

## RESEARCH NOTE

## Problems in Dissemination of Homestead Technologies to Rural Women and Strategies to Overcome them

Veenita Kumari<sup>1</sup> and R. Vasantha<sup>2</sup>

1. Assistant Professor (Ext.), COHSc., Tura, Meghalaya (CAU, Imphal), 2. Prof. (Ext.), COA, PJTSAU, Hyderabad  
Corresponding author e-mail: veen\_chand@ yahoo.co.in

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### ABSTRACT

*Educating rural women and creating awareness about modern homestead technologies can go a long way in enhancing their knowledge & skill and ultimately, the productivity of the system and farm incomes. The study was conducted with 15 KVK scientists of Rajendra Agricultural University (RAU) and data was collected by personally interviewing them. The problems expressed and suggested solutions were tabulated and interpreted with meaningful conclusion. Based on the information generated, conceptual framework/ strategies were formulated to overcome the problems. The results highlighted that the major technological problem was high cost of production for some of the technologies hence suggested the scientists to develop more of low cost technologies. The main financial problem was inadequate and untimely release of fund for training programs hence suggested making it available on time and in adequate amount. The major infrastructural problem faced by them was shortage of vehicles and mobile training units with all the essential facilities to disseminate technologies in the remotest areas that should be made available at the KVKs. The organisational problem faced was lack of Subject Matter Specialists (SMSs) for all the allied areas of agriculture and hence suggested to recruit the vacant positions to lessen their work load. The main social problem faced was low literacy rate of rural women and it was suggested to increase the literacy rate of rural women through adult education program. The strategies proposed to overcome these problems were that the Directorate of Extension should facilitate in circulation of technology manuals to all stakeholders, improved infrastructure facilities, adequate and timely release of fund, deployment of additional staff, better and additional transport facilities (mobile units), capacity building and skill up-gradation, improving R-E-F linkage and collaboration of extension scientists with line departments.*

**Keywords:** Problems; Dissemination; Homestead technologies; Rural women; Strategies;

There are a number of home science researchers engaged in generating new and appropriate homestead technologies and there are several agencies, institutions and organisations entrusted with the responsibility of delivering their useful knowledge and technology to the rural women. So far a number of extension programmes had been carried out in the villages. In extension activities women is now the central point and activities are being planned keeping her in view. Her enlightenment will change the face of rural India. But very few evidences are available whether extension programs are being benefited by the rural women or not. There is evidence of considerable and widespread dissatisfaction with the programs among rural women. Therefore, time to time

evaluation of the programs in action would be necessary to provide a base to determine the progress or effectiveness of the programmes and accordingly frame suitable strategies at the national, State and district levels. With these points in view, the study was conducted with the following specific objectives- to unearth problems faced by the extension scientists in dissemination of homestead technologies and their solutions and formulation of conceptual framework or strategies to overcome these.

### METHODOLOGY

Nine homestead technologies viz. fruit & vegetable preservation, stitching & embroidery, value addition to

garments, arts & craft making, value added products from cereals & pulses, mushroom production, value added mushroom products, vermicompost and apiculture were identified to study the problems in their dissemination. An interview schedule was prepared to unearth problems faced by extension scientists in dissemination of homestead technologies along with their appropriate solutions as suggested by them. The problems were categorised into five categories viz. technological, financial, infrastructural, organisational and social to know about the nature of problems and corresponding solutions to it. 15 KVK Scientists from the three districts of Bihar viz. Samastipur, Muzaffarpur and Vaishali were selected to collect responses for eliciting problems and suggestions. The data was collected and presented statistically. Based on the information generated suitable strategies were formulated to overcome these problems

## RESULTS AND DISCUSSION

Homestead technologies of RAU were disseminated through different sources such as officials of Department of Agriculture (ATMA), NGOs and KVK extension scientists of RAU. In this study, information on problems faced by KVK extension scientists in dissemination of homestead technologies was collected. The problems faced by them in dissemination of homestead technologies of RAU are presented in Table 1. The problems were presented under the five categories of technological, financial, infrastructural, organisational and social along with their appropriate solution.

*Technological-* The technological problems faced by the extension scientists in dissemination of the selected homestead technologies were as detailed below-

i. *Taste not liked by the people:* Taste of some of the value added mushroom products like sauce, value added cereals and pulses products like pasta, noodle and fruits and vegetable preservation products like sauce were not liked by rural people. Hence they did not show much interest and enthusiasm during the training. It was found that as they didn't relish the taste, they had rejected it after 1 or 2 trials.

*Solution:* The taste of some of the products, as mentioned above, which were not liked by rural people, should be modified to suit rural taste.

ii. *High cost of the technology:* Rural women expressed that some of the technologies were costly

for them to adopt. These included fruit & vegetable preserved products (jam, jelly, squash, sauce), value addition to garments, value added products from cereals & pulses (pasta), art & craft making (soft toys, artificial flowers) and apiculture. Hence they have not shown interest in the technology during its demonstration.

*Solution:* The Scientists should either lower the cost of such technologies or develop other low cost technology feasible for poor rural people.

*Financial:* The financial problems faced by the personnel in KVKs in dissemination of homestead technologies were as discussed below-

i. *Inadequate and untimely release of fund:* The extension scientists reported that inadequate and untimely release of fund was the major financial problem faced by them. The ICAR releases fund to the University and the University allocates budget to the respective departments, KVKs etc. By the time the fund reaches the KVK the training programs get delayed and most of the training programs are conducted at the end of the financial year. Sometimes the programs could not be conducted because the funds do not reach the KVKs on time.

*Solution:* The fund should be made available on time and adequate fund should be released as per the plan of action submitted, to enable smooth and efficient execution of the training and demonstration programs.

*Infrastructural:* The infrastructural problems faced by the extension scientists in dissemination of homestead technologies were-

i. *Lack of transport facility:* Lack of transport facility for field visits and off-campus training programs.

*Solution:* There should be sufficient number of vehicles at KVKs to enable scientists and other staff to make more frequent and regular visit to villages and enhance technology transfer as well as follow-up action.

ii. *Lack of mobile training units:* The KVKs does not have any mobile training units with all the infrastructural facilities to disseminate technologies at the doorstep of rural people for wide coverage.

*Solution:* Mobile training units with all the

**Table 1. Distribution of respondents based on problems encountered by extension scientists in dissemination of homestead technologies and solutions to overcome them (N=15)**

Type of Problem	Problems	Solutions	No.	%
<i>Technological</i>	Taste of some value added & preserved products not liked by the people.	Research should be done on the development of such products which have consumer preference.	10	66.67
	High cost of fruit & vegetable preservation technologies, value addition to garments, art & craft making technologies and apiculture.	Reduce the cost of such technologies.	8	53.33
<i>Financial</i>	Inadequate and untimely release of fund for conducting extension activities.	Fund to be made available on time and in adequate amount for successful and smooth conduction of extension activities.	15	100.0
<i>Infrastructural</i>	Lack of transport facility	To provide vehicles for field visits	15	100.0
	Lack of mobile training units	Providing mobile training units for remote areas	15	100.0
<i>Organisational</i>	Lack of Scientists for all the subjects increases the work load.	Recruitment of SMSs in the vacant post.	12	80.0
	Lack of adequate staff and skilled labour	Filling up of vacant posts	10	66.67
	Lack of 'Master trainer' to guide rural women or farmers for follow-up action	Appointment of local people as 'Master trainers'.	6	40.0
	Wide coverage area of the KVK i.e. the entire district limits their programs throughout the district	—	15	100.0
	Excessive work load	Lessen the work load	8	53.33
<i>Social</i>	Illiteracy of rural women	Improving literacy rate through adult education program	15	100.0
	Lack of community or group approach among rural people	Awareness generation and motivational programs for building group dynamics	12	80.0
	Inappropriate mind set of the participants	Developing positive mind set of the participants.	10	66.67

infrastructural amenities should be provided to the KVKs so that a mobile unit is available any time to serve rural and remote areas.

*Organisational:* The organisational problems encountered by the personnel in dissemination of homestead technologies were-

i. *Lack of scientists for all the subjects:* There were only few Subject Matter Specialists (SMS) who were responsible for dissemination of all the agricultural and allied field technologies.

*Solution:* Subject Matter Specialists (SMSs) from major areas in agriculture and allied fields should be recruited at the KVKs so that they disseminate area specific technologies to the clients.

ii. *Lack of adequate staff and skilled labour:* They reported that lack of adequate staff and skilled labour also poses problem in dissemination of

homestead technologies.

*Solution:* The vacant post of technical staff and skilled labourers should be recruited to strengthen manpower structure.

iii. *No technical person i.e. 'master's trainer' to guide rural women or farmers for follow-up action:* The other problem encountered by them was that there was no technical person to guide rural women or farmers for follow-up action after the demonstration and it was difficult for the limited no. of Scientists to keep a regular supervision and monitoring of the disseminated technologies.

*Solution:* Trained local persons with technical knowledge i.e. 'Master's Trainer' should be appointed to carry out monitoring & supervision and follow-up action after the training and demonstration programs.

iv. *Wide coverage area of the KVK:* The scientists reported that since each KVK covers entire district so it is difficult for them to visit all the villages of the entire district.

*Solution:* No suggestion was given by them.

v. *Excessive work load:* The scientists at KVKs reported that due to limited number of subject matter scientists and other staff, there was excessive work load.

*Solution:* Work load will be lessened if all the vacant posts are filled up and manpower structure is strengthened.

*Social:* The different social problems faced by the extension scientists in dissemination of homestead technologies were described below-

i. *Illiteracy of rural women:* Illiteracy of rural women was the major social problem faced by them in dissemination of homestead technologies. Due to illiteracy and low literacy rate, it was very difficult to impart knowledge, skill and understanding about homestead technologies to the participants. The participants also find it difficult to learn and practice the disseminated technologies.

*Solution:* Literacy rate of rural people should be improved through adult education and farm field school programs.

ii. *Lack of community or group approach among rural people:* The extension scientists reported that lack of cooperation and unity among the villagers also poses problem in wide spread of the technologies. When any training is to be conducted, all rural women do not get information about it. The villagers entrusted with the job do not give information to all. Group rift among the members also poses problem in dissemination of homestead technologies.

*Solution:* The power of group dynamics i.e. community approach should be strengthened through awareness generation and motivational programs.

iii. *Inappropriate mind set of the participants:* This was the common problem experienced by the extension scientists in dissemination of homestead technologies. The scientists reported that majority of the participants in the training or technology demonstration program attend it for the sake of certificates and the refreshments served during the

program. Such participants do not have interest and motivation to benefit from the training or demonstration. This deprives many of the genuine women to participate in the training and benefit from it. Such mind set discourages the morale and tempo of the training program.

*Solution:* The participants mind set has to be changed so that they look up to these training and demonstration programs as an opportunity for improving their economic condition and standard of living rather than just a participant with small gains.

*Pankajasree (2004)* reflected in her study seven constraints in dissemination of technologies that were listed out by DAATT centres coordinators. These are 'Inadequate technical staff', followed by 'limited finances, particularly for transport', 'lack of field staff for conducting on-farm trials/ demonstrations/ mini kits throughout the district', 'lack of advanced A.V. equipments', lack of own office accommodation for DAATT centre', lack of adequate number of experienced scientists in the centre' and 'lack of separate funds for information centre' in that order.

Similar findings were observed in the study of *Rao (2000)*, who reported that provision of staff in full strength, spacious building, vehicle for transport, funds for organising kisan melas & ZREAC meetings, laboratory facilities and work distribution among Scientists are the major suggestions given by the DAATT centre Scientists.

*Strategies to overcome problems encountered in dissemination of homestead technologies :* In order to overcome the problems in dissemination such as lack of adequate and timely release of fund, transport facilities, lack of manpower etc. the following strategies were suggested for Directorate of Extension and extension personnel, which have been presented in fig. *Directorate of Extension:*

- *Circulation of technology manuals to all stakeholders:* A manual consisting of all the successful technologies of RAU should be circulated to all the KVKs (University, Indian Council of Agricultural Research, New Delhi & NGOs), NGOs/ VOs and State Department of Agriculture officials for wide spread dissemination of the technologies among rural women and farmers.
- *Improved infrastructure facilities:* The office of the Directorate of Extension should provide improved

infrastructure facilities like advanced training hall with proper AV aids, transport facilities, mobile units etc. to all its KVKs so as to ensure better organisation of extension activities for effective dissemination of homestead technologies.

- *Adequate and timely release of fund:* Adequate and timely release of fund should be done so that the training programs could be conducted in time and regularly.
- *Deployment of additional staff:* The vacant positions should be filled up and additional contractual manpower should be deployed to work as 'Master trainer' for follow-up action in villages.
- *Better and additional transport facilities (mobile units):* Additional vehicles should be provided to the KVKs so as to encourage the scientists for more frequent field visits and also for covering distant and unreached villages. Development of mobile units will facilitate in carrying out extension activities even in the remotest villages.
- *Capacity building & skill up gradation:* The extension scientists should be deputed for regular trainings and workshops to upgrade their knowledge and skills.
- *Improving research-extension-farmer linkage:* The extension scientists should try to coordinate with

research scientists, rural women & farmers and other extension personnel so that the developed Homestead technologies get adopted by the rural women without replication.

*Extension scientists:*

- *Collaboration with line departments :* The extension scientists of KVKs, State Department of Agriculture (SDA) and NGOs/VOs should work in collaboration with all so as to ensure widespread coverage of the district and disseminating maximum number of useful and feasible homestead technologies among rural women.

## CONCLUSION

It can be concluded from this study that the major problems faced by extension personnel in dissemination of homestead technologies were high cost of some of the value added technologies, untimely release of fund, lack of transport facilities, lack of staff and low literacy rate of rural women. Hence an effort from various sources needs to be made so that the problems expressed and the solutions suggested by them are incorporated for fast and uninterrupted dissemination of these technologies. Suitable strategies may also be chalked out involving all the stakeholders that can strengthen the job of dissemination.

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