

Impact of Professional Factors on the Working Efficiency of Agriculture Extension Field Staff in Punjab

M. ASLAM KHAN, M. YAQOUB[†], AHTASHAM GUL[‡] AND SAEED AHMAD[¶]

Agriculture Extension, Pakistan Academy for Rural Development (PARA) Peshawar, Pakistan

[†]*Department of Livestock Management, University of Agriculture Faisalabad–38040, Pakistan*

[‡]*Research Section, PARA Peshawar, Pakistan*

[¶]*Directorate of Agriculture (Extension & Adaptive Research), Lahore–Pakistan*

ABSTRACT

A study was conducted in major agricultural ecological zones of Punjab to identify the professional factors affecting the working efficiency of agriculture extension field staff during the years 1997 and 1998. Random samples of 16 Deputy Directors of Agriculture out of 34 (category I), 46 Extra Assistant Directors of Agriculture out of 85 (category II) and 175 Agricultural Officers out of 350 (category III) were taken. A comprehensive questionnaire regarding professional parameters was developed, pre-tested and personally administered to the 237 selected respondents. Results of the study revealed that majority of respondents were of the view that professional degree was helpful in performing extension activities, but there is need of improvement in syllabi, in-service training, supply of audio visual aids, timely supply of information and close linkage between extension and research organization. The working efficiency of the staff can be improved by revisiting the professional factors of the field staff.

Key Words: Impact; Working efficiency; Extension; Punjab

INTRODUCTION

Pakistan has agricultural based economy. Agriculture sector contributes 25% to grand domestic production and employees 44% of the total labour force. It contributes 80 percent of foreign exchange and provides raw material to many industries (Pakistan Economic Survey, 2001-2002).

Presently the crop productivity for most crops is very low compared with developed countries (FAO 1993). This reflects an inadequate access of farmers to better farming technology. This is mainly due to poor services provided by the agriculture extension department.

Availability of improved technology and its effective dissemination are two pre-requisites in productivity. There is considerable dissatisfaction on the performance of extension services among farming and related communities. There are so many weakness identified in the present extension system (Malik & Prawl, 1993), of which professional factor is the most important. Non availability of qualified staff, outdated syllabi of agriculture subjects, lack of in-service training, no use of audio visual aids, improper utility of agricultural technologies and non-availability of timely information about new technology are the major bottlenecks. Therefore, there is a dire need to appraise the impact of these factors for improving the working efficiency of extension field staff so that sustained agricultural productivity is improved. Due to these constraints the front line workers are not able to make maximum use of their energies.

The present study was therefore conducted to identify the extent of the professional factors affecting the working efficiency of agriculture staff, since their working efficiency has a direct bearing on the efficacy and quality of extension services in the Punjab province.

MATERIALS AND METHODS

The study was based on descriptive survey methodology. The population for the study comprised of supervisory field workers and officers of the Department of Agricultural Extension in the Punjab. For the purpose of this study three administrative divisions i.e. Multan, Rawalpindi and Lahore were included.

The list of respondents was taken from the office of Director General of Agriculture (Extension & Adaptive Research) Punjab. The stratified sampling technique (William & Cochran, 1997) with proportionate allocation was used to select representative sample. The population was divided into homogenous subgroups of respondents to their respective population size. The sample composed of 16 Deputy Directors of Agriculture out of 34, 46 Extra Assistant Directors of Agriculture out of 85 and 175 Agricultural Officers out of 350. The data were collected with the help of pre-tested interview questionnaire and analyzed by using statistical software SPSS.

RESULTS AND DISCUSSION

Professional factors and their usefulness. The data regarding professional factors affecting the working efficiency of agriculture extension field staff of three categories revealed that 18.75, 30.42 and 40% of the category first, second and third respectively was considered useful who got professional degree from the Universities of Agriculture (Table I).

Need for change of syllabi. Data indicated that 87.5, 84.78 and 82.49% of categories first, second and third considered it necessary to change the syllabi while 12.50, 15.22 and 17.71% of category first, second and third inform that there is no need of change in syllabi (Table I). These results conform to the reports of Bembridge (1987) and Dakhore and Bhilegonkar (1987) who stated that modifications in the syllabi of major subjects of agriculture are needed, particularly with reference to physiological disorders of crops.

Usefulness of training received. Data revealed that 37.5, 30.5 and 36% of the respective categories received the in-service professional training (Table I). Only 43.75, 39.13 and 41.71% of these categories considered it highly useful while 0, 15.42 and 11.43% considered otherwise. Gholamerzu (1997) have reported similar results.

Table I. Professional factors affecting working efficiency of extension field staff

Activity	Presentation					
	DDA (N=16)		EADA (N=46)		AO (N=175)	
	Total	%age	Total	%age	Total	%age
Usefulness of professional degree						
Most helpful	3	18.75	14	30.43	70	40
Helpful	11	68.75	19	51.3	78	44.57
Less helpful	2	12.5	13	28.26	27	15.43
Need of change of syllabi of the major subjects of agriculture						
Yes	14	87.5	39	84.78	144	82.29
No	2	12.5	7	15.22	31	77.71
In-service Training received						
Yes	6	37.5	14	30.43	63	36
No	10	62.5	32	69.57	112	64
Usefulness of training received						
To great extent	7	43.75	18	38.03	73	41.71
To some extent	9	56.25	21	45.65	82	46.86
Not at all			7	15.22	20	11.43
Access to audio-visual aids for transfer of technology						
Yes	6	37.5	9	19.57	23	13.14
No	10	62.5	37	80.43	152	86.86
Timely information regarding new technology provided by higher ups						
Yes	9	56.25	17	36.96	55	31.43
No	7	43.75	29	63.04	120	68.57

Access to audio visual aids. Most of the respondents (62.5, 80.4 and 86.8% each from first, second and third categories) had no access to audio visual aids and remaining has little access. This is in conformity with Damrong Kiattisak (1985) and Samy (1988). Exclusive number of respondents (about 100%) remarked that availability of audiovisual aids enhance working efficiency of extension workers.

Timely provision of information on new technology. Estimates indicated 43.75, 63.04 and 68.57% of category first, second and third respectively receive technical information very late from the head offices. These results are supported by Malik (1988) who stated that lack of communication among various institutions is another constraint in the adoption of improved farm practices.

Usefulness of various disciplines in carrying out extension work. It is obvious from data in Table II that all the categories were of the opinion that Agronomy, Entomology and Extension were the most helpful disciplines in the agricultural extension work followed by Plant Pathology, Soil Science and Horticulture. However, Category-III (Agricultural Officers) had slightly different opinion. They described that, in addition to the above disciplines, Agriculture Economics, Plant breeding and Genetics, Forestry, Food Technology and Genetic Engineering were also helpful. Generally, all subjects appear to be equally applicable for performance of extension service. Perhaps it is due to syllabi of batchelor's degree in agriculture in which all subjects are taught to considerable depth to students and all agricultural graduates are able to understand most of the agricultural problems with little efforts.

Forms of receiving message from training staff. Study revealed that 43.75, 43.48 and 54.29% respondents of category I, II, and III respectively received message in printed form. About 31.25, 17.39 and 24.57% respondents of these categories respectively received message during lecture/discussion (Table III). Zero, 2.17 and 1.14% respondents of these categories received messages by videocassette. Data revealed that 6.25, 2.171 and 5.14% respondents got information through demonstration. Likewise, 6.25, 2.17 and 1.7% respondents of category II III and I, respectively always received message through result demonstration method. These findings are in contradiction to the results reported by Chedanandappa (1992) and Randavay and Vonghn (1991) who stated that the greatest training need was found to be in the area of "teaching and communication". The workers mostly received trainings through principles of learning, motivation, using television, preparing teaching material, select proper teaching and results demonstration methods.

Forms of Conveying Message to Farmers

Verbal. The results indicated that 31.25% of respondents of category I always, 50% most of the times and 18.75% sometimes conveyed verbal message to the farmers (Table IV). Nearly 46% respondents of category-II (EADAs) always conveyed message to the farmers in verbal form, 45.65% quite often while 8.70% conveyed message sometime in verbal form. Likewise, 66.86% of the respondents of category-III always conveyed message to the farmers in verbal form, 27.43% quite often while 5.7% sometime.

Printed material. Out of total, 18.75% of the respondents of category-I (DDAs) always conveyed instructions to the

Table II. Degree of helpfulness of various subjects in carrying out extension work

Category	Level	Subject
Deputy Director of Agriculture (N=16)	Most Helpful	Agronomy
	More helpful	Soil Science
	Helpful	Plant Pathology
Extra Assistant Director of Agriculture (N=46)	Most helpful	Agronomy
	More helpful	Soil Science
	Helpful	Agri. Economics
Agricultural Officer (N=175)	Most helpful	Agronomy
	More helpful	Plant Pathology
	Helpful	Agri. Economics

Category	Level	Subject
Deputy Director of Agriculture (N=16)	Most Helpful	Entomology
	More helpful	Plant Breeding & Genetics
	Helpful	Forestry, Food Technology, Genetic Engineering
Extra Assistant Director of Agriculture (N=46)	Most helpful	Entomology
	More helpful	Horticulture
	Helpful	Forestry, food Technology, Genetic Engineering
Agricultural Officer (N=175)	Most helpful	Entomology
	More helpful	Soil Science
	Helpful	Plant Breeding & Genetics

Table III. Forms of receiving message from training staff

Activity	DDA (N=16)		Respondents EADA (N=46)		AO (N=175)	
	Total	%age	Total	%age	Total	%age
Printed material						
Always	7	43.75	20	43.48	95	54.29
Often	6	37.5	10	21.74	48	27.43
Sometime	3	18.75	16	34.78	32	18.28
Lecture / Discussion						
Always	5	31.25	8	17.39	43	24.57
Often	3	18.75	14	30.43	47	26.25
Sometime	8	50	24	52.17	85	48.57
Video Cassettes						
Always			1	2.17	2	1.14
Often			1	2.17	9	5.14
Sometime	16	100	44	95.65	164	93.72
Method Demonstration						
Always	1	6.25	1	2.17	9	5.14
Often			1	2.17	16	9.14
Sometime	15	93.75	44	95.65	150	85.72
Result Demonstration						
Always	1	6.25	1	2.17	3	1.71
Often	1	6.25	2	4.35	15	11.52
Sometime	14	87.5	43	93.47	152	86.85

farmers in printed form, 6.25% quite often while 75% sometime used this method (Table IV). The results further showed that 6.52% of the respondents of category-II (EADAs) conveyed message to the farmers in printed form always, 8.70% often and 84.78% conveyed message sometime in printed form. The result in Table IV further shows that 5.14% of the respondents of category-III (AOs) always conveyed message to the farmers in printed form, 19.43% quite often and 75.43% did so sometimes.

Method demonstration. The results explicitly show that 12.5% of the respondents of category-I (DDAs) conveyed message to the farmers always through method demonstration always, 18.75% did so quite often and 68.75% just a few times (Table IV).. Furthermore, 10.87% of the respondents of category-II (EADAs) always conveyed message to the farmers through method demonstration, 15.22% quite often while 73.91% did so just sometimes. Data revealed that 10.29% of the respondents of category-III (AOs) always adopted this way of conveying message, 25.14% quite often, and 64.57% did so sometimes.

Result demonstration. As is evident from Table IV, 12.5% of the respondents of Category-I (DDAs) always conveyed message to the farmers through result demonstration, 18.75% most of the times while 68.75% did so sometimes. Contrarily, 13.04% from Category-II always conveyed message through this method, 17.39% often while 69.56% conveyed message sometime through the result demonstration. From category III, 9.71% always conveyed message through this method, 26.29% often while 63.91% did so sometimes.

Seminars. Data revealed that 12.50% of the respondents of category-I (DDAs) always delivered seminars to the farmers always, 6.25% often and 81.25% used this method sometimes (Table IV). No respondents from category-II always used this method, 4.35% often while 95.65% conveyed message sometimes by this means. From category III, 1.71% of the respondents always delivered seminars to the farmers, 9.14% often, and 89.55% did so sometimes.

Extension workers use variety of extension methods to disseminate information to farmers regarding production technology. Under prevailing condition verbal communication was found to be 1st, result demonstration 2nd method, result demonstration as 3rd and printed material 4th choice. These results support the findings of Reddy (1987) Malik (1988), Debowski and Ryznar 1989, Randavay and Voughn (1991) and Muhammad and Garforth (1995). On the basis of prevailing trend it can be concluded that poor performance of extension staff is also due to lack of the use of demonstration method. Although this method it is expensive, it gives excellent results.

Linkage between agriculture extension and agriculture research. Data suggest that 100% of respondents of all the categories were of view that there is poor linkage between agriculture extension and research institutes, which is affecting the working efficiency (Table IV). Moreover, a great majority of the respondents were not at all satisfied with the existing linkage between research and extension institutions, which agrees with the findings of Benor *et al.* (1984). In a study conducted by Lodhi and Khan (1988) in the Punjab, similar working relations between research and extension were reported. Similar results were reported by El-Zoobi and Malik (1993) and Maglinao (1997) "who reported that there exist unworkable, weak, ineffective or no

Table IV. Forms of conveying message to farmers

Activity	Respondent					
	DDA(N=16)		EADA(N=46)		AO(N=175)	
	Total	%age	Total	%age	Total	%age
Verbal						
Always	5	31.25	21	45.65	117	66.86
Often	8	50	21	45.65	48	27.43
Sometime	3	18.75	1	8.7	10	5.71
Printed material						
Always	3	18.75	3	6.52	9	5.14
Often	1	6.25	4	8.7	34	19.43
Sometime	12	6.25	4	8.7	34	19.43
Method Demonstration						
Always	2	12.5	5	10.87	18	10.29
Often	3	18.75	7	15.22	44	25.14
Sometime	11	68.75	34	73.91	113	64.57
Result Demonstration						
Always	2	12.5	6	13.04	17	9.71
Often	3	18.75	8	17.39	46	26.29
Sometime	11	68.75	32	69.56	112	63.91
Seminar by Competent Authority						
Always	2	12.5			3	1.71
Often	1	6.25	2	4.35	16	9.14
Sometime	13	81.25	44	95.65	156	89.55
Poor linkage between Agriculture Extension and Agriculture research institutions						
Yes	16	100	46	100	175	100
No	0	0	0	0	0	0

linkage among research and extension institutions and farmers.

REFERENCES

Benor, D. J.Q. Harrison and M. Baxter, 1984. *Agriculture Extension: the training and visit system*. World Bank, Washington, D.C.

Bembridge, T.J., 1987. Agricultural extension in the less developed areas of Southern Africa. *Agricultural Administration and Extension*, pp. 245–65

Chidanandappa, G., and V. Veerabhadraiah, 1988. Mass media utilization by extension personnel. *Mysore J. Agric. Sci.*, 22: 120–5

Dakhore, K.M., M.G. Bhilegaonkar, 1987. Self assessed levels of job performance of the veterinary extension personnel. *Maharashtra J. Extension Education*, 6: 139–46

Damrongkiattisak, W., 1985. *Communication Effectiveness among Extension Agents and Rice Farmers in Northern Thailand*. Unpublished doctoral dissertation. The Pennsylvania State University, U.S.A.

Debowski, S. and J. Ryznar, 1989. The achievements of demonstration farms seen as a result of the work of advisory. *Osiagniecia gospodarstw przykladowych jako wynik pracy instruktorsko-doradczej*. Zeszyty Naukowe Akademii Rolniczej we Wroclawiu, *Rolictwo*, 42: 213–21

El-Zoobi, A. and W. Malik, 1993. Agricultural Extension and Media outreach. Proc. *National Workshop on Reforming Agricultural Extension in Pakistan*, 24–26 October, 1993, sponsored by FAO/UNDP, PARC Islamabad.

Garforth, C., 1997. Supporting sustainable agriculture through extension in Asia. Overseas Development Institute, London, UK. OKI Natural Resources perspectives, pp. 21–4

Lodhi, T.A. and S.A. Khan, 1988. *Linkage Between Agricultural Research and Extension in Punjab*. Division of Education and Extension, University of Agriculture Faisalabad, Pakistan

Table V. Administrative factors affecting working efficiency of field staff

Activity	Respondent					
	DDA(N=16)		EADA (N=46)		AO(N=175)	
	Total	%age	Total	%age	Total	%age
Do you agree/disagree with the following statements?						
1). Promotions are lacking in the Department						
Agree	16	100	40	86.96	165	94.269
Disagree	0	0	6	13.04	10	5.71
II) Subordinates work with you in Harmony.						
Agree	10	62.5	28	60.86	118	67.43
Disagree	6	37.5	18	39.13	57	32.57
III) Knowledge of training staff is not up to marks:						
Agree	11	68.75	36	78.26	114	65.14
Disagree	5	31.25	10	21.74	61	34.86
Area under jurisdiction is too large?						
To great extent	1	6.25	18	39.13	32	18.29
To some extent	3	18.75	10	21.74	87	49.71
Not at all	12	75	18	39.13	56	32
Asked for unconcerned duties?						
Often	2	12.5	14	30.43	19	10.86
Sometimes	8	50	23	50	91	52
Never	6	37.5	9	19.57	65	37.14
Involvement in policy decision making in the department?						
Most of time	0	0	0	0	0	0
Sometimes	3	18.75	3	6.52	10	5.71
Never	13	81.25	43	93.48	165	94.29
If never does is effect development/progress of the department?						
To great extent	8	50	27	58.7	110	62.86
To some extent	7	43.75	17	36.96	53	30.29
Not at all	1	6.25	2	4.35	12	6.86
Satisfaction with the present system of the assessment of working Efficiency?						
Yes	6	37.5	14	30.43	63	36
No	10	62.5	32	69.57	112	64
Present structure of Extension Wing is effective?						
To great extent	2	12.5	9	19.57	37	21.14
To some extent	11	68.75	21	45.65	102	58.29
Not at all	3	18.75	16	34.78	36	20.57

Maglinao, A.R., S.S. Ombatpanit, M.A. Zobisch, D.W. Standers and M.G. Cook, 1997. Accelerating technology transfer and a doption; the challenge to research and extension. *Soil Conservation Extension*; from concepts to adoption: 405–16

Malik, W. and W. Prawl, 1993. Reforming Agriculture Extension in Pakistan. Proc. 3 *National Workshop on reforming Agriculture extension in Pakistan*, pp. 25–7. PARC Islamabad

Randavay, S. and P.R. Vanghn, 1991. Self perceived Professional competencies needed and processed by Agricultural Extension worker in Western region of Thailand: A multivariate Technique approach. *The Informer Association for International Agriculture and Extension Education* 7: 19–26

(Received 10 July 2004; Accepted 05 December 2004)