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Research Article

Impact of Training and Development of Farm Women Groups in Tamil Nadu

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ABSTRACT

In agricultural-dependent countries, extension programmes have been the main conduit for disseminating information on farm technologies and assist farmers in developing their farm technical and managerial skills. Farmers already have a lot of knowledge about their environment and their farming system extension can bring them other knowledge and information which they do not have. Major international agencies such as the UN and the World Bank have realized that these technologies have to address to the needs of not only the male farmer in perspective but also incorporate the requirements and adaptability of women in the farm sector. This study focus on impact of farm women groups by doing extension services. The sampling design followed was simple random sampling. Totally a sample of 240 Farm women were to be interviewed, 180 from member of Farm Women Group (FWG) and 60 from Non-member Farm Women. The result showed that certain characteristics such as personal characters of farmers, influential characters of trainers and other socio-cultural factors also playing a greater role in influencing technology adoption by farmers were analysed. About 60-80 % each of the women farmers identifies technical skill, attitude towards change, attitude towards taking risk, farmers exposure were important influential factor than educational level, income and years of farming experience. Moreover, government policy and weather condition respectively as factors influencing adoption of improved farm practices among women farmers.

Keywords: *Farm women groups, Training, Impact on farm practices.*

INTRODUCTION

Extension is a primary tool for making agriculture, its related activities as well as other economic activities more effective and efficient to meet the needs of the people Agricultural extension is aimed primarily at improving the knowledge of farmers for rural development; as such, it has been recognized as a critical component for technology transfer (Bonye et al., 2012). Gender has proven to be an essential variable for analysing the roles, responsibilities, constraints, opportunities, incentives, costs, and benefits in agriculture.

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Extension education adopts in formal ways of empowering the rural farmers to enable them identify their problems and solve the problems in their own way, using their local resources with slight scientific modifications (Abu-Mus'ab, 2009). Extension increases farm yields and improve the standard of living of farmers (Hemu, 2010). Agriculture is the single largest production endeavor in India which is increasingly becoming a Female Activity that contributes about 18 per cent of GDP. Agriculture sector employs 4/5th of all economically active women in the country where 48 per cent of India's self-employed farmers are women. There are 75 million women engaged in dairying as against 15 million men and 20 million in animal husbandry as compared to 1.5 million men.

Trained women farmers were encouraged to establish women's groups in their villages to share their knowledge and experiences with others to address the relevance, effectiveness, efficiency and sustainability of farm women group. Share of farm women in agricultural operations like land preparation is 32%, seed cleaning and sowing (80%), inter cultivation activities 86 % and harvesting-reaping, winnowing, drying, cleaning and storage (84%) (FAO). It is realized that, in order to raise the agricultural output and productivity on a sustainable basis in the developing countries, large scale adoption of new technologies is very essential. Women are involved in all aspects of agriculture, from crop selection to land preparation, sowing, planting, weeding, pest control, harvesting, crop storage, handling, marketing, and processing (Fabiyi et al., 2007).

From 1998 onwards, the most important innovation had been the formation of Farm Women Groups (FWGs), a total of around 1500 groups, generally consisting of 15 to 20 farm women, some trained, some not. These groups had gradually evolved into Self-Help Groups (SHGs). They were given one day's training in group formation as well as specialised training in both agriculture and other income-generating activities. In this context, the objective is to assess the level of agricultural training and extension activities targeted at women for promoting adoption of technologies and to test its cost efficiency and sustainability.

METERIALS AND METHODS

The sampling design followed was simple random sampling .From each selected district, taluk and revenue villages a list of farm women group details had been prepared after consulting agricultural officials, panchayat authorities, peoples' representatives. In the first stage, based on cropping intensity, the districts shown in Table 1 were selected.

Table 1: Selection of Sample Respondents

S.No	District	Member of Farm Women Group	Farm Women	Total
1	Coimbatore	30	10	40
2	Erode	30	10	40
3	Thanjavur	30	10	40
4	Ramanathapuram	30	10	40
5	Thiruvannamalai	30	10	40
	Villupuram	30	10	40
	Grand Total	**180**	**60**	**240**

From each district, 30 members of farm women group and 10 non members of farm women group were selected randomly to assess the technology adoption and the productivity changes. Totally a sample of 240 Farm women were to be interviewed, 180 from member of Farm Women Group (FWG) and 60 from Non-member Farm Women. The study had been completed during 2015. Primary data has been collected using structured questionnaire through interview schedule method. Secondary data details have been collected from Agriculture Department, Commissioner of Agriculture, Tamil Nadu and

Joint Director of Agriculture, Coimbatore, Tamil Nadu.

RESULTS AND DISCUSSION

1) Demographic details of the sample respondents.

The demographic details of the sample respondents are shown below:

Table 2: General Profile of Sample Farmers

S.No	Category	FWG		FW	
		Number	Percentage	Number	Percentage
1	**Age Distribution (years)**				
	< 35	47	26.11	10	16.67
	35-45	110	61.11	38	63.33
	46-60	21	11.67	12	20.00
	>60	2	1.11	0	0.00
2	**Educational Status**				
	Illiterate	0	0.00	1	1.67
	Primary	23	12.78	17	28.33
	High school	62	34.44	15	25.00
	Secondary	66	36.67	17	28.33
	Degree	29	16.11	10	16.67
3	**Family Size (no)**				
a.	Up to 3	34	18.89	6	10.00
b.	4 – 6	134	74.44	49	81.67
c.	>6	12	6.67	5	8.33
	Family type				
a.	Nuclear	125	69.44	35	58.33
b.	Joint	55	30.56	25	41.67
4	**Farming Experience (years)**				
a.	<10	106	58.89	31	51.67
b.	11 to 25	60	33.33	27	45.00
c.	>25	14	7.78	2	3.33
	Occupational Status (in numbers)				
a.	Agriculture as primary occupation	150	83.33	49	81.67
b.	Agriculture as secondary occupation	30	16.67	11	18.33

*Figures in parenthesis indicate per cent to the total

It could be inferred from the Table 2, that one-fourth of sample women respondents were aged less than 35 years in the category FWG and the corresponding figure is 17 percent in FW. Two-third of them was in more than thirty five years i.e. economically active population. In both the groups, the 35-45 age group was highest. Education status shows that all are literates irrespective of the Farm Group category and Non-Group category. Farming Experience 50 % was having less than 10 years. Remaining 33- 45 percent of them were having less than 25 years. Almost 80 percent of women's main occupation is agriculture only.

2) Farm Size of the sample respondents

The farm size sample farms are reported in Table 3.

Table 3: Farm Size details of the sample respondents

S.No	Category	FWG			FW		
		Mean	Number	Percent	Mean	Number	Percent
1	< 2.5 acres (Marginal)	1.2	71	39.44	2.21	29	48.33
2	2.51 to 5.00 (Small)	2.91	80	44.44	4.52	24	40.00
3	5.01 to 10.00 (Medium)	5.14	25	13.88	8.23	6	10.00
4	> 10 acres (Big)	10.32	4	2.22	15.25	1	1.67
	Total		**180**	**100.00**		**60**	**100.00**

It could be inferred from the Table 3, there is not much difference between study groups is noted in farm size excepting medium size holding.

3) Annual income of the sample respondents

Annual income was computed for the sample farms (Table 4) and it is found that after the training, income of member group increased significantly.

Table 4: Distribution of Farmers according to Income

S.No	Family Income (Rs/Annum)	FWG		FW
		Before	After	
1	< 60000 (Low Income)	48 (26.67)	25 (13.80)	19 (31.67)
2	60000-120000 (Middle Income)	48 (26.67)	49 (27.22)	15 (25.00)
3	120000-240000 (High Income)	41 (22.78)	53 (29.44)	10 (16.67)
4	>240000 (Very High Income)	43 (23.89)	55 (30.55)	16 (26.67)
	Total	**180 (100.00)**	**180 (100.00)**	**60 (100.00)**

*Figures in parenthesis indicate percent to the total

The percent of families with below Rs. 60,000 per annum was 27 percent before the training and it declined to 14 percent after the training. This is primarily due to adoption of improved technologies. In non-member category, below Rs. 60,000 families are 32 percent clearly showing the impact of technology adoption.

4) Source of information about farming practices.

The source of information on new farming practices for crop farmers are presented in Table 5.

Table 5: Source of Information on New Farming Practices

Particulars	FWG	FW
TNAU	23 (38.33)	4 (46.67)
Agrl. Department	55 (91.67)	5 (16.67)
Private company	11 (18.33)	10 (33.33)
Neighbour	20 (33.33)	13 (43.33)
Source of seeds		
Self	57 (95.00)	28 (93.33)
Neighbour farmers	3 (5.00)	2(6.6)

(Figures in parentheses indicate the per cent to total)

In case of Member farmers, nearly 92 per cent of households reported that Agricultural Department was the major source of information on the new technologies followed by TNAU and neighbour farmers. However, in case of non-member farmers, Agricultural Department (46.67 per cent) and neighboring farmers (43.33 per cent) were the major sources of information on new farming practices. Regarding the source of seeds with respect to agricultural crops, majority of them had their own seed production which ranged from 93 to 95 percent.

5) Impact of farm training among FWG members

Formation of SHGs of the trained women has resulted is inculcating the saving habit. They are able to mobilize funds to meet their requirements for agriculture and other needs without being dependent on the money lenders and others.

Table 6: Impact of Training in Farming and SHG Functions on Select Socio-economic Activities of FWG Members

Sl.No	Particulars	Socio economic activities		
		Increased	**No Change**	**Decreased**
	I. On farm			
1	Adoption of improved agricultural practices	166 (92.22)	14 (7.78)	0 (0.00)
2	Purchase of additional landfor cultivation	13 (7.22)	67 (37.22)	100 (55.55)
3	Leased in lands for cultivation	22 (12.22)	158 (87.77)	0 (0.00)
4	Leased out land for cultivation	13 (7.22)	67 (37.22)	100 (55.55)
5	Purchase of new implements	29 (16.11)	151 (83.39)	0 (0.00)
6	Purchase new tractor	5 (22.78)	175 (77.22)	0 (0.00)
7	Purchase of livestock	38 (21.11)	142 (78.89)	0 (0.00)
	II. Material Changes			
1	Purchase of new utensils	26 (14.44)	154 (85.56)	0 (0.00)
2	Purchase of household appliances	19 (10.56)	161 (89.44)	0 (0.00)
3	Purchase of new jewels	32 (17.78)	148 (82.22)	0 (0.00)
4	Purchase of new vehicles	24 (13.33)	156 (86.67)	0 (0.00)
5	Purchase of radio/T.V/Telephone	23 (12.78)	156 (86.67)	0 (0.00)
	III. Personnel Changes			
1	Providing education to children	22 (12.22)	158 (87.78)	0 (0.00)
2	Healthcare	51 (28.33)	129 (71.67)	0 (0.00)
3	Nutritious food consumption	44 (24.44)	136 (75.56)	0 (0.00)
4	Expenditure on religious ceremonies	42 (23.33)	138 (76.67)	0 (0.00)
	IV. Economic Changes			
1	Repayment of old loans	104 (57.78)	76 (42.22)	
2	Savings /deposits	139 (77.22)	39 (21.67)	2 (1.11)
3	Investment on other enterprises	33 (18.33)	146 (81.11)	1 (0.56)
4	Income	164 (91.11)	16 (8.88)	1 (0.56)
	V. Home Changes			
1	Purchase of new house	6 (3.33)	174 (96.6)	0 (0.00)
2	Modification of existing house	33 (18.33)	147 (81.67)	0 (0.00)
	VI. Social Changes			
1	Relationship developed with extension worker	121 (67.22)	59 (32.78)	0 (0.00)
2	Organizational participation	133 (73.89)	33 (18.33)	14 (7.78)
3	Consultant role for many farm women	61 (33.89)	110 (61.11)	9 (5.00)
4	Emergence as local leader	43 (23.88)	137 (76.11)	0 (0.00)
5	Increase of outside contact	131 (72.78)	49 (27.22)	0 (0.00)
6	Change in mass media exposure (Radio/TV/Farm Publication)	68 (37.77)	112 (62.22)	0 (0.00)
7	Development of 'We' Feeling	143 (79.44)	37 (20.56)	0 (0.00)
8	Group cohesiveness	98 (54.44)	82 (45.56)	0 (0.00)
9	Participation in decision making	177 (98.33)	3 (1.67)	0 (0.00)

As a group, they have got involved in several income generating activities, further improving their economic condition. This has enabled some of them to acquire farm assets to some extent. Group cohesiveness has improved thus creating more of 'WE' feeling. Exposure to mass media was expressed by about 54 percent of members.

6) Sustainability of Farm Women Groups

Members of these groups started to grow new crops in more area compared to previous periods and also they were able to manage risks due to drought through technology they trained. Nearly 50 % of farm women groups reported positive changes in economic and social aspects while observing indicators. 70% of women groups observed no changes in enrollment in education. But drugs and tobacco use almost stopped after joining groups. They started using the available time very effectively. General awareness about political, social aspects had been increased because of mobility and meeting other people.

Table 7: Sustainability indicators after training

Sl.No	Sustainability indicators	Increase	Decrease	No Change
I	**Economic Indicators**			
1	Getting employment regularly	82 (45.56)	28 (15.56)	70 (38.89)
2	Wages/day	120 (66.67)	9 (5.00)	11 (6.11)
II	**Social Indicators**			
1	General awareness	159 (88.33)	12 (6.67)	9 (5.00)
2	Enrollment in education	46 (25.56)	9 (5.00)	125 (69.44)
3	Efficient utilization of available time	123 (68.33)	12 (6.67)	45 (25.00)
4	Use of tobacco	0 (0.00)	166 (92.22)	14 (7.78)
III	**Environmental Indicators**			
1	Capacity to withstand (to grow crop even when there is drought)	87 (48.33)	24 (13.33)	69 (38.33)
2	Change in cropping area	118 (65.56)	21 (11.67)	41 (22.78)

7) Respondents Opinion on Trainings regarding Technology

Respondent's opinion about this kind of training on technology was collected and given in Table 8. Reason to go for this training is motivation given by **TANWABE** Agricultural officers and through department of agriculture only they came to know about that training. Duration of the training programme is sufficient to learn the technology**.** Class room training combined with Field demonstration is much useful for them compared with other methods. Majority of women not prefer to going for adoption immediately. After training, they used to discuss informally with friends and relatives and disseminate the technology.

Table 8: Respondents opinion on Trainings

Category	Number	Percentage
Motivation to join and attend training programme		
Female extension officer	154	85.56
Husband	24	13.33
Other trained farm women	2	1.11
Duration of the training programme is sufficient to learn the technology		
Sufficient	134	74.44

Too short	41	22.78
Too long	5	2.78
Extension method used in imparting training the technology		
Class room training	27	15.00
Field demonstration	12	6.67
Class room and field demonstrations combined	141	78.33
Preferred time to adopt a new technology		
Immediately after training	37	20.56
After seeing other farmers doing it successfully	49	27.22
I prefer to wait and take my own time until I convinced	94	52.22
Information regarding Training / Meeting		
Print and Media	3	1.67
Agricultural Department	168	93.33
Other fellow farmers already trained	9	5.00
Person you disseminate the information regarding Training you know		
Farmer friends	64	35.56
Family members working in my farms	82	45.56
Relatives	19	10.56
Neighboring farmers	12	6.67
To those who ask for it	3	1.67
Frequency of passing on the information regarding Training to others		
Regularly	118	65.56
Rarely	59	32.78
Never	3	1.67
Mode of disseminate the information regarding Training to others		
Personal contact	27	15.00
Group discussion	59	32.78
Phone	94	52.22
Meeting other people other than the field		
Total	**180**	**100.00**

It is interesting to note that 90% of the women reported that they had no prior knowledge of the methods taught during the programme. 74.4% of the women reported that the duration of the main training was sufficient. 73% of the women reported that they were consulted about what they wanted to learn. It is also interesting to note that 68% of the women reported that the adoption of the methods did not involve more work for them. 61% of the women reported that they attended the training in their own village.

8) Impact of training on agricultural practices

Training about agricultural practices followed generally by respondents after training were given in Table 10. Several other changes were also reported in the cost of cultivation, use of chemical fertilizer, use of farm yard manure and use of labour.

Table 9: Changes in agricultural practices after training (per cent)

S.No	Parameter	Increased	Decreased	Same	No response	Total
1	Change in cost of cultivation	18	73	1	8	100
2	Use of chemical fertilizer	10	72	0	18	100
3	Use of enriched farm yard manure	84	4	1	7	100
4	Use of implements and machinery	28	0	62	10	100
5	Informed marketing decisions	65	0	21	14	100

Regarding the changes in the cost of cultivation after training more than 73% of the respondents have reported that the cost has come down while only 18% have reported the cost has gone up. Of those who reported that cost of cultivation has gone up, 48% have reported that it has gone up by 10%-25%, 37% by less than 10%. Similarly reduction of costs has been 10%-25% for 43%, less than 10% for 39%. Over 70 % of the women, after training, report that the use of chemical fertiliser has gone down. Correspondingly, over 80% of the women have reported that use of farm yard manure has gone up after the training. Another significant trend is that over 60% of the women have reported the use of labour has gone down. This is because less weeding requires to be done due to proper seed selection and seed treatment methods adopted. Labour being expensive, the saving in this aspect has reduced the cost of cultivation significantly.

CONCLUSION

Prior to training the women were just following the traditional methods practiced by the elders. They reported that the methods taught like seed selection, seed treatment, line sowing, compost making, preparation and use of organic pesticides were new to them and relevant as they were low cost or no cost. They were also perceived to be environment friendly, good for the land and for the health. Training in other agricultural related activities like horticulture, flower gardening, animal husbandry was perceived to be relevant. Training in other income generating activities like candle making, making detergents, phenyl, shampoo etc. were found to be useful and relevant for keeping them occupied in lean agricultural periods. Besides the training on modern farming practices, training provided in the formation and running of SHGs was found to be inculcating the saving habit and making them economically independent.

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