

## **Constraints Faced by Scientists in Performing Linkage Activities with Extension Personnel**

Agricultural development is the process which is continuous and dynamic. Research system has to start the process by conducting basic and applied research. It is therefore important that researchers identify real problems and issues faced by the clients before making a research postulate. This requires a direct linkage of the research subsystem with both client as well as extension subsystem (Sinha, 1996).

Agricultural research institutions usually concentrate their efforts on strategic research and technology generation. Some efforts towards technology testing are also made. However, technology integration and production activities are generally neglected. In contrast, more extension agencies concentrate their efforts on technology production and dissemination with negligible attention given to technology integration and testing.

In the absence of effective linkage, researchers does not receive enough information about the environment and resource constraint, under which farmers are operating. Also extension agencies do not receive the necessary information and co-operation they need from researchers to adopt and then disseminate new technology. The linkage problem thus cause disruptions in technology flow and lead to low adoption rates, increased time laps between development and adoption of new technology, reduced efficiency in the use of resources, unnecessary competition and duplication of efforts and increased cost of agricultural research and extension activities. Keeping in view the problems in the performance of the linkage activities, the present study was designed to know the constraints faced by scientists in performing linkage activities with the extension personnel

and to get suggestions from them in order to strengthen these linkages.

The present study was carded out in four districts of northern Karnataka namely Dharwad, Belgaum, Gulbarga and Bellary. The selected respondents with respect to scientists consisted of all the 102 research personnel in the grade of Assistant Professors and above, involved in extension activities in the research station of the selected districts.

To know the problems faced by the scientists in performing linkage activities, list of likely problems were prepared based on the review of literature and discussion with the experts. Further, provisions were made to the respondents to indicate the problems they were facing in performing linkage activities.

It could be seen from table 1 that majority of the Professors (78.53%) expressed sufficient manpower was not provided by partner institute when required for carrying linkage activities followed by Associate Professors (69.23%) and Assistant Professors (62.90%). Since both the organisations are different and their nature of job is also different including, their roles and responsibilities. Researchers' main job is doing research with a little bit of extension and extension personnel' main job is transfer of technology with no research. They might not have sufficient time to participate in each other's activities. This might be the reason that majority of the scientists expressed this as a major constraint. Whereas, poor communication mechanism between them was also expressed by majority (71.42%) of the professors. Since the communication may take place between the higher officials of both the organisation and not in lower officials but may be

Table 1. Administrative and organisational, operational and managerial constraints faced by scientists in performing linkage activities

Sl No	Constraints	Professor (n=14)		Associate Professor (n=26)		Assitant Professor (n=62)	
		Freq.	%	Freq.	%	Freq.	%
1.	Lack of clear cut policy guidelines for linkage activities	8	57.14	19	73.07	42	67.74
2.	Heavy research work load in the university	6	42.86	16	61.53	38	61.29
3.	Poor communication mechanism between them	10	71.42	12	46.15	32	51.61
4.	Sufficient manpower was not provided by partner institute when required for carrying linkage activities	11	78.53	18	69.23	39	62.90
5.	Distant location of research station and department of agriculture makes it difficult to have effective linkages	2	14.29	8	57.14	33	53.22
6.	Lack of financial provision to carry out the linkage activities	11	78.53	22	84.61	47	75.80
7.	Lack of financial provision to carry out the linkage activities	12	85.71	21	80.76	38	61.29
8.	Lack of sufficient time to participate in extension activities	9	64.28	19	73.07	41	66.12
9.	Lack of proper feed back on farmers problems from extension workers	12	85.71	22	84.61	37	59.67
10.	Poor participation of extension personnel in the meetings, field days etc.	11	78.53	19	73.07	39	62.90

due to lack of proper time due to their respective work, they might not have communicated with each other about the information which is required. Eventhough, communication between scientist and extension personnel is there but there may not be a free flow of information due to their different jobs and different organisations. This might be the reason that majority of Professors expressed poor communication mechanism between them.

This finding was in line with the findings of Singh (1984) and Lupanga (1995) who also reported that there is no proper communication between the two system.

Majority (73.011%) of Associate Professors expressed lack of clearcut policy guidelines for linkage activities followed by 67.74 per cent of Assistant Professors who also expressed the same constraint. Though, there is a memorandum of understanding between university and department of agriculture in that they have mentioned that there must be a coordination between the personnel of two organisation. But, it failed to spell out what type of ordination is needed, in what context and by whom to enhance the coordination and cooperation between the personnel of two system. This might be the reason that majority of

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Associate and Assistant Professors expressed the same problem.

The findings of the study was in line with the findings of Wang and Liu (1994) who suggested that there must be clear cut policy to enhance the linkage between the personnel of these two systems.

Similarly, over sixty per cent of Associate Professors (61.53%) an Assistant Professors (61.29%) also expressed the heavy research work load in the university. The discussion for sufficient manpower was not provided by partner institute when required for carrying linkage activities also holds good for this constraint.

It is also evident from table 1 that, majority (85.71%) of the Professors expressed lack of proper feedback on farmers' problem from extension workers followed by Associate Professors (84.61%). Since, Agricultural officers, are the extension workers at field level and they are the persons who have to bring the farmers problems to the scientists. The communication gap between higher and lower officials may also be the reason that scientists may not be able to get the proper information they want.

Similarly, lack of proper conveyance facilities to participate in extension activities was expressed by majority of Professors 85.71%), Associate Professor (80.76%) and Assistant Professor, (61.29%). There may not be sufficient finance available with scientists to carry out linkage activities and due to this they may not be able to hire more transportation facilities to participate in extension activities. This might be the reason that majority of them expressed these as a major problem. Majority of the Professors (78.53%) also expressed poor participation of extension worker in the meetings, field days etc. followed by Associate Professors (73.07%) and Assistant Professors. The discussion of lack of

proper feedback on farmers problem from extension personnel also holds good here.

The findings of the study were supported by the findings of Ingle *et al.* (1993); Wang and Liu (1994) and Eswarappa (1999) who also expressed that the lack of finance and transportation facilities hinders the linkages between scientists and extension personnel.

It could be seen from the table 2 that cent per cent of professors suggested that provision for farmers participation in research and extension activities, liaison with private organization and NGO's by both the system and sufficient finance and transportation facilities must be made available to participate in extension activities. Whereas, majority (78.53%) suggested that the staffing extension personnel in research station followed by exchange of information by using jointly developed protocols (71.42%) for strengthening linkages with the extension personnel.

Similarly, 80.76 per cent of associate professors suggested that sufficient finance and transportation facilities must be made available to participate in extension activities and liaison with private organization and NGO's by both the system for strengthening linkages between them. Again, 73.07 per cent Suggested provision for farmers participation in research and extension activities followed by staffing extension personal in research station (69.23%).

Majority (72.58%) of Assistant Professors also suggested that sufficient finance and transportation facilities must be made available to participate in extension activities followed by liaison with private organisation and NGO's by both the systems (67.74%). More than sixty per cent (62.90%) suggested that provision for farmer's participation in research and extension activities is a must for strengthening linkages.

Table 2. Suggestions given by scientists for strengthening linkages

Sl. No.	Suggestions	Professor (n=14)		Associate Professor (n=26)		Assistant Professor (n=62)	
		Freq.	%	Freq.	%	Freq.	%
1.	Staffing extension personnel in research station	11	78.53	18	69.23	25	40.32
2.	Provision for farmers participation in research and extension activities	14	100.00	19	73.07	39	62.90
3.	Laison with private organisation and NGO's by both the system	14	100.00	21	80.76	42	67.74
4.	Establishing joint review of research and extension activities	7	50.00	15	57.69	35	56.45
5.	Provision of incentives to increase their participation in linkage activities	8	57.14	16	61.53	34	54.81
6.	Joint participation in functions such as field testing, demonstrations etc. should be enhanced	8	57.14	17	65.38	37	59.67
7.	Exchange of information while using jointly developed protocols	10	71.42	17	65.38	37	59.67
8.	Sufficient transportation facilities must be made available to participate in extension activities	14	100.00	21	80.76	45	72.58

Department of Agril. Extension Education  
University of Agricultural Sciences  
Dharwad - 580 005

VINOD GUPTA  
D.M. CHANDARGI

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