. In addition to this, district Okara is house of a number of agro-based industries e.g. sugar mills, flour mills, textile spinning/weaving mills, rice husking units, cotton ginning/pressing factories, etc.

The sample for this study consisted of 480 rural women. Multi-stage random sampling technique was employed to approach the respondents and collect information. From each Tehsil, eight villages were randomly selected. Twenty farm families were selected from each selected village at random and one woman was further selected randomly from each selected household. So, farm families made a total of 480 respondents for the study. The data was collected through pre-tested interview schedule. The contents of research instrument were tested for its validity and reliability. The statistical package was used to analyze the data.

RESULTS AND DISCUSSION

The data illustrates that most (47%) of the respondents belonged to young age group followed by 40% and 13% of the respondents who fall in middle and old age categories, respectively (Table 1). A study conducted on the need for agricultural extension services for rural women in Faisalabad reported that most (42%) of the respondents were in middle aged group (Sadaf, 2005). The data also show that a vast majority (79%) of the respondents were illiterate. These findings are in consonance with those of Sadaf (2005) and Hassan (2008) who reported that majority (73% and 77%) were illiterate. Literacy remains higher in urban areas (72%) than in rural areas (45%) and more in men (67%) compared to woman i.e. 42% (GoP, 2008).

Four out of five respondents reported that they earned less than Rs.100,000 income annually from farm and other activities. This situation indicates that a large majority of the respondents were finan-

Table 1. Background characteristics of the respondents

Background Characteristics	Frequency (%)
Age (years)	
Up to 30 (young)	227 (47.29)
31-50 (middle)	193 (40.21)
Above 50 (old)	60 (12.50)
Education	
Illiterate	382 (79.58)
Primary	54 (11.25)
Middle	33 (6.88)
Matric	11 (2.29)
Family type	
Nuclear	66 (13.75)
Joint	353 (73.54)
Extended	61 (12.71)
Family income	
Less than 1 lac	388 (80.83)
Up to 1 lac	57 (11.88)
More than 1 lac	35 (7.29)
Family landholding	
<12.5 acre (small)	397 (82.71)
> 12.5-25 acre (medium)	66 (13.75)
Above 25 acre (large)	17 (3.54)
Total	480 (100)

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cially not well off. Majority (83%) of the respondents fall under the category of (small) <12.5 acres of land holding whereas only 3.54% hold large farms, having above 25 acres of land (Table 1).

The joint family system was more common (74%) in the study area. While there was not much difference between the proportion of nuclear and extended family system i.e. 14% and 13% respectively. The

Table 2. Distribution of respondents according to their response regarding participation level of rural women in various crop production

Operation	Always		Rarely		Never		Total	
	f	%	f	%	f	%	f	%
Maize								
Seed sowing	436	90.83	12	2.50	32	6.67	480	100
Granules	409	85.21	55	11.46	16	3.33	480	100
Hoeing	288	60.00	95	19.79	97	20.21	480	100
Fertilizer application	0	0.00	8	1.67	472	98.33	480	100
Harvesting	102	21.25	176	36.67	202	42.08	480	100
Shelling & bagging	389	81.04	83	17.29	8	1.67	480	100
Potato								
Seed sorting	434	90.42	0	0.00	46	9.58	480	100
Sowing	438	91.25	0	0.00	42	8.75	480	100
Hoeing	436	90.83	0	0.00	44	9.17	480	100
Fertilizer application	0	0.00	34	7.08	446	92.92	480	100
Digging	430	89.58	20	4.17	30	6.25	480	100
Rice								
Transplanting	476	99.17	0	0.00	4	0.83	480	100
Weeding	468	97.50	2	0.42	10	2.08	480	100
Harvesting	436	90.83	4	1	40	8.33	480	100
Manual threshing	444	92.50	0	0	36	7.50	480	100
Packing/bagging	464	96.67	0	0	16	3.33	480	100
Wheat								
Cleaning of seed	440	91.67	-	-	40	8.33	480	100
Weeding	438	91.25	-	-	42	8.75	480	100
Harvesting	436	90.83	-	-	44	9.17	480	100
Bundling	448	93.33	-	-	32	6.75	480	100
Sugarcane								
Sowing	410	85.42	41	8.54	29	6.04	480	100
Weeding	418	87.08	10	2.08	52	10.83	480	100
Hoeing	406	84.58	20	4.17	54	11.25	480	100
Sugarcane peeling	448	93.33	15	3.13	17	3.54	480	100
Harvesting & loading	430	89.58	16	3.33	34	7.08	480	100
Vegetable								
Production for domestic use	431	89.79	0	0	49	10.21	480	100
Picking	430	89.58	8	1.67	42	8.75	480	100
Pest management	0	0	10	2.08	470	97.92	480	100

Always = 2, Rarely = 1, Never = 0

above findings were in line with those of Hassan (2008) who reported that more than half (53%) of the respondents were living in joint family system.

Corn Production

In corn production, women were involved in almost all aspects with the exception of land preparation and other mechanized activities. Nine out of ten women reported that they always participate in seed sowing (Table 2). A vast majority was involved in granules (85%), shelling and bagging (81%), and hoeing (60%), respectively.

Fertilizer application to crop was almost being done by men and rarely by women (Table 3). Women participation in corn/maize production was higher in seed sowing with mean score 1.84, and granules (1.82), while it ranks lower in fertilizer application (0.02).

Seed sowing of corn and other crops mostly done by female laborers due to cost and work efficiency. Grower was paying Rs.80 to female and Rs.100-110 to male labor per day on average. Corn is sown on raised bed and for this labor has to bend to place the seed in the bed. Female can do this job more easily as compare to male labor. In maize growing areas almost 95% area was under hybrid corn production. Hybrid corn germination was 98%, which was costly seed, almost Rs. 2500-3500 / bag of 10 kg seed. Drill method has vanished from the area due to the 98% germination and high price of the seeds. So, sowing was done by the female laborers. Normally 3-4 laborers are required for one acre of sowing.

Granule application is done by female due to cost factor. In spade work, male laborers were involved, and in removing weeds female laborers were involved in hoeing. Harvesting was being done by the whole family. Normally male and female labor involved in shelling and bagging. They harvest the crop in the field. In field, labor detaches cobs from plants and places them in the trolley. Trolley is unloaded at shell-

ing floor. There farmer keep the cobs for 6-10 days for drying depending on climatic conditions. After drying they shell the cobs. Shelling is done by female laborers. Female laborers sort out cobs and carry them near the sheller where male help them. Effland (1998), Chase (1988), CTA (1993), Krug (1995) and Shahzad (2004) also reported almost the same findings with little variation.

Table 3. Mean ± S.D. and rank order of participation level of respondents related to various crop production

Operation	Mean ± S.D.	Rank
Maize		
Seed sowing	1.84±0.52	1
Granules	1.82±0.46	2
Shelling & bagging	1.79±0.44	3
Hoeing	1.40±0.80	4
Harvesting	0.79±0.77	5
Fertilizer application	0.02±0.13	6
Potato		
Digging	1.83±0.51	1
Sowing	1.835±0.56	2
Hoeing	1.82±0.58	3
Seed sorting	1.81±0.59	4
Fertilizer application	0.07±0.26	5
Rice		
Transplanting	1.98±0.18	1
Weeding	1.95±0.29	2
Bagging	1.93±0.36	3
Manual threshing	1.85±0.53	4
Harvesting	1.83±0.56	5
Wheat		
Bundling	1.89±0.41	1
Cleaning of seed	1.83±0.55	2
Weeding	1.83±0.57	3
Harvesting	1.82±0.58	4
Sugarcane		
Peeling of sugarcane	1.89±0.40	1
Harvesting & loading	1.83±0.53	2
Sowing	1.79±0.53	3
Weeding	1.76±0.63	4
Hoeing	1.73±0.65	5
Vegetables		
Picking	1.81±0.57	1
Production for domestic use	1.80±0.61	2
Pest management	0.02±0.14	3

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Potato Production

It is indicative from the data that participation of women in potato production ranked higher in seed sowing (91%) followed by hoeing (90.83%) and sorting (90%) (Table 2). In potato production respondents' involvement was higher in digging (1.83) followed by sowing (1.83). While in fertilizer application it seemed less with 0.07 (Table 3).

Rice Production

Data showed that women participation in rice production was higher in transplanting followed by weeding and manual threshing, respectively (Table 2). Data also showed that women participation was higher and ranked 1st in transplanting with mean score 1.98 and at 5th in harvesting (1.83) (Table 3).

Wheat Production

Data indicated that women participation in all operations of wheat production was almost the same i.e. nine out of ten women reported their involvement in cleaning of seeds, weeding, harvesting, and bundling of the wheat in the fields (Table 2). There was a negligible difference among the mean scores and SD (Table 3) of the specific operations of wheat production.

Sugarcane Production

Data classified showed that women participation was high in peeling of sugarcane (93%) followed by harvesting and loading of sugarcane that was 90% (Table 2). On the other hand women participation and involvement ranked first in peeling of sugar cane (Table 3). While the involvement of respondents seemed relatively less in hoeing (1.73), which ranked the lowest.

Vegetable Production

Data showed that nine-tenth of respondents were involved always in vegetable production for domestic use and the same proportion was involved in vegetable

picking (Table 2). Respondent's involvements ranked higher in vegetable picking with 1.81 mean score and ranked least in pest management in vegetables with 0.02 mean score (Table 3).

The study concluded that respondents had lower level of education as they have to share work at farm instead of going to school. The economic condition of women was not well and most of them had hand to mouth subsistence level. The joint family system was much common among women and holding of small farms. The results indicated that nine-tenth of women were involved in agricultural operations at farms and their participation level was higher than their counterparts. Female labor remains busy all the year because potato and corn is the major crop rotation of the district.

The present study provides an existing scenario of women's participation in agricultural operations and future policies should address their vital contribution towards the growth of this sector. Recognition of women's work, allocation of more funds and shifting of resources for village-based trainings can improve women skills in agricultural activities, which ultimately would be a beneficial step for an agro-based country.

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