Mainstreaming Women Farmers to Agricultural Extension Services in India: Perception of Extension Personnel

Uma Sah¹, Shantanu Kumar Dubey², S. K. Singh³, Rajesh Kumar⁴, Deepak Singh⁵ and Radha Krishna⁶

ABSTRACT

The poor access of women farmers' to agriculture extension services is an issue of concern with respect to the efficacy of the agriculture production situation in India. The present favorable policy environment enabling women farmers in accessing the extension services, the extension personnel plays the crucial role of translating these policies in achieving the desired results. In an attempt to comprehend empirically the extension personnel's perception of the issue relating to mainstreaming women farmers to agricultural extension services in India, the study was conducted among 150 Extension Personnel (EP) who participated in capacity enhancement programmes during 2008-13 at ICAR- Indian Institute of Pulses Research (IIPR), Kanpur. Research variables included perception of EP on women farmers' contribution to farming related activities, engagement of female workforce in respective district extension system, the issues related to involving women farmer in agricultural extension activities and the potential interventions to overcome the perceived issue. Finding revealed that in overall pooled data more than half (56%) of EP observed that woman farmers contributed 21-40 per cent to the overall agricultural activities, while 23 per cent of them perceived that women farmers contributed 41-60 per cent of the total labour to agriculture activities in their respective districts. In depth activity analysis showed that majority of the respondents reported that activities like weeding (87%), harvesting (85%), seed sowing (69%) and threshing (48.6%) were performed by women farmers. Regarding the strength of female extension staff in their districts, about 51 per cent of the EP revealed that the percentage of women extension staff was 0 to 5 per cent of the total existing staff strength. Majority of the EP also perceived that social taboos prevented women's involvement in the extension activities (61%) besides their illiteracy (39%). Nearly half (48%) of EP were not satisfied with the present level of women farmers' access to agriculture extension services and about 83.3 per cent opined that women farmers need to be adequately involved in the agriculture extension activities. About 61 percent of them viewed that for better reach of extension services to women farmers, appointment of women extension staff needs priority attention. For mainstreaming women farmers in agricultural extension activities in India, majority of the EP suggested that designing specialized need based trainings for women farmers (50 %), approaching women in groups through SHGs or women's club (20 %) and reserving thirty per cent seats for women extension staff (15%) in the department may ensure better access of agricultural extension services to women farmers in India.

Keywords: Agricultural extension services, mainstreaming women farmers

INTRODUCTION

Agricultural extension has been envisaged as an important development tool for realizing the growth potential of the farm sector and also for promoting sustainable, inclusive, and pro poor economic development (World Bank 2007). The agricultural extension services work with the basic objective of providing rural people the access to knowledge on the ways and means to increase productivity of the given agricultural production system in profitable manner as well as developing the capacities of the farmers to take correct agriculture related decisions. The farming community as a whole represents the user of these services that are planned to be gender neutral i.e., directed

equally towards farmers as well as women farmers.

Indian agricultural extension machinery, which has been primarily manned by male agriculture extension personnel till very recently, have a long tradition of working predominantly with men (Sulaiman *et al*, 2003, Singh *et al*. 2013)) and by and large has failed to address to the agriculture extension needs of the women farmers (Doorenbos, 1988). The poor access of women farmers' to agriculture extension services is an issue of concern with respect to the efficacy of the agriculture production situation in India. The issue implicates the structural and functional factors relating to the agriculture extension systems at one hand and the social and intra-household reasons at the other end. The prevailing social setup in

rural area does not approve the interaction between the women farmers and male extension personnel added with the prejudice among the male extension functionaries regarding the applicability of agricultural extension services for women farmers.

The growing realization of immense contribution of women farmers to Indian agriculture came with the documentation of the fact by several researchers all over the country(Venkateswaran, 1992; Dimri, 1999; Rao, 2006; Chayal, et al, 2010; Sah, et al 2014) and women farmers being recognized as the important stakeholder in the process of overall agricultural development, certain provisions have been made to improve the access of women to agricultural extension in recent past. Explicit actions have been undertaken for improving services in India (Raabe, 2008). A shift in the policy level has been witnessed in women specific programmes from welfare to empowerment mode like Women/Youth Training Extension Project (WYTEP) in Karnataka, Women in Agriculture (MAPWA) in Madhya Pradesh, Training and Extension for Women in Agriculture (TEWA) program in Orissa, Tamil Nadu Women in Agriculture (TANWA) projects, etc.

The present agriculture policy environment in India has therefore, started working towards women farmers' reach to agricultural extension system. With the policy reforms in place, the Indian agricultural extension system is under transition phase from being women blind to women sensitive. The male dominated extension system is slowly adjusting to the new policy environment that equally favors women farmers. As the extension personnel form the main linkage mechanism between the women friendly policies and the women farmers at the field level, their perception on mainstreaming of women farmers to agricultural extension machinery holds the key for successful translation of such policy initiatives at the field level. It is therefore imperative to empirically comprehend how extension personnel perceive the concerns relating to mainstreaming women farmers to the agricultural knowledge system through agricultural extension services in India. The present paper analyses the perception of extension personnel regarding the contribution of women farmers to agriculture, the need to mainstream women farmers as well as their suggestions for better reach of agriculture extension services in the country to women farmers.

METHODOLOGY

The study was conducted on 150 Extension Personnel who participated in capacity enhancement programmes during 2008-13 at Indian Institute of Pulses Research

(IIPR), Kanpur. The participant EP representing different regions and states of India who participated in 15 such programmes wherein a total of 425 extension officials from 16 states of India participated. These officials were mainly the state and district level consultants, and regional, divisional and district level executives who were mainly involved in implementation, monitoring and evaluation of agricultural development programmes, schemes, extension activities like capacity building programmes, delivery of production inputs and services and farmers' institution building. For the uniform representation of these officials from different regions of the country in the study, the participating states were stratified into five regions namely northern, southern, eastern, western and central region of India. From northern and southern region, the states of Haryana, Punjab and Himachal Pradesh; and Maharashtra, Tamil Nadu and Karnataka, respectively were included. Similarly, the states of Bihar, Jharkhand, West Bengal, Assam and Nagaland were included in eastern region and Gujarat and Rajasthan constituted the western region. From central region, Madhya Pradesh and Chhattisgarh were included in the study. Stratified random samples of the respondents from these regions were drawn in such a way that minimum of two officials represented each of the five regions of India. Thus, from the batch of participants in each training, 15 numbers of respondents were chosen for inclusion in the study. Response of 30 numbers of extension officials from each region were interviewed in all the 15 training programmes organized during 2008-13 was considered for the study. Thus, response of a total of 150 extension officials constituted the sample for the present study who was interviewed during different training programmes. However, for two research variables namely women farmers' access to extension services and extension personnel's suggestions on how to mainstream them in agricultural development only 96 EP participated as the respondents.

The researchable aim of the study was to analyze the extension personnel's perception of farm women's contribution to agricultural activities, reach of extension services among them and ways out to improve upon the access in their own region. The research variables accordingly included were perception of extension officials on women farmers' contribution in agriculture and allied activities, their involvement in crop and animal husbandry activities, proportion of women extension officials at the district level extension departments, accessibility of extension services to women farmers and opinion of sampled officials for better integration of women farmers to the state extension services.

Contribution of women farmers in agriculture and allied fields was operationalized in terms of their percentage contribution level as perceived by the extension officials from across different regions of India. Their extent of involvement was ascertained in different crop and livestock activities as perceived by the officials. The proportion of women extension staff to the total strength at the district level was operationalized in percentage as reported by the respondents. The problems in associating women farmers in the extension activities and ways to integrate them in state extension services and programmes were ascertained by asking open-ended questions to the respondents.

Data on the identified research variables were collected through semi-structured pre-tested question-naire designed especially for the purpose. As most of the variables were operationalized in terms of respondents' perception, care was taken to make the perception statements as valid and appropriate as possible. Published and unpublished literature, experts' opinion and researchers' own insight of the subject was utilized to ensure the content validity of the instrument. Respondents' opinions on open-ended questions were carefully enlisted. The collected data were coded, tabulated and analyzed using the descriptive statistics *viz.*, frequency, percentages and rank; and descriptive statistics like rank correlation coefficient to draw meaningful implications.

RESULTS AND DISCUSSIONS

Extension personnel's perception of women farmers' contribution to agricultural activities

The data presented in Table 1 indicated that the majority of the Extension Personnel across all the five regions of the country perceived that women contributed about 21-40 per cent to agriculture, about 23 per cent of the them perceived the contribution varied between 41-60 per cent, while about 9 per cent perceive women farmers' contribution to be as high as 60-80 per cent. An equal number of EP (33%) from southern region perceived that women contributed 21-40 per cent and 41-60 percent in agricultural activities. From the same region, about 30 per cent of the respondents perceived women contributed as high as 60-80 per cent in agricultural activities (Table 1). An interesting fact that emerged from the presented data was that one third of the sampled respondents from southern, central and western region of India perceived women farmers contributed about 41-60 per cent in agriculture while majority of the EP from northern and eastern region perceived contribution of women in agriculture was below 40 per cent. The relative contribution of women farmers as perceived by the EP across different regions was found to vary significantly (X^2) . Findings therefore support the fact of regional variation in women farmers overall contribution to agricultural activities in India. However, the perceived contribution was on the lower as compared to the available empirical evidences.

Table 1: Approximate per cent age contribution of women farmers to agricultural activities in India

| Response (%) | Northern region (n=30) | Southern region (n=30) | Central region (n=30) | Western region (n=30) | Eastern region (n=30) | Total (n=150) | Pearson X ² Value at 12 df |
|--------------|------------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|------------------|--|
| up to 20 | 5 | 1 | 1 | 4 | 11 | 40 | |
| | (16.7) | (3.3) | (3.3) | (13.3) | (36.7) | (26.7) | |
| 21-40 | 20 | 10 | 18 | 15 | 16 | 79 | 46.686* |
| | (66.7) | (33.3) | (60) | (50) | (53.3) | (52.7) | |
| 41-60 | 3 | 10 | 10 | 10 | 2 | 35 | |
| | 10 | (33.3) | (33.3) | (33.3) | (6.7) | (23.3) | |
| 60-80 | 2 | 9 | 1 | 1 | 1 | 14 | |
| | (6.7) | (30) | (3.3) | (3.3) | (3.3) | (9.3) | |

^{*} P<0.01 Figures in parentheses indicate percentages

An analysis of extension personnel's perception of women's contribution in various agriculture and allied activities revealed that on overall basis majority of the EP perceived the intercultural operations (87.3%), harvesting of crop (84.2%), seed sowing (69.3%) and threshing (48.7%) and livestock rearing were the activities where women farmers had major contribution. Across the five regions, the contribution of women farmers in the above mentioned activities followed a similar trend except for some minor variations. In contrast, overall minimum percentage of the extension personnel perceived women' role in activities like management of agriculture labour (8.6%), marketing (4.2%) and seed selection and treatment (16%) and vegetable cultivation (16.7%) (Table 2). Women farmers were perceived to be contributing in operations like post harvest activities and livestock rearing activities by 30-87 percent and 50-77 percent of the EP, respectively in southern, western, central and eastern regions of India. A regional variation in response on activities like weeding and hoeing, harvesting and seed sowing was found to be least, reflecting that they were the activities perceived to be performed by women in all the regions. However, for activities like livestock rearing, postharvest operation and threshing, the perception on women's' contribution varied across regions. This perception reflects on the existence of regional variations in the agricultural activities performed by women. Though findings are in concordance with most of the empirical observations, still, some of the women centered work areas were unnoticed by the sampled extension personnel.

| Major activities | Northern Region (n=30) | Southern Region (n=30) | Central India (n=30) | Western Region (n=30) | Eastern Region (n=30) | Total (n=150) | Pearson X ² Value at 48 df |
|---------------------|------------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|------------------|---|
| Seed selection | 3 | 9 | 3 | 2 | 7 | 24 | |
| and treatment | (10) | (30) | (10 | (6.6) | (23.3) | (16) | |
| | 12 | 25 | 26 | 26 | 15 | 104 | |
| Seed sowing | (40) | (83.3) | (86.7) | (86.7) | (50) | (69.3) | |
| weeding and | 18 | 30 | 30 | 30 | 23 | 131 | |
| hoeing | (60) | (100) | (100) | (100 | (76.6) | (87.3) | |
| | 20 | 25 | 30 | 26 | 26 | 127 | 95.180* |
| Harvesting | (66.7 | (83.3) | (100) | (86.7) | (86.7) | (84.6) | |
| | 12 | 20 | 26 | 11 | 4 | 73 | |
| Threshing | (60) | (100) | (86.7) | (55) | (20) | (48.67) | |
| | 3 | 9 | 11 | 15 | 4 | 42 | |
| Grading | (10) | (30) | (36.7) | (50) | (13.3) | (28) | |
| | 10 | 9 | 10 | 15 | 4 | 48 | |
| Storage | (33.3) | (30) | (33.3) | (50) | (13.3) | (32) | |
| Nursery raising | | | | | | | |
| & transplanting | 3 | 9 | 5 | 7 | 14 | 38 | |
| | (10) | (30) | (16.6 | (23.3) | (46.7) | (25.3) | |
| | 5 | 10 | 11 | 1 | 3 | 30 | |
| Manuring | (16.7) | (33.3) | (36.7 | (3.3) | (10) | (20) | |
| Post harvest | 5 | 9 | 15 | 26 | 11 | 64 | |
| operations | (16.6) | (30) | (50) | (86.6) | (36.7) | (42.7) | |
| Livestock | 7 | 18 | 15 | 23 | 18 | 71 | |
| rearing | (23.3) | (60) | (50) | (76.6) | (60) | (47.3) | |
| Management of | 1 | 8 | 2 | 1 | 1 | 13 | |
| labour | (3.3) | (26.7) | (6.67) | (3.3) | (3.3) | (8.6) | |
| Vegetable | 1 | 9 | 10 | 1 | 4 | 25 | |
| cultivation | (3.3) | (30) | (33.3) | (3.3) | (13.3) | (16.7) | |

Table 2: Perception of extension personnel regarding women farmers' involvement in major agriculture and allied activities

Figures in parentheses indicate percentages

Extension personnel's feedback of women extension staff employed at the district level

About 30 per cent of the sampled EP on pooled data basis stated that the women extension staff employed in their district was below 20 per cent of the total extension staff in position in their respective districts. Majority of the extension personnel (57%) from southern region of India stated that the strength of women extension staff was up to the extent of 30 per cent in their respective districts, while about 23 per cent of EP from eastern region stated the same (Table 3).

Table 3: Approximate per cent age of women extension staff employed in the district

| Response (%) | Northern region (n=30) | Southern region (n=30) | Central India (n=30) | Western region (n=30) | Eastern region (n=30) | Total (n=15 0) | Pearson X ² Value at 16 df |
|-----------------------|------------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|----------------------|---|
| up to 5 % | 17 (56. 7) | 5 (16. 7) | 11 (36.7) | 10 (33.3) | 1 (3.3) | 44 (29.3) | _ |
| 6-20% | 5 (16.7) | 5 (16. 7) | 11 (36. 7) | 4 (13.3) | 7 (23.3) | 32 (21.3) | |
| 21- 30% | 3 (10) | 17 (56.7) | (3.3) | (3.3) | 7 (23.3) | 29 (19.3) | 93.311* |
| NIL | (6.7) | (3.3) | 1 (3.3) | 14 (46. 7) | 15 (50) | 33 (22) | |
| No answer TOTAL | 2 (6.67) 30 | 1 (3.3) 30 | 6 (20) 30 | 1 (3.3) 30 | 1 (3.3) 30 | 11 (7.3) 150 | |

^{*} P<0.01 Figures in parentheses indicate percentages

As high as 47 and 50 per cent EP from western and eastern region respectively reported absence of women extension staff at their respective districts. As per the pooled data, 7 per cent of the EP failed to give an appropriate answer to regarding status of women extension staff employed in their district. Northern and central region presented a little better picture, wherein more than 80 and 74 per cent of the sampled EP, respectively reported presence of 5-20 per cent of female extension staff of the total extension staff in position in their respective districts. About 57 per cent of EP from Southern region on the other hand reported presence of 21-30 per cent of female extension staff at district level. The overall data reflects a poor strength of women extension personnel across all the regions of India except southern region. The overall data reflects on a poor strength of women extension personnel stated that the percentage of women extension personnel in their district.

Regional analysis shows that as high as 80 and 53 per cent of EP from western and eastern region, respectively stated presence of less than 5 per cent of the female extension staff employed. Northern and central India presented a better picture in this regard wherein more than 16 per cent and 37 per cent of EP respectively stated presence of up to 5-20 percent of the female extension staff in their district. Southern region on the other hand outperformed the other region of the country in this regards, as 57 per cent of EP reported presence of 21-30 per cent of female extension staff at the district level. The variation on the response of EP across the region was found to be statistically significantly (P >0.01) as indicated by high chi square value (93.3 df 16).

The figures represent a dismissal picture of women extension personnel employed in the agriculture extension system in India. The data also reflects on high level of inter-regional variations in the percent of women extension personnel employed. The high variation could be attributed to the polices of certain states for reservation of women in government jobs, leading to a higher percent of women extension personnel employed.

Problems perceived by extension personnel in involving women farmers in extension activities

Prevalence of social taboos was perceived as the main reason in involving women farmers in extension related activities by majority of the sampled EP (61%) on pooled data basis. This problem was perceived by 43, 37, 33 and 27 per cent of sampled EP from northern, western, southern and eastern region of India, respectively. As high as 40 per cent of the total EP stated illiteracy among

^{*} P<0.01

women farmers as problem perceived in involving women farmers in extension related activities. This problem was perceived by 87 per cent of the EP from central India. Further, the problem of time constraint faced by women farmers due to high priority to domestic activities was also perceived as a problem as pointed out by 35 per cent EP on pooled data basis.

Contrary to the above perception, about 17 per cent of the sampled EP perceived no problem in involving women farmers in extension activities. Negative attitude of field extension functionaries towards women farmers, lack of women specific programmes, safety issues and male dominance were perceived by 5-9 per cent of the EP only. Finding presented above thus indicated that institutional sensitivity and preparedness and related policy support were adequate as reflected in perception of sampled EP.

The data also indicated the that the EP were sensitive towards the need to involve women farmers in extension activities. However, some bottlenecks like the social taboos and illiteracy posed problems in mainstreaming women farmers.

Table 4: Problems perceived in involving women in extension activities

| Problems | Northern region (n=30) | Southern Region (n=30) | Central India (n=30) | Western region (n=30) | Eastern region (n=30) | Total (n=150) |
|---|------------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|------------------|
| Illiteracy among women | 5 | 5 | 26 | 4 | 19 | 59 |
| | (16.7) | (16.7) | (86.7) | (13.3) | (63.3) | (39.3) |
| Social taboos that prevent women's involvement | 13 | 10 | 50 | 11 | 8 | 92 |
| | (43.3) | (33.3) | (166. 7) | (36. 7) | (26. 7) | (61.3) |
| male dominance and don't let women to participate | 6 | 6 | 4 | 4 | 6 | 21 |
| | (20) | (20) | (13.3) | (13.3) | (20) | (14) |
| Male dominance in decisions related to agriculture women have little say. | 3 (10) | 2 (6. 7) | 4 (13.3) | 4 (13.3) | 1 (3.3) | 14 (9.3) |
| Suitable conveyance for attending the activities | 2 (6.7) | 1 (3.3) | 1 (3.3) | 4 (13.3) | 11 (36.7) | 17 (11.3) |
| Time constraints due to priority to domestic responsibilities | 16 | 15 | 2 | 11 | 12 | 52 |
| | (53.3) | (50) | (6.7) | (36.7) | (40) | (34.7) |
| Lack of inspiration | 2 | 1 | 2 | 1 | 1 | 7 |
| | (6.7) | (3.3) | (6.7) | (3.3) | (3.3) | (4.7) |
| Lack of awareness about agricultural technology | 2 (6.7) | 5 (16.7) | 4 (13.3) | 4 (13.3) | 8 (26.7) | 23 (15.3) |
| No problems | 8 | 8 | 2 | 4 | 4 | 26 |
| | (26.7) | (26.7) | (6.7) | (13.3) | (13.3) | (17.3) |
| lack of women | 4 | 2 | 1 | 1 | 3 | 11 |
| specific programmes | (13.3) | (6.7) | (3.3) | (3.3) | (10) | (7.3) |
| Negative attitude of | 1 | 2 | 2 | 1 | 2 | 8 |
| field functionaries towards women farmers | (3.33) | (6. 7) | (6. 7) | (3.3) | (6. 7) | (5.3) |

X2 value is 3.373E2a at 44 df (P<0.01) Figures in parentheses indicate percentages

Extension personnel's perception on the women farmers' access to extension services

For assessing the perception of extension officers on the present level of women farmers access to extension services in India, they were subjected to a set of four questions and response was collected on a three point continuum, viz., agree, cannot say, don't agree. Data presented in the Table 5, clearly indicated that majority of the extension personnel perceived that that the present level of access of women farmers to extension services is inadequate (48%), and more number of female extension staff need to be involved for their better reach (83%). Extension personnel also opined that women farmers need to be adequately involved in the extension programs (81%). However, about 48 per cent of the extension personnel felt that women farmers failed to understand the complexities of modern agricultural technologies. The results clearly indicated a positive attitude of selected extension personnel for the need to mainstream the women farmers to agricultural extension services.

Table 5: Extension personnel's perception on the women farmers' access to extension services

n=150

| Statement | Response | Norther n region (n=30) | Southern Region (n=30) | Central India (n=30) | Western Region (n=30) | Eastern Region (n=30) | Total (n=150) |
|---|----------------|-------------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|------------------|
| Do you find the | Yes, | 13 | 15 | 15 | 04 | 05 | 52 |
| present level of access | Agree | (43.3) | (50.0) | (50.0) | (13.3) | (16.7) | (34.7) |
| of extension services | Cannot | 2 | 10 | 0\4 | 7 | 1 | 24 |
| to women farmers is | say | (6.7) | (33.3) | (13.3) | (23.3) | (3.3) | (16.0) |
| adequate? | No | 15 | 05 | 11 | 19 | 24 | 74 |
| | | (50.0) | (16.7) | (36.7) | (63.3) | (80.0) | (49.3) |
| Do you feel that | Yes, | 15 | 7 | 15 | 11 | 12 | 60 |
| women farmers fail to | Agree | (50.0) | (23.3) | (50.0) | (36.7) | (40.0) | (40.0) |
| understand the | Cannot | 8 | 15 | 8 | 4 | 1 | 36 |
| complexities of | say | (26.7) | (50.0) | (26.7) | (13.3) | (3.3) | (24.0) |
| modern agricultural | No | 7 | 8 | 7 | 15 | 17 | 54 |
| technologies? | | (23.3) | (26.7) | (23.3) | (50.0) | (56.7) | (36.0) |
| Do you agree that for better reach of extension services to | Yes , Agree | 22 (73.3) | 23 (76.7) | 19 (63.3) | 26 (86.7) | 1 (3.3) | 91 (60.7) |
| women farmers, the | Cannot | 7 | 05 | 10 | 2 | 1 | 25 |
| number of female | say | (23.3) | (16.7) | (33.3) | (6.7) | (3.3) | (16.7) |
| extension staff needs | No | 1 | 3 | 1 | 2 | 1 | 8 |
| to be enhanced? | | (3.3) | (10.0) | (3.3) | (6.7) | (3.3) | (5.3) |
| Do you feel that | Yes, | 20 | 28 | 27 | 25 | 25 | 125 |
| women farmers need | Agree | (66.7) | (93.3) | (90.0) | (83.3) | (83.3) | (83.3) |
| to be adequately | Cannot | 8 | 1 | 1 | 2 | 4 | 16 |
| involved in the | say | (26.7) | (3.3) | (3.3) | (6.7) | (13.3) | (10.7) |
| extension activities/ | No | 02 | 1 | 2 | 3 | 1 | 9 |
| programmes? | | (6.7) | (3.3) | (6.7) | (10.0) | (3.3) | (6.0) |

Extension personnel suggestions for mainstreaming of women farmers in agricultural extension programmes

Majority of the sampled extension personnel on pooled data basis viewed that designing specialized training for women farmers (35%), approaching women farmers through SHGs or women's club (31%) and arranging on farm training in villages (10 %) for better reach of extension services to women farmers.

Table 5: Extension personnel's suggestions for mainstreaming of women farmers in agricultural extension programmes

| Response | Northern region (n=30) | Southern Region (n=30) | Central India (n=30) | Western region (n=30) | Eastern Region (n=30) | Total (n=150) |
|---|------------------------------|------------------------------|----------------------------|-----------------------------|-----------------------------|------------------|
| Designing specialized extension activities including use of simple language | 15 | 30 | 22 | 24 | 4 | 75 |
| | (50.0) | (100) | (73.3) | (80.0) | (13.3) | (50.0) |
| Encouraging better education for women farmers | 05 | 04 | 10 | 01 | 07 | 18 |
| | (16.7) | (13.3) | (33.3) | (3.3) | (23.3) | (12.0) |
| Proper Motivation of women | 06 | 01 | 01 | 01 | 01 | 08 |
| farmers | (20.0) | (3.3) | (3.3) | (3.3) | (3.3) | (5.3) |
| Approaching women farmers | 12 | 1 | 14 | 07 | 07 | 30 |
| in groups through SHG or club | (40.0) | (3.3) | (46.7) | (23.3) | (23.3) | (20.0) |
| Reservation up to 30 % for women extension staff | 02 | 01 | 07 | 21 | 07 | 22 |
| | (6.7) | (3.3) | (23.3) | (70.0) | (23.3) | (14.7) |
| Arranging on farm trainings in the villages by women trainers and experts | 11 (36.7) | 05 (16.7) | 01 (3.3) | 02 (6.7) | 15 (10.0) | 24 (16.0) |
| Demonstrations of agriculture technologies for women farmers | 02 | 05 | 04 | 03 | 03 | 08 |
| | (6.7) | (16.7) | (13.3) | (10.0) | (10.0) | (5.3) |
| Proper boarding and lodging arrangements for women at training centers | 02 | 02 | 01 | 04 | 11 | 13 |
| | (6.7) | (6.7) | (3.3) | (13.3) | (36.7) | (8.7) |
| Involvement in planning & designing of programmes | 02 | 05 | 01 | 02 | 01 | 11 |
| | (6.7) | (16.7) | (3.3) | (6.7) | (3.3) | (7.3) |
| No problems Increasing the subsidies for women farmers | 03 | 01 | 02 | 01 | 04 | 11 |
| | (10.0) | (3.3) | (6.7) | (3.3) | (13.3) | (7.3) |
| | 01 | 02 | 02 | 01 | 11 | 17 |
| | (3.3) | (6.7) | (6.7) | (3.3) | (36.7) | (11.3) |

However, inter regional variations were observed in the response on these three suggestions. Designing specialist extension activities was coherently perceived by EP from all the regions of the country except from eastern region. Suggestion of approaching women farmers in groups was given by larger number of EP from central (46.7%), northern (40%), western (27%) and eastern region (23%) except southern region (3.3%). Similarly, suggestions of arranging on farm training programme were stated by more frequently by EP from eastern region (50%), northern region (37%) and southern region (17%).

Besides the above suggestions some region specific suggestions also evolved as presented in table 5. A high percentage of EP from western (70%), eastern (23%) and central region of EP (23%) suggested the need for reservation for female extension staff for greater reach to women farmers while the suggestion was given by lower number of EP from southern region (3.3%). The reason for the response could be attributed to the high regional variation in the existing female extension staff percentage.

CONCLUSION

Extension personnel were found sensitive about the need for better integration of women farmers in extension services and recognized the contribution of women farmers to agriculture in activities like weeding, hoeing, harvesting, threshing and livestock rearing. However, the ratio of female extension staff was found to be dismissal at district level in most of the regions of the country. Prevalence of social taboos, lower literacy level among women posed problems for extension personnel for better integration of women in extension activities. To overcome the existing problems, the major suggestions for better integration of women farmers were related to designing specialized extension programmes and approaching women in groups and ensuring better training logistics at training centres for women farmers and enacting the necessary policy support in form of reservation for women staff in extension department at state and district level.

Paper received on : April 21, 2015 Accepted on : June 4,2015

REFERENCES

Anonymus, 2010. Gender and governance in agriculture extension services: Insights from India, Ghana and Ethopia. Agriculture and rural development notes (53) March. the world bank., pp1

Chayal, K; Dhaka,B.L. and Suwalka, R.L. (2010). Analysis of role performed by women in agriculture, *Humanity and social science journal*, 5(1), Pp 68-72.

Dimri, A. 1999. Economic analysis of contribution of women to dairy and crop farming system in Taria region of Nainital district. Unpublished Ph.D. Thesis, NDRI, Karnal.

Doorenbos, J; Haverkort, B. and Jiggins, J 1988. Women and rationalization of small holder agriculture, *Agricultural administration and extension*, 28(2), pp, 112.

Rabbe, K. 2008. Reforming the Agricultural Extension System in India What Do We Know About What Works Where and Why?, IFPRI Discussion Paper 00775, Development Strategy and Governance Division Internationals Food policy Research Institute, Washington, DC 20006-1002 USA

Rao, Krishna E. 2006 Role of Women in Agriculture: A Micro Level Study, <u>Journal of Global Economy</u>, 2(2), Pp, 107-118.

Sulaiman, V; Jafry Tahseen and Ashok, MS (2003). Cafeteria for Women in Agriculture. NCAP Working Paper 4, National Centre for Agricultural Economics and

Policy Research, New Delhi,pp 1

Uma Sah, SK Dubey and SK Singh. 2014. Empowerment of farm women with pulses production technologies: An empirical framework. *Current Advances in Agricultural Sciences* 6(1): 35-41.

Venkateswaran, S. 1992. *Living on the Edge: Women, Environment and Development,* Friedrich Ebert Stiftung, New Delhi.

World Bank 2007. Agriculture for development. World development report 2008. Washington, D.C.: The International Bank for Reconstruction and Development/World Bank.