

## Adoption of sustainable agricultural practices by women farmers

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### ABSTRACT

The study was executed during 2006-09 to find out the adoption of sustainable agricultural practices by 270 women farmers of Dharwad, Belgaum and Haveri districts of Karnataka state. Women farmers from Belgaum district were found to be progressive in adoption of sustainable agricultural practices followed by Dharwad and Haveri districts. On an average, 65 per cent of women farmers adopted more than one type of selected agricultural practices. Practices related to organic farming, integrated nutrient management, integrated pest management and water conservation practices were found to be positive and significantly related to training programmes undergone and adoption of agricultural practices, indicating the resultant impact of need based intensive training programmes. A conversely non-significant relationship was revealed with respect to agro-forestry, land resource and natural farming in selected research area.

## INTRODUCTION

Women are a vital part of Indian economy. Over the years, there is a gradual realization of the key role of women in agricultural development and their vital contribution in the field of agriculture and allied sectors. In past years, more and more women are taking active participation in agriculture and allied sector, due to the more seasonal migration of men search of better paid jobs in urban areas. Men impose extra burden on women and for this reason women are becoming farmers and managers.

Indian agriculture need to be reinforced with latest and sustainable agricultural technologies to have sustainable production. To meet growing needs sustainability is to be maintained (Yadhav *et al.*, 2000). To produce more and maintain sustainability in agriculture, it emphasizes reduced chemical use, the view of world as global village, respect for nature, family and group self reliance (D'Souze and Gebremedhin, 1998). It integrates three goals mainly environmental health, economic profitability and social and economic equity (Pykh

and Pykh, 2003). There is need to study the role of women in management of sustainable agriculture, adoption of new technologies and assessment of training programme which help in improving their agricultural productivity and production and maintain the sustainability by the women farmers in their forming system. Hence, present study was undertaken with the objectives to analyze the adoption of sustainable agriculture practices by the women farmers and to study the impact of training programmes on sustainable agriculture.

## METHODS

The study was executed during 2006-09 to find out the adoption of sustainable agricultural practices by the women farmers. A total of 270 women farmers were selected in the three districts of Karnataka, from each districts 90 women farmers were selected for the study. A structural interview schedule is used to collect the information such as demographic profile, sustainable and agricultural practices adopted by the women farmers of the selected districts. Eight

different sustainable practices commonly used in agriculture were selected to assess the adoption. Correlation is used to know the relation between the sustainable agricultural practice and trainings undergone by the women formers. Chi-square test was used to study the difference between the districts in adoption of sustainable agricultural practices of northern Karnataka. Correction is used to know the relationship between the independent variable and the adoption of sustainable agricultural practices by the women farmers.

## OBSERVATIONS AND ANALYSIS

Table 1 represents the demographic characteristics of the women farmers selected for the study from three districts. It is clear from the total sample that majority of the women farmers were illiterates (39.25%) and more than 90.00 per cent of them were married from the selected districts. Farm women were agriculturist (74.08%) in owned land and their husband's occupation was also noticed as agriculture (66.29%). More than 80.00 per cent of women farmer's families have nuclear type (83.33%). Majority of the women farmers from the selected

Sr. No.	Variables	Dharwad (n=90)		Belgaum (n=90)		Haveri (n=90)		Total (n=270)	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1.	<b>Educational level</b>								
	Illiterate	32	35.56	26	28.89	48	53.33	106	39.25
	Can read and write	23	25.56	16	17.78	4	4.45	43	15.93
	Primary School	16	17.78	20	22.22	14	15.56	50	18.52
	Middle School	13	14.43	17	18.89	12	13.33	42	15.56
	Matriculate	5	5.56	11	12.22	10	11.11	26	9.63
	College	1	1.11	-	0	2	2.22	3	1.11
2.	<b>Marital status</b>								
	Unmarried	5	5.56	3	3.33	-	-	8	2.96
	Married	81	90	85	94.45	79	87.78	245	90.75
	Separated	-	-	-	-	3	3.33	3	1.11
	Divorce	-	-	-	-	2	2.22	2	0.74
	Widow	4	4.44	2	2.22	6	6.67	12	4.44
3.	<b>Age of the respondent</b>								
	Young (<30 yrs)	31	34.62	39	43.48	24	26.32	94	34.83
	Middle (30 to 40 yrs)	31	34.62	35	39.13	39	43.16	105	38.88
	Elderly (> 40 yrs)	28	30.76	16	17.39	27	30.52	71	26.29
4.	<b>Occupation of the respondents</b>								
	Agriculturist (Leased land)	16	17.78	13	14.44	2	2.22	31	11.48
	Self farmer	12	13.33	4	4.44	23	25.56	39	14.44
	Agriculturist (own land)	62	68.89	73	81.12	65	72.22	200	74.08
5.	<b>Husband's occupation</b>								
	Agriculture	57	63.33	54	60.00	68	75.55	179	66.29
	Agriculture labour	-	-	-	-	-	-	-	-
	Business	7	7.78	22	24.44	3	3.33	32	11.85
	Government employee	12	13.33	-	-	2	2.22	14	5.18
	Others	5	5.56	9	10	6	6.67	20	7.40
6.	<b>Type of family</b>								
	Nuclear	74	82.22	82	91.11	69	76.67	225	83.33
	Joint	16	17.78	8	8.89	19	21.11	43	15.93
	Extended	-	-	-	-	2	2.22	2	0.74
7.	<b>Farming experience (years)</b>								
	Less than 10	18	19.61	16	17.39	6	6.59	40	14.81
	10 to 20	49	54.90	43	47.83	31	34.07	123	45.55
	More than > 20	23	25.49	31	34.78	53	59.34	107	39.64

districts fell in the middle age group (30 to 40 years). More than 45.00 per cent of the women farmers have farming experience of 10 to 20 years in the selected districts of Karnataka.

Results obtained on the adoption of sustainable Agricultural practices by women farmers in presented is Table 2. Each item of sustainable practice includes many activities concerned to it. More number of women farmers (66 out 90) in Belgaum adopted sustainable agricultural practices followed by women farmers in Dharwad (50 out of 90) and least was with Haveri district women farmers. The district wise data revealed that land resource management practices noticed the index score of more than 70 in Dharwad and Belgaum districts and in Haveri, it was 50.74. Adoption of organic farming practices

was next best sustainable agricultural practice followed by women farmers of all the three districts. Edwards (1988) stated that integrating various practices like use of organics, animal and agricultural wastes helps in maximizing benefits in sustainable agricultural systems. Another study indicated that organic farming encourages nutrient recycling and enhances crop yield (Anonymous, 1996). In organic farming also Belgaum women farmers stood first followed by Dharwad and Haveri Districts. Integrated nutrient management, integrated pest management and agro-forestry system practices were next best sustainable agricultural practices adopted by women farmers of all the three districts. In all these cases, Belgaum women farmers were first followed by Dharwad and Haveri. Natural farming, water conservation and integrated farming

Sr. No.	Sustainable agricultural practices	Adoption of sustainable agricultural practices index				X <sup>2</sup>
		Dharwad (n=90)	Belgaum (n=90)	Haveri (n=90)	Total (N=270)	
1.	Land resource management	71.73	77.41	50.74	66.63	5.33
2.	Organic farming	58.25	70.79	56.83	61.96	1.71
3.	Integrated farming	33.33	47.68	17.56	32.89	12.43**
4.	Natural farming	41.11	58.20	31.18	43.55	7.73*
5.	Integrated nutrient management	55.68	62.96	46.17	54.94	2.32
6.	Integrated pest management	52.72	64.94	42.35	53.04	4.32
7.	Agro forestry	51.11	95.56	12.44	53.11	58.71**
8.	Water conservation	32.44	48.56	21.00	34.00	10.15**

Sr. No.	Sustainable agricultural practices	Correlation
1.	Land resource management	0.09 NS
2.	Organic farming	0.78**
3.	Integrated farming	0.73**
4.	Natural farming	0.18 NS
5.	Integrated nutrient management	0.62**
6.	Integrated pest management	0.69**
7.	Agro forestry	0.22 NS
8.	Water conservation	0.43**

\* and \*\* indicate significance of values at P=0.05 and 0.01, respectively NS=Non-significant

Sr. No.	Sustainable agricultural practices	Income	Land holding	Age	Education	Farming experience
1.	Land resource management	0.18	0.66**	0.23	0.31*	0.65**
2.	Organic farming	0.48**	0.59**	0.37**	0.67**	0.58**
3.	Integrated farming	0.57**	0.48**	0.41**	0.58**	0.18
4.	Natural farming	0.21 NS	0.06 NS	0.19	0.17	0.21
5.	Integrated nutrient management	0.09 NS	0.14 NS	0.15	0.72**	0.49**
6.	Integrated pest management	0.24 NS	0.17 NS	0.04	0.69**	0.43**
7.	Agro forestry	0.17 NS	0.25 NS	0.16	0.14	0.17
8.	Water conservation	0.53**	0.44**	0.12	0.55**	0.55**

\* and \*\* indicate significance of values at P=0.05 and 0.01, respectively NS=Non-significant

practices were followed by small number of women farmers in all the three districts.

Table 3 reveals the correlation between sustainable agricultural practices and training undergone by the respondents. As per the table, organic farming, integrated farming, integrated nutrient management, integrated pest management and water conservation practices were significantly related with training undergone by the respondents but found non-significant relationship with land resources, natural farming and agro forestry.

Correlation between sustainable agricultural practices and training is presented in Table 4. Organic farming was positively related with all the independent variables such as income, land holding age, education and farming experience. Integrated farming was positively related with income, landholding, age and education. Land resources found relationship with landholding, education and farming experience but found no relationship between natural farming and agro forestry with all the independent variables. Integrated nutrient management and integrated pest management practices were positively related with education and farming experience but found no relationship with income, landholding and age. Water conservation was significantly related with income, landholding, education and farming experience and no relationship was found with age.

### Conclusion:

Results indicate that there is a need to create still more awareness with women farmers on the adoption of sustainable agricultural practices to improve the production and productivity through suitable training programmes and demonstrations.

### REFERENCES

- Anonymous (1996). Manual of orientation course on enter-preneurship development in Agriculture, held from Dec. 17-31, 1996, IARI, New Delhi (INDIA).
- D'Souza, G.E. and Gebremedhin, T.G (1998). Sustainable in agricultural and rural development. Aldershot, U.K. and Brookfield, V.T., USA Ashgate Publishing Co., 245 pp.
- Edwards, C.A. (1988). Agriculture ecosystem environment. Proceedings of International Symposium at Padora. Italy, 25-35 pp.
- Pykh, Malkina, J.G. and Pykh, Y.A. (2003). Sustainable food and agriculture WIT Press, Southampton, Boston, UNITED KINGDOM.
- Yadhav, R.C., Dwivedi, B.S. and Pandey P.S. (2000). Rice crossing system assessment of sustainability under green manuring and chemical fertilizer inputs. *Field Crops Abstracts*, **65** : 15-30.

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