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Assessing Rural Women‟s Perceptions of Effective Extension Methods for Promotion of Horticultural Crops

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Abstract: ***Effectiveness of extension education methods as perceived by rural women for promotion of horticultural crops was worked out to meet their assessed needs in areas of production, marketing and management. A sample of interested rural women 60 (30/village/training) between age group of 30-40 years, having land holding up to 2.5 acres and education up to Secondary were selected. In Burak (Gp1) training was imparted with the help of extension talk, group discussion and media (EM-1) while to the second group in Gawar village i.e. along with (EM-I), method demonstration was also organized with the help of technical expertise from the concerned technical departments (EM-II). Vegetable seeds and saplings of both Pomegranate and Papaya were distributed in both the villages for plantation. Data were collected with the help of structured interview schedule.. The results showed that Increase in knowledge and change in skill was reported in majority of respondents in both the villages with the use of extension methods. In village Burak after exposure to EM-I the overall increase in knowledge was observed in papaya (53.0%) followed by general messages (50.9%) and pomegranate (37.8%). In village Gawar after exposure to EM-II, overall increase in knowledge was observed in general messages related to fruits & vegetables (52.5%) followed by messages on papaya (49.6%) and pomegranate (43.1%).In village Burak, the skill acquisition by respondents regarding weeding (MS-2.6) was high whereas for pruning (MS-1.26) the skill acquisition was low. For rest of the messages skill acquisition was of medium level. In village Gawar, the skill acquisition for watering of plants (MS 3.0), protection of saplings & seed (MS 2.86), weeding (MS 2.73), preparation of nursery bed (MS 2.5) harvesting (MS 2.36), skill acquisition was found high to medium whereas for pruning (MS-1.53) the skill acquisition was low. However, EM-II (extension methods: extension talk, group discussion and media exposure and method demonstration) revealed better results.***

Keywords: assessment, perception, effectiveness, knowledge and skill

1. Introduction

In developing countries , diversification primarily involves a substitution of one crop or other agricultural product for another, or an increase in the number of enterprises, or activities, carried out by a particular farm, the definition used in developed countries sometimes relates more to the development of activities on the farm that do not involve agricultural production. For example, one section of the British Department for Environment, Food and Rural Affairs (DEFRA) defines diversification as “the entrepreneurial use of farm resources for a non-agricultural purpose for commercial gain”. Diversification originated from the word „Diverge‟ which means to move or extend in a different direction from a common point and to meet the cash needs of the family as well as to combat risk associated with mono-cropping. Diversification in agriculture made women feel that they had an increased workload, that they got less sleep, and had no time for leisure due to bulk of the work that had to be performed. They felt tired and worn out with aching backs, legs and arms. Women also felt that their beauty faded away with an increasingly tanned skin. However, at the same time, women noted that the family nutritional and clothing situation was better after diversification that is why they wanted to learn technologies related to crop diversification. Keeping all this in view a study on assessing rural women‟s‟ Perceptions of Effective Extension Methods for promotion of Horticultural crops was conducted in Hisar district of Haryana state. Varied extension methods can be used to transfer technologies with varying strengths and weaknesses. Both extension and research personnel were of the opinion that mass media must be used effectively in order to get maximum output with minimum efforts. Demonstrations were perceived as “effective” group approaches to technology transfer; Face to face and farm/personal visits were perceived as “effective” individual approaches to technology transfer. Mass media and ICT are good for creating awareness and knowledge, and developing positive whereby many farmers can be reached within a short time. Individual and group extension is more important for gaining skills (Gaya, 1994). For the communication of new ideas and skills to the farmers, various methods (individual, group, and mass) are being utilized by public and private extension in Sindh. Knowledge acquisition occurs with awareness, exposure and at least a rudimentary understanding of how an innovation functions (Rogers, 1995). In developing countries such as India, which has been one of the leaders in promoting diversification, the concept is applied both to individual farmers and to different regions, with government programmes being aimed at promoting widespread diversification , often seen as referring to the “shift from the regional dominance of one crop to regional production of a number of crops which takes into account the economic returns from different value-added crops with complementary marketing opportunities(Singh, Aradhana,2010).

2. Methodology

The experiment was continued for two consecutive years. In Hisar II block, a matching sample of 60 rural women (30/village/training) between age group of 30-40 years, having land holding up to 2.5 acres and education up to Secondary were selected. Two trainings were organized on above mentioned diversified areas (one each) in two villages of Hisar (Gawar and Burak) in collaboration with concerned technical departments. In Burak (Gp1) training was imparted

with the help of extension talk, group discussion and media (EM-1) while to the second group in Gawar village i.e. along with (EM-I), method demonstration was also organized with the help of technical expertise from the concerned technical departments (EM-II). Vegetable seeds and saplings of both Pomegranate and Papaya were distributed in both the villages for plantation. Data were collected with the help of structured interview schedule. Comparative effectiveness of different extension methods in terms of increase/gain in knowledge and skill acquisition was analyzed. Frequency, percentages, mean scores and ranks were calculated. Also the adoption status of the established kitchen gardens (100.0%) during 2014-15 was assessed.

3. Results and Discussion

Majority of the respondents (50%) belonged to the middle age group (30-40 years) followed by 36.7 per cent respondents belonged to 40-50 years of age and only 13.3 per cent respondents belonged to 20-30 years of age. Cent per cent respondents were married. 33.3 per cent respondents belonged to nuclear family followed by 66.7 per cent respondents who were from joint family. Regarding education 33.3 per cent were secondary, 30.0 per cent were illiterate, 20.0 per cent respondents were educated up to primary and 13.3 up to higher secondary and only 6.7 per cent respondents were graduates. Table I reveals that cent per cent women undertook the training for home consumption as the major reason, followed by (96.6%) economic needs, 93.3 percent respondents preferred the particular activity as market is far away and 91.6% percent respondents due to local availability of resources.

Table 1: Reasons for undertaking training on horticultural crops n=60

S. No.	*Reasons*	*Frequency*	*Percentage*	*Rank*
1	Economic need	58	96.6	II
2	Local availability of resources	55	91.6	IV
3	Home consumption	60	100	I
4	Market far away	56	93.3	III

Perception of effectiveness of Extension Methods I & II for increase in Knowledge by rural women:

Increase in knowledge and skill was observed irrespective of the method used **as the methods selected keeping in view the educational level and interest of rural women of** The selection of extension delivery method, in a particular situation is based on its ability to give the right kind of information to the right people in the right time (Campbell & Barker, 1997 In village Burak after exposure to EM-I the maximum increase in knowledge was observed in papaya (53.0%) followed by general messages (50.9%) and pomegranate (37.8%).

In village Gawar after exposure to EM-II maximum increase in knowledge was observed in general messages related to fruits & vegetables (52.5%) followed by messages on papaya (49.6%) and pomegranate (43.1%) .). It is important to measure the knowledge and skill in order to understand what people know about certain things, how they feel and also how they behave (Adhikarya, 1994; Pasiani et al., 2012). Farmers can be made knowledgeable about new technologies through creating awareness, interest and more positive attitudes can be developed towards new methods and materials through mass media channels (i.e. radio, television, printed materials (Ban & Hawkins, 1988) and ICT (Vignare, 2013).

Table 2: Effectiveness of extension methods (EM-I & EM-II) in terms of increase in knowledge, n=30

Knowledge Aspects	EM-I		EM-II		Increase/gain	Increase/gain
	Pre exposure (%)	Post exposure (%)	Pre exposure (%)	Post exposure (%)	EM-I	EM-II
General messages	23.7	73.5	22.4	74.9	50.9	52.5
Papaya cultivation	29.2	82.3	29.28	79.64	53.0	49.6
Pomegranate cultivation	31.8	69.7	30.4	73.5	37.8	43.1

Perception of Effectiveness of Extension Methods I & II for increase in Skill acquisition by rural women:

Skill acquisition was measured in terms of high, medium and low with scores 3, 2 and 1 respectively. Mean scores for all the aspects were calculated. Table 3 Shows the skill acquisition by respondents in village Burak. Regarding weeding (MS-2.6) the skill acquisition was high whereas for identification of seeds/saplings (MS-1.73), soil treatment (MS-1.83) preparation of nursery bed and harvesting (MS-2.0), planting the saplings & seed (MS-2.20), protection of saplings & seed (MS-2.26) and watering of plants (MS-2.30), skill acquisition ranged from medium to high and for pruning (MS-1.26) the skill acquisition was low.

Table further shows that in village Gawar the skill acquisition for protection of saplings & seed (MS 2.86), weeding (MS 2.73), preparation of nursery bed (MS 2.5), harvesting (MS 2.36), watering of plants (MS 2.33), skill acquisition was high whereas for soil treatment (MS-1.93), planting the saplings & seed (MS-1.96) and identifications of saplings (2.0) was medium and for pruning (MS-1.53) the skill acquisition was low. The method chosen will depend on the goal and adoption stage; whether we wish to change knowledge, attitude or skills, resources and the size and the educational level of the target group. Mass media are the preferred methods for creating awareness as they can reach and inform many people at the same time. Individual and group extension such as farm visits, meetings, field days and demonstrations are important for technical and management skills building and training (Gaya, 1994; Campbell & Barker, 1997). In practice, multimedia approaches that use different communication channels and utilize several senses, in a coordinated and mutually reinforcing way would give the best results (Nooriafshar, 2004).

Table 3: Comparative effectiveness of extension methods for skill acquisition (n=30)

Sr. No.	Aspects	EM-I Mean scores Extent	EM-II Mean scores Extent
1	Identification of seeds/saplings	1.73 M	2.0 M
2	Preparation of nursery bed	2.0 M	2.5 H
3	Soil treatment	1.83 M	1.93 M
4	Protection of saplings & seed	2.26 M	2.86 H
5	Planting the saplings & seed (distances)	2.20 M	1.96 H
6	Watering of plants	2.30 M	2.33 M
7	Pruning	1.26 L	1.53 L
8	Weeding	2.6 H	2.73 H
9	Harvesting	2.0 M	2.36 H

Score range: Low = 1-1.66, Medium – 1.67-2.33 and High 2.33-3.0

Table 4: Overall feasibility:

Attribute	*Total Score (%)*	*Extent*
Relative advantage	81.3	87.3%
Compatibility	86.7	
Simplicity	90.1	
Practicability	91.0	

Table 4 reveals the acceptability of technology in terms of adoption feasibility of horticultural crops i.e. the extent to which the rural women perceived the technology as relatively advantageous, compatible, simple and practicable. It was 87.3%. The findings are in line with Gita (2010) who revealed moderately high acceptability for fruit plant nursery whereas only 23.3 percent respondents were having moderately low acceptability and only13.3 percent respondents accepted the fruit plant nursery at high level.

Table 5: Adoption status of respondents for kitchen gardens established during 2014-15
n=30

Status(2014-15)	Gawar Frequency Percentage	Burak Frequency Percentage
Continued with kitchen garden	12 40.0	5 16.7
Discontinued kitchen garden	18 60.0	25 83.3

Table 5 reveals the adoption status. It was seen by visiting the houses of 2014-15 participants. Hundred percent participants established kitchen gardens. In village Gawar 40.0 per cent respondents continued kitchen garden and 60.0 per cent respondents. In village Burak 16.7 per cent respondents continued kitchen gardens and 83.3 per cent discontinued.

4. Outcome of the Experiment

The experiment was continued for two consecutive years. In village Gawar 40.0 per cent respondents continued kitchen garden for home consumption and 60.0 per cent respondents discontinued, the reason being due to heavy schedule not able to take care of kitchen garden properly. In village Burak 16.7 per cent respondents continued kitchen gardens for home consumption and 83.3 per cent discontinued, the reason being shortage of water.

5. Conclusion

Extension activities help to accelerate the adoption process if the technology is social, compatible, simple to learn, and triable. Therefore, varied extension methods can be used to transfer technologies with varying strengths and weaknesses. The perception regarding extension methods utilized was that EM II (extension talk, group discussion, media and method demonstration) was found **effective** and **better method** for promoting horticultural crops among farm women. The farm women indicated a strong information delivery system with more support for demonstration/visualization as strength in the present technology transfer system.

References

[1] Adhikarya, R. (1994). *Strategic extension campaign: A participatory-oriented method of agricultural extension*. Rome: FAO/United Nations.
[2] Ban, A. W., & Hawkins, H. S. (1988). *Agricultural Extension*. England: Longman Scientific & Technical.
[3] Campbell, D., & Barker, St. C. (1997). Selecting appropriate content and methods in program delivery. In B. Swanson, R. Bentz, & A. Sofranko(Eds.), *Improving agricultural extension: A reference manual*. FAO, Rome.
[4] Gaya, A. (1994). Extension education in agricultural and rural development: Role of international organizations - the FAO experience. In P. Plaza (Ed.), *La vulgarisation, composante du développementagric ole et rural: Actes du séminaire de Grenade Montpellier* (*CIHEAM Cahiers Options Méditerranéennes, 2*(4), 33-45).
[5] Nooriafshar, M. (2004). A multi-sense approach to information reception and knowledge creation in learning. In *3rd Pan-Commonwealth Forum on Open Learning*, July 2004, Dunedin, New Zealand.
[6] Pasiani, J., Torres, P., Roniery, S., Diniz, B., & Caldas, E. (2012). Knowledge, attitudes, practices and biomonitoring of farmers and residents exposed to pesticides in Brazil. *International Journal of Environmental Research and Public Health, 9*(9).
[7] Vignare, K. (2013). *Options and strategies for information and communication technologies within agricultural extension and advisory services*.MEAS Discussion Paper, USAID.
[8] Rogers, E. M. (1995). Diffusion of Innovation. The Free Press, New York, USA.
[9] Singh, Aradhana (Lead Author); Lakhdar Boukerrou and Michelle Miller (Topic Editors). Diversification in agriculture. In: Encyclopedia of Earth. Eds. Cutler J. Cleveland (Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment). (Published in the Encyclopedia of Earth November 17, 2009; Retrieved February 22, 2010).
[10] DEFRA, Diversification in Agriculture