



RESEARCH PAPER

Analysis of work profile in vegetable production system

Renuka Salunke, Rajeshwari Desai*, Geeta Chitagubbi and Shreedevi Mugalkhod
All India Coordinated Research Project- Family Resource Management, Main Agricultural Research Station,
University of Agricultural Sciences, Dharwad (Karnataka) India
(Email: rajmanohardesaiuas@gmail.com)

Abstract : Vegetable cultivation has become highly commercialized but still there is a wide gap between current production and potential productivity. The present study is an attempt to study the role of women in vegetable production system. Five villages from Dharwad taluka namely Yadawad, Lakmapur, Hebballi, Shivalli and Govinkoppa were selected for the study. The sample size comprised of 50 farm women from the selected villages. The study revealed that majority of the land preparation activities were performed by male gender. The planting/ sowing activities were performed by both male and female. Among weed management activities, spraying of weedicide was performed by only men. On the contrary, hand weeding was performed by only female. Harvesting activities were performed by both male and female gender. The transporting activities performed by male only. On an average the farm women spent 4 to 8 hours on agricultural activities. Majority of them were still following the traditional method and technologies. Hence, there is for introduction of improved/ mechanized agricultural technologies for the farming community to reduce the drudgery and save the labour cost.

Key Words : Vegetable production, Work profile

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INTRODUCTION

Swaminathan, the famous agricultural scientist describes that it was woman who first domesticated crop plants and thereby initiated the art and science of farming. While men went out hunting in search of food, women started gathering seeds from the native flora and began cultivating those of interest from the point of view of food, feed, fodder, fibre and fuel. It is known from early civilization that women were the first agriculturists, while men were out for hunting and tending livestock. Women are responsible for at least 50 per cent of the total food

production of the country (Kapur, 1988). Women often shoulder the increased labour to a greater degree than men (Rebecca and Jutamart, 2002).

Women participation in the family farming system is crucial to the sustenance of rural economy (Kumari, and Laxmikant, 2015). Women have played and continue to play a key role in the conservation of basic life support systems such as land, water, flora and fauna. They have protected the health of the soil through organic recycling and promoted crop security through the maintenance of varietal diversity and genetic resistance. That women play a significant and crucial role in agricultural

* Author for correspondence:

development and allied fields including in the main crop production, livestock production, horticulture, post harvest operations, agro/ social forestry, fisheries, etc. Vegetable cultivation has become highly commercialized but still there is a wide gap between current production and potential productivity.

The nature and extent of women's involvement in vegetable production, no doubt, varies greatly from region to region. Even within a region, their involvement varies widely among different ecological sub-zones, farming systems, castes, classes and stages in the family cycle. But regardless of these variations, there is hardly any activity in agricultural production, except ploughing in which women are not actively involved. Studies on women in agriculture conducted in India and other developing and under developed countries all point to the conclusion that women contribute far more to agricultural and vegetable production than has generally been acknowledged. Recognition of their crucial role in agriculture should not obscure the fact that farm women continue to be concerned with their primary functions as wives, mothers and homemakers. Despite their importance to agricultural and vegetable production, women face severe handicaps. They are in fact, the largest group of landless labourers with little real security in case of break-up of the family owing to death or divorce; inheritance laws and customs discriminate against them land reform and settlement programmes usually give sole title and hence the security needed for obtaining production credits to the husband.

Agricultural development programmes are usually planned by men and aimed at men. Mechanization, for example alleviates the burden of tasks that are traditionally men's responsibility, leaving women's burdens unrelieved or even increased. It may not be out of place to mention here that considering their dual responsibilities within and outside the home, it would be in the fitness of things that more and more in the village training is organized for rural farm women to suit their convenience with due realization that institutional training is important in its own place (Behera and Behera, 2013). In order that farm women get a fair deal at the hands of change agents, one of the remedial measures that needs to be undertaken is to induct a sizeable number of well trained women personnel in training and extension programmes of agricultural development agencies at all levels and more so at the grass-root level. Before imparting any agriculture related training programmes, her role has to

be analysed, hence, the present study was conducted with an objective to study the role of women in vegetable production system.

MATERIAL AND METHODS

Base line survey was conducted to select the villages. Five villages from Dharwad taluka namely Yadawad, Lakmapur, Hebballi, Shivalli and Govinkoppa were selected for the study under AICRP-FRM, Dharwad component. Ten sample from each village were selected which comprised of total 50 farm women. The present study was conducted in purposively selected Dharwad taluka in Karnataka state. Keeping in the view the nature of sample and objectives of the study the secondary information *viz.*, socio - economic characteristics, working pattern, gender participation, technology used and activity analysis in vegetable production was collected through personal interview schedule. The collected data was processed, tabulated and presented in the form of table. Suitable statistical tools was used.

RESULTS AND DISCUSSION

The socio-economic characteristics of the selected sample for the study in vegetable production system is presented in Table 1. It can be observed from the data that maximum per centage of the women selected belonged to the age group of 30-35 years (62.00%) followed by 25-30 years age group (28.00%), 18-25 years (8%) and above age group of 35 years (2.00%). Sixty two per cent of the households belonged to the general caste category followed by OBC (34%) and only four per cent of households belonged to schedule tribe. Regarding, family type 50 per cent of the respondents belonged to nuclear family followed by joint family (44%) and only six per cent of respondents belonged to extended family. Further, 44 per cent of the respondents belonged to small family size (<4 members), followed by 32 per cent belonged to medium family size (5 to 8 members) and 24 per cent of the respondents belonged to large family size (>8 members). Forty eight per cent of the respondents were functionally illiterate and equal per cent of the respondents completed primary (22%) and high school (22%) whereas, only eight per cent of the respondents completed middle school. More than 70 per cent of the respondents had irrigated land and 26 per cent of the respondents had dry land. More than 90 per

cent of the respondents owned their land. Ninety six per cent of the respondents occupation was only agriculture and very less per cent of the respondents occupation was service and agriculture.

Table 2 shows the working pattern of the selected sample for the study in vegetable production system. It can be observed from the data that 46 per cent of the respondents had 3 to 6 years of experience in agriculture followed by upto 3 years of experience (28%), 6 to 9 years of experience (16%). Regarding working hours per day, more than 60 per cent of the respondents worked (upto 4) hours per day whereas, 32 per cent of the

respondents worked 4 to 8 hours per day. Further, more than 60 per cent of the respondents worked 2 to 4 days in a week and equal per cent of the respondents (18%) worked (upto 2) and (4 to 6) days in a week.

Gender participation and technology used in vegetable production system is depicted in Table 3. It can be observed from the data that land preparation activities were male dominated. Among these ploughing activity was solely performed by men. The manure application activity was performed by both gender (84%) participated followed by only male gender (16%), while forming ridges and furrows activity was performed by

Table 1: Socio-economic characteristics of the selected sample for the study in vegetable production system (n=50)

Sr. No.	Variables	Categorization	Frequency	Percentage
1.	Age (Years)	(18 - 25 yrs)	04	08.00
		(25-30 yrs)	14	28.00
		(30-35)	31	62.00
		Above 35	01	2.00
2.	Caste	SC	-	
		ST	02	4.00
		OBC	17	34.00
		General	31	62.00
3.	Marital status	Married	50	100.00
		Un married	-	-
4.	Family type	Nuclear	25	50.00
		Joint	22	44.00
		Extended	03	06.00
5.	Family size	Small (upto 4 members)	22	44.00
		Medium (5 to 8 members)	16	32.00
		Large (above 8 members)	12	24.00
6.	Educational status	Functionally literate	24	48.00
		Primary	11	22.00
		Middle	4	08.00
		High school	11	22.00
		Graduate	-	
		Post graduate	-	
7.	Land holding	Small (2-5Acre)	33	66.00
		Medium(5-10Acre)	09	18.00
		Large(>10Acre)	24	48.00
8.	Nature of land	Irrigated	37	74.00
		Dry land	13	26.00
9.	Possession of land	Own	48	96.00
		Lease	02	4.00
10.	Occupation of the family	Agricultural only	48	96.00
		Service +agriculture	02	04.00

male gender (72%) followed by both gender (28%).

In planting/sowing activity, both gender (98%) participated. Only 2 per cent female gender participated in this activity. Among different weed management activities, cent per cent of the male gender participated in spraying weedicide activity. Only female gender (98%) participated in hand weeding activity. Further the results revealed that cent per cent of both gender participated in fertilizer application activity. Only male gender (100%)

participated in irrigation activity.

Regarding harvesting activities, the male gender (56%) participated in cutting activity followed by both gender (42%). Whereas, male gender (66%) participated in sorting activity and followed by both gender (32%). The cleaning activity was female dominated (74%).

The transporting activities *viz.*, carrying and loading were performed only by male gender.

Regarding technology used, majority of the activities

Sr. No.	Particulars	Category	F	%
1.	No. of experience in agricultural activity	0-3	14	28.00
		3-6	23	46.00
		6-9	8	16.00
		9-12	1	2.00
		12-15	4	8.00
		Above15	-	-
2.	Working hours per day	0-4	34	68.00
		4-8	16	32.00
		8-12	-	-
		Above15	-	-
3.	No. of working days in week	0-2	9	18.00
		2-4	32	64.00
		4-6	9	18.00
		7 days	-	-

Sr. No.	Farm activities	Gender participation			Technology used	Duration in each season (hours/ minutes)
		Male	Female	Both		
1.	Land preparation					
	Ploughing	50.00 (100.00)	-	-	Hand ploughing, tractors	5.05
	Manure application	8.00 (16.00)	-	42.00 (84.00)	Manual, fertilizer trolley	5.12
	Forming ridges and furrows	36.00 (72.00)	-	14.00 (28.00)	Manual	5.84
2.	Planting/Sowing	-	1.00 (2.00)	49.00 (98.00)	Manual	7.50
3.	Weed management					
	Spraying weedicide	50.00 (100.00)	-	-	Hand sprayer	4.94
	Hand weeding	-	50.00 (100)	-	Krupi	7.26
4.	Fertilizer application	-	-	50.00 (100)	Manual	5.52
5.	Irrigation	50.00 (100.00)	-	-	Manual	5.04
6.	Harvesting					
	Cutting	28.00 (56.00)	1(2.00)	21 (42.00)	Manual	5.42
	Sorting	33.00 (66.00)	1(2.00)	16 (32.00)	Manual	4.54
	Cleaning	12 (24.00)	1(2.00)	37.00 (74.00)	Manual	4.58
7.	Transporting					
	Carrying	50.00 (100.00)	-	-	Manual	4.96
	Loading	50.00 (100.00)	-	-	Manual	4.48

were performed manually, whereas tractor was used for ploughing activity, fertilizer trolley was used for manure application, hand sprayer was used for spraying weedicide, kurpi was used for hand weeding.

The mean score calculated for the duration in each season revealed that maximum duration was spent on planting/sowing activity with 7 hours and 50 minutes followed by hand weeding activity with 7 hours and 26 minutes and very less time was taken for loading activity with 4 hours and 48 minutes.

Chawhan and Oberoi (1990) in their study found that participation of women was observed in almost all farm activities except ploughing of fields, marketing of grains, irrigation and application of pesticides and fungicides. These findings find some similarity with the present study, where women participation was not observed in irrigation and transport activities. The similar results were also found by Panghal *et al.* (1999) which revealed that there was no participation of women in irrigation and ploughing operations in all zones of Haryana and almost in all the crops.

Table 4 reveals the activity analysis of duration/time in vegetable production system. As per the mean score calculated for the time spent in each season, maximum duration was taken for planting/sowing activity with 7 hrs and 50 min followed by hand weeding activity with 7

hrs and 26 min and very less time was taken for loading activity with 4 hrs and 48 min. Regarding number of days maximum days was taken for weeding activity with mean score of 2.26 followed by hand weeding (2.16), irrigation (1.98), cutting (1.98) and equal days was taken for the ploughing (1.50), fertilizer application (1.50) and carrying activity (1.50). With respect to number of labour employed for the farm activity as per the mean score calculated maximum number of the laborers were employed for hand weeding activity (4.16) followed by planting/sowing (4.14), weeding activity (4.1), cutting activity (3.24) and very less laborers were employed for irrigation activity (2.0). Similar work related to the present investigation was also carried out by Kapur (1991).

Conclusion:

Women have played and continue to play a key role in the conservation of basic life support systems such as land, water, flora and fauna. It can be observed from the study that women role is very important in performing agricultural activities especially in vegetable production system. The female participation was found more prominent in manure application, sowing of seed, transplanting, hoeing and weeding, vegetable harvesting and processing activities and majority of them were still following the traditional method and technologies. Hence,

Sr. No.	Farm activities	Hours/day	Number of days	Number of labour employed	Number of man days	Workload as per time
1.	Land preparation					
	Ploughing	5.05	1.50	1.58	2.31	1.64
	Manure application	5.12	1.62	2.34	2.49	1.94
	Forming ridges and furrows	5.84	1.9	3.02	4.21	2.88
2.	Planting/Sowing	7.50	1.92	4.14	7.30	2.94
3.	Weed management					
	Spraying weedicide	4.94	1.94	2.44	3.25	2.06
	Hand weeding	7.26	2.16	4.16	8.05	2.96
4.	Fertilizer application	5.52	1.5	2.28	2.63	1.78
5.	Irrigation	5.04	1.98	2.04	2.67	2.04
6.	Weeding	7.01	2.26	4.1	8.01	2.52
7.	Harvesting					
	Cutting	5.42	1.98	3.24	4.10	2.20
	Sorting	4.54	1.82	2.94	3.26	2.14
	Cleaning	4.58	1.9	2.92	3.58	2.36
8.	Transporting					
	Carrying	4.96	1.5	2.24	2.27	1.86
	Loading	4.48	1.46	2.18	2.06	1.70

there is for introduction of improved/ mechanized agricultural technologies for the farming community to reduce the drudgery and save the labour cost.

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