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Socio-economic Empowerment of Farmwomen in Madhya Pradesh Through Suitable Technological Interventions: A Krishi Vigyan Kendra (KVK) Approach

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ABSTRACT

Women are the backbone of an agricultural workforce and do the most tedious and back-breaking tasks in agriculture, animal husbandry and homes but her hard work has mostly been unpaid and unrecognized worldwide. With this backdrop, there is a need for social and economic empowerment of women. Indian Council of Agricultural Research (ICAR) established a vast network of 575 KVKs with provision of one home scientist in each KVK for conducting the mandated activities like On Farm Trials (OFTs), Front Line Demonstrations (FLDs) and Training, with special focus on farm women to increase their knowledge, enhance their skill and change their attitude and for the overall improvement of farm women. Zonal Project Directorate, Zone VII comprising 93 KVKs spread over Madhya Pradesh, Chhattisgarh and Odisha. In Madhya Pradesh (M.P.) there are 47 KVKs with 28 Home Scientists working in the field of women in agriculture for the upliftment of status of farm women. A technological module was developed and popularized for proper working of home scientists and to overcome the problems of farm women which contain status of farm women, problems of farm women, institutional arrangements, case studies, outcomes of the activities, problem inventory and process for the development of modules in terms of technology assessment, refinement and demonstration of technology/ product/ methodology and capacity building of farm women. On this basis, we identified 48 problems of farm women related to low income, drudgery reduction, nutritional security and value addition. Further, to solve above problems we conducted 32 OFTs, 30 FLDs and 278 trainings in Madhya Pradesh. All these interventions resulted in adoption of 45%, 68%, and 85%,which resulted in increases of 20-25% additional income. Therefore, if the module used properly, it will surely help in improving the livelihood and quality of life (QOL) of the farm women in the region.

INTRODUCTION

Women's empowerment is a very challenging task in India vis-a-vis in the world. From the beginning, civilization shows its footprints on the sand of history that gender-based discrimination is a deep-rooted social malice practiced and especially in India, it is an incurable disease (Pandey,2005).

The Government of India had ushered in the new millennium by declaring the year 2001 as 'Women's Empowerment Year' to focus on a vision 'where women are equal partners like men'. The most common explanation of 'women's empowerment' is the ability to exercise full control over one's actions. The last decades have witnessed some basic changes in the status and role of women in our society. There has been shift in policy approaches from the concept of 'welfare' in the seventies to 'development' in the eighties and now to 'empowerment' in the nineties. This process has been further accelerated by some sections of women becoming increasingly self-conscious of their discrimination in several areas of family and public life (Dash, 2004). They are also in a position to mobilize themselves on issues that can affect their overall position. Most of the women work in agricultural sectors either as workers, in household farms or as wage workers. It is now an accepted fact that women have been the first agriculturists. Rural women throughout the Asia and Pacific region make critical contributions to household production and consequently to national food security. Women involved in various field operations which include application of manures and fertilizers, land preparation, seed grading, seed treatment, sowing, dibbling, planting, weeding, plant protection, harvesting, threshing and storage etc. Besides they are also involved in livestock production and management, fish farming as well as child rearing and housekeeping activities. As per 2001 census, women constitute about 40 per cent of the workforce engaged in agriculture, their number being about 92 million. By 2012, this number is expected to cross 110 million and it would be about 45 per cent of total agricultural workers. These figures give an indication of the role of farm women in Indian agriculture. Gautam *et al.*, (2008) developed a technology module for forewomen of Madhya Pradesh. This study was conducted to check the utility of the technology module and its outcome for the end-users, particularly farm women. The findings will be used as a road map for further improvement in this direction. As a result, this may bring smiles to the millions of the forewomen otherwise suffering.

Role of KVK in women empowerment

Krishi Vigyan Kendra (K.V.K.) is a well-planned

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institutional arrangement implemented by the Indian Council of Agricultural Research (ICAR) which carries out the site-specific scientific extension at the district level. It transfers technologies in agriculture and allied fields to the farmers, farm women, rural youth, school drop-outs and extension functionaries to increase their knowledge and enhance their skill and change their attitude in their work areas. As per the recommendations of Mohan Singh Mehta Committee during 1974, K.V.K. was established in different states. Gradually working guidelines were prepared to make the K.V.K. as the light house for the rural people. For the overall development of farm women, Home Scientists are posted in KVKs. Now in Zone VII, comprising Madhya Pradesh, Chhattisgarh and Odisha, total 67 Home Scientists are working in the field of women in agriculture for the upliftment of status of farm women.

METHODOLOGY

Farm women play a valuable role in agriculture in all stages of food production, processing and post-harvest storage. Despite their tremendous contribution to agriculture and economy of the country, they are overlooked, exploited and disadvantaged in the society. To solve various problems of the forewomen, a technological module was developed, which contains problems of farm women, status of farm women, institutional arrangements, case studies, outcome, problem inventory and process for the development of modules in terms of technology assessment, refinement and demonstration of technology/ product/ methodology and capacity building of farm women, which ultimately lead the improvement of livelihoods of farm women. Total 75 farm women were the respondents for this study. These farm women were selected by the concerned home scientist and were properly trained. The data were collected by the home scientist through personal interview of the respondent.

RESULTS AND DISCUSSION

On the basis of developed module as mentioned above, 48 problems of farm women were identified in Madhya Pradesh relating to the priority thrust areas as low income, drudgery reduction, nutritional security and value addition. After developing technological module including intervention point, causal diagram, technology assessment, FLD and training modules, a total number of 32 OFTs, 30 FLDs and 278 trainings were organized by Home Scientists of KVKs of MP during 2008-09. In this paper, major findings have been discussed on the thrust area of the state.

1. On Farm Testing

On farm testing of the available technology for farm women was done to confirm the suitability and performance of the said technology in the given conditions. On the basis of the selected problems, OFT was planned and the results obtained are in detailed in Table 1.

Table 1: Details of on farm trials

Thrust area	Problem	Title of OFT	Parameters	Result	
Low income of farm women	Low income of tribal farm women involved in backyard poultry due to high mortality and low productivity	Assessment of management practices in backyard poultry	Technical observation - Mortality rate reduced (25 weeks) - Body weight gain	Mortality = 40% Increase in weight = 24%	
			Economic Indicators - No. of egg per laying cycle - CB ratio	Inc. in egg prod.=75% Inc. in income=25%	
Drudgery reduction	High drudgery and low efficiency of farm women during wheat harvesting by local sickle	Assessment of drudgery reduction and efficiency enhancement of farm women during harvesting of wheat by serrated sickle		Serrated Sickle	Local sickle
			Output m²/hr	87	80
			Heart rate (beats/min)	20.1	23.5
			Energy expenditure (kj/min)	7.34	8.77
			CCW (beats/m²)	13.9	17.2
			Saving in cardiac cost/kg (%)	19.2	-
Nutritional security	Food and nutritional insecurity of farm women due to unavailability of functional fruits and vegetables at household level	Assessment of unavailability of functional vegetables at household level for nutritional insecurity of farm women	Yield kg/250 sqm	125.5	
			Net return/family/ season (Rs.)	900	
			B:C ratio	1.8	
Value addition	Economic loss of orange fruits production due to market glut	Assessment of orange preservation through squash	Preparation skill	Learned	
			Cost analysis (Rs./ lt)		
			-Input cost	30.70	
			-Output cost	90.00	
			Comparison with commercial product	Better	
			Net Return(Rs./ lt)	19.76	
			B:C ratio	2.92	

That technology assessment on identified problems under different thrust areas resulted in 45% of adoption with an increase of 103.1% income of farm women. Component-wise analysis revealed that the technology adaptation rate was found higher in low income for farm women (58%) closely followed by drudgery reduction (50%) and nutritional security (42%). In the case of drudgery reduction, technology assessment, working capacity was increased 45% with 15.4%. raised income. Although, maximum income was increased through value addition estimation (292%), the rate of adoption was found very less (30%), because of market availability.

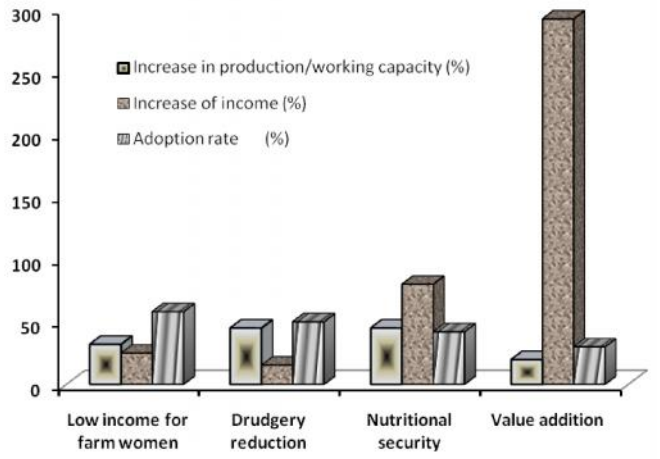

Fig.1. Benefits and adoption of on farm testing technology by farm women.

2. Front Line Demonstrations

Frontline demonstration is being organized for up-scaling the suitable technologies among the large number of the needy farm women. The technology showed good performance and response during OFT were selected under FLD for further dissemination at wider scale, so that large-scale end-users could be benefitted by the said technology. In fact, successful FLDs helped in enhancing the rate of adoption of the technology very fast (Table 2).

Table 2: Front Line Demonstrations

Problem	Technology Demonstrated	Parameters	Result
Unavailability of green leafy vegetables during off season	Demonstration of technology for availability of green leafy vegetables during off season through sun drying	Production/ unit (kg) Net return (Rs./Unit) BC ratio	4.44 117.00 1:3.4
High drudgery and low efficiency of farm women involved in intercultural operations	Demonstration of wheel hoe for drudgery reduction and efficiency enhancement of farm women during weeding	Time spent (min/100 m^2) Drudgery reduction (%) Weed intensity (per m^2)	33 (FP-60) 43 26 (FP-39)

The shelf lives of vegetables were increased after drying up to 5 months and the farm women received net return with Rs 117/- with an adaptation of 65 % for saving of expenditure for not purchasing the vegetables during off season and technology demonstration.

Demonstration of wheel hoe for drudgery reduction and efficiency enhancement of farm women during weeding drudgery reduces 43%, increases 45% efficiency with 33.3% reduction in weed intensity were adopted by 67% of farm women.

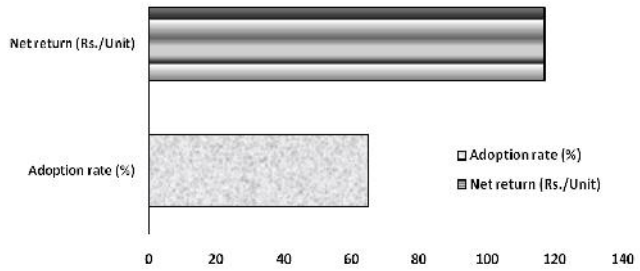

Fig 2: Benefits and rate of adoption by farm women of front line technology demonstration for availability of green leafy vegetables during off season through sun drying.

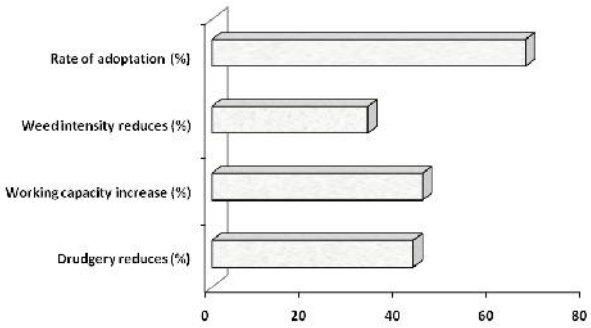

Fig. 3: Front line demonstration of wheel hoe for drudgery reduction and efficiency enhancement with a rate of adaption by farm women.

Trainings

Training is an investment which helps in upgrading the knowledge, skill and changing the perception and attitude of the users towards the newly developed technologies. During 2008-09, total 278 trainings were organized by home scientists of MP on human nutrition, health and care, post harvest management, women in agriculture, income generating activities, SHG formation and small-scale entrepreneurship development and 5875 farm women were benefitted with an adoption of 85 per cent (Figure 4).

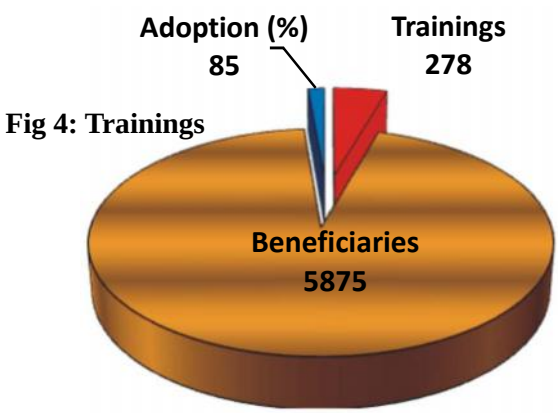

Fig 4: Trainings

CONCLUSION

Socio-economic empowerment has been challenging task for the farm women. A newly developed technological module was popularized for proper working of home scientists and to overcome the problems of farm women. In M.P., a total of 48 problems of farm women were identified which were related with low income, drudgery reduction, nutritional security and value addition. A considerable number of the OFTs, FLDs and training were carried out on farm women for their capacity building and income generation. All these interventions resulted in adoption of 45%, 68%, and 85% which in turn increased that additional income by 20-25%. Therefore, this module proved worthy in improving the socio-economic status of the farm women in the region. It is expected the home scientists working with the farm women in the other parts of India can use this module successfully for empowerment of the farm women in their region.

REFERENCES

Gautam,U.S., Khare. N, Singh. Alka and Deva Kant 2008. Technological module for farm women of Madhya Pradesh. Published by Directorate of Extension Services, JNKVV, Jabalpur. 222 p.

Siddhartha Dash, 2004. Women Empowerment in India. Orissa review.

Vinita Pandey, 2005. Empowering Women in India: Changing Horizons The Kalanjiam Experience. Journal of South Asia and Women Studies. 10 (1).