

Professional Progress and Its Effect on Agricultural Extension Agents Services

Muhammad Israr¹, Mrs. Nafees Ahmad², Khalid Nawab³, Shamsheer Ali⁴,
Barkatullah Khan⁵, Muhammad Aamir⁶ and Muhammad Ibrahim⁷

Abstract

The aim of this research was to study the different professional factors affect the services of the agriculture extension agents in the two purposively selected districts of Khyber Pakhtunkhwa. For this all the employed processional (82) of the agriculture extension department of the respective districts was the respondents of the study. Data was collected by means of questionnaire and were analysed by using descriptive statistics and Chi-square test. Findings of the study revealed that there is no association in the age group of the respondents in the selected district. Mostly having 16 and above years of experience. Thirty eight percent were strongly agreed for help of professional degree in the practical field while 52% answered for change in the major subject of agriculture. In-service trainings were received by 68% respondents. Majority reported for having no access to audio-visual aids for transfer of technology to the farmers at the field level. Demonstration methods were used by 56% respondents as a form of conveying information to the farmers. The respondents strongly agree and satisfied from new technology Demonstration methods were used by 56% respondents as a form of conveying information to the farmers and also commented for linkages between agricultural research and agricultural extension. The study as a whole conclude that in the study area majority of the employee were old, not benefit for the trainings, used the old methods for demonstration and were diploma holder. The study recommends employment of young and energetic graduates, suitable and timely imparted trainings and the introduction and practice of new technology and new methods for extension which will leads to the sustainability of agriculture in the area.

Key Words: Extension Agents, Services and Working Efficiency of Extension Agents.

Introduction

Agricultural extension is the application of new knowledge and scientific research to agricultural practices and development through farmer education for enhancing their skills and capabilities. The new ideas in agriculture introduced to the farmer in the field are the work and duty of the extension agents. Extension agents can be found throughout the world, usually working for government agencies and agricultural development organizations.

¹ Assistant Professor, Department of Rural Development, The University of Agriculture, Peshawar, AMK Campus, Mardan, Khyber Pakhtunkhwa, Pakistan

² Lecturer, Department of Economics, University of Malakand, Khyber Pakhtunkhwa, Pakistan

³ Professor, Department of Agricultural Extension Education and Communication, The University of Agriculture, Peshawar, Pakistan

⁴ Assistant Professor, Department of Soil and Environmental Sciences, AMK Campus Mardan, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan

⁵ Post Graduate Student, Department of Agricultural Extension Education and Communication, K.P. Agricultural University Peshawar, Pakistan

⁶ Lecturer, Department of Agriculture Mechanization, AMKC, Mardan, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan

⁷ Lecturer, Department of Agriculture and Applied Economics, AMKC, Mardan, The University of Agriculture, Peshawar, Khyber Pakhtunkhwa, Pakistan

Extension service in agriculture is indispensable and it offers more than just expert assistance in improvement of production and processing, it also enables flow of information and transfer of knowledge and scientific findings to practice.

According to Rogers and Shoemaker (1991) extension service has undergone numerous changes and has influenced unevenly application of certain scientific achievements in the practice. In dissemination and adopting new technologies, socio-economic attributes such as education level, age and communication behaviors, relationship with neighbor and relatives, professional experience, length of service are important factors contributing towards the development of agriculture productivity.

Effectiveness in agricultural extension activities substantially depends on the attributes of farms and farmers. Rogers (1995) suggests that socio-economic characteristics, personality values and communication behavior of individuals influence their way of adopting innovations and accepting new challenges in agricultural development process. Agricultural extension activity is important agrarian-political instrument of the state which stimulates the development of agricultural production. Agricultural extension service has to be competent in agricultural skills, to communicate efficiently with producers and stimulate them to acquire new knowledge. In numerous World countries has lead to forming of special institutions as part of their own policies of technical-technological development of agriculture, and these institutions would be engaged in application of scientific results in agricultural production (Glover, 1994).

In viewed of Rivera (1996) agricultural extension service has the objective to assist family holdings or farmers in improvement of the methods and techniques of agricultural production, farm management, and increase of income and of productivity and production quality, increase of standard of living and elevating of social and educational standards in villages. Dominance of large number of small family farms, holdings and need to adjust to new scientific achievements and results, as well as lower educational level of agricultural producers, compared to workers in other fields of economy and industry.

Agricultural extension services are important policy tools in agriculture and rural development. In the developed as well as in the non developed world these services have been provided to farmers free of charge as a public service. The extension activities have aimed to teach farmers informally the ways to improve their agricultural practices so that they can adopt new productivity and profit increasing technologies in their farming activities (Mulayim, 1995). Extension people are those who use available tools effectively to help farmers adopt and apply the new technologies as fast as possible (Heeks, 1999). While performing such duty agricultural extension agents are facing numerous problems in present times which affect their services for agriculture development in our country in general and in the province in particular. One of these is the professional factors. To identify these factors the study in hand is design with the following objectives.

Objectives of the Study

- I. To study the different professional factors of the extension agents which affect their services during the agriculture development process in the study area?
- II. To study the way through which the extension agents transfer the information to the receivers and how it affect the process of agriculture development.
- III. To suggest recommendations on the basis of study findings for policy formulation about the extension services for agriculture development in the region particular and in the country in general.

Hypothesis

It is assumed that under (H_0), there is no significant association between variables of interest in the selected districts, while for (H_1) assumes that there is significant association between the variables of interest in the two districts.

Material and Methods

This study was conducted during December, 2012 in the two purposively selected districts i.e. Swat and Buner of Malakand Division, Khyber Pukhtunkhwa. The population included all the employed members of provincial Government department of agriculture extension in the two selected districts. There were a total of 19 field assistant and 05 agriculture officers in district Swat, while in district Buner there were a total of 52 fields assistant and 06 agricultural officers involved in agriculture extension process. Thus the total sample size was 82. Questionnaire was an instrument for conducting the study. Data collection through questionnaire is a useful tool in social and scientific research (Cohen et al. 2002, Bassey, 1999). In this regard, questionnaire was developed to collect data from the respondents in two selected districts. The researcher visited these two districts and also administered already pre-tested structured questionnaire. All the respondents in the two districts were purposively selected. Furthermore, selection of sample from the two districts will have no problem in the generalization of the results of the study for the whole province. For analysis of data, descriptive statistics were used (Microsoft Exil, 2007) and for comparison purposes the Chi-square test were used.

Results and Discussions

Professional, socio-economic and demographic factors play important role in the efficiency and capabilities of an individual. These factors are the age of extension agents, education level, service experience, professional degree help, role of the existence agriculture curriculum in the development of agricultural professional capabilities and the sources which the extension agents transfer the information to the farmers. So, first age of the respondents.

Age of the respondents

Age is an important factor in determining the energy and exertion of an individual towards achievements of different targets. These targets are directly affecting the status of the individual and his family. Age is a factor which plays an important role in the adoption or rejection of a practice. Therefore, the respondents were asked to provide, so far as possible, their correct age. The information regarding the age of the respondents are presented in table-I. The age of the respondents is classified in to four groups (a) from 20-30 years (b) from 31-40 years (c) from 41-50 years (d) above 51 years. In district Swat, 21% of the respondents were between 20-30 years of age, 17% were between 31-40 years of age, 29% were between 41-50 years of age, while maximum (33%) respondents were above 51 years of age. In district Buner, 16% of the respondents were between 20-30 years of age, 17% were between 31-40 years of age, 29% were between 41-50 years of age, while maximum (38%) respondents were above 51 years of age.

Data also present the four age groups of the respondents; highest percentage (36%) was noted in the group of 51 years and above. The figure also depicts that 30% were between 41-50 years, while minimum percentage (17%) was noted in the remaining two groups 20-30 and 31-40 years of the respondents. It is clear from the table that expert and talented people were selected for the study to collect accurate information. From the tabulated data it is concluded that majority of the respondents in the two selected districts were of old age. The same observation were made by Bowen *et al.* (1994) stated that older and more experienced extension agents had higher levels of job satisfaction and were more committed to

cooperative extension than younger less experienced agents. The Chi-square calculated is 3.4026, implies the acceptance of H_0 and the rejection of H_1 , that there is no difference in age group of the respondents in the two districts.

Table 1: Distribution of respondents on the basis of age

District	Age group (years)				Total
	20-30	31-40	41-50	51 & above	
Swat	5* (21)**	4 (17)	7 (29)	8 (33)	24
Buneer	9 (16)	10 (17)	17 (29)	22 (38)	58
Total	14 (17)	14 (17)	24 (30)	30 (36)	82
χ^2 Cal. = 3.40276, χ^2 Tab. at 5% = 7.814728					

Source: Field survey, 2012. * Figure shows numbers, ** Figure shows percentages

Education level of the respondents

Education is one of the most important factors for using different information sources, analyzing new information in terms of acceptance/adoption and dissemination of this information to other fallows for their benefits. It is suggested that education plays a vital role in the adoption of improved agricultural technology and to control factors affecting extension services. Education level of the respondents is explained in table-II. It is evident from the data that in district Swat, out of total 24 respondents, majority (79%) of the respondents were Diploma holders. Seventeen percent (17%) of the respondents were Master degree holders, while one respondent (4%) was found having bachelor degree. While in district Buneer, out of total 58 respondents, majority (89%) of the respondents were Diploma holders. Nine percent (9%) of the respondents were Master degree holders, while one respondent (2%) was found having bachelor degree.

Data also explain that out of total 82 respondents, majority (87%) were Diploma holders, 11% having master degree, while two percent (2%) were having bachelor degree. From the table it is concluded that majority of the extension agents in the area were diploma holders. These are field assistants, while agriculture officers involved in extension activities were having Bachelor and Master level of education. Chi-square of education implies that there is no significant association in the level of education of the two districts of the area.

Table-II: Distribution of respondents on education level

District	Educational level				Total
	B.Sc	M.Sc	Ph.D	Diploma holder	
Swat	1 (4)	4 (17)	-	19 (79)	24
Bunair	1 (2)	5 (9)	-	52 (89)	58
Total	2 (2)	9 (11)	-	71 (87)	82
χ^2 Cal. = 5.0035, χ^2 Tab. at 5% = 7.814728					

Source: Field survey, 2012.

Service experience of the respondents

Service experience is a frequent strives of individuals, help them in providing opportunities to develop knowledge and help the population. As agriculture officer and agricultural field assistant working in the study area also play an eminent role in the advancement of farming community related to crop productivity and the adoption of new technology. Data in table III describes service experience of the respondents. It is evident for the data that in district swat, 50% were having great experience of 16 years and above. Five (21%) respondents each were having 1-5 and 11-15 years service experience. Where two (8%) respondents were having service 6-10 years experience.

In district Buneer, 48% were having an experience of 16 years and above. Thirteen (22%) respondents were having 1-5 years and nine (16%) respondents were expert 11-15 years. Only 8(14%) respondents were having 6-10 years service experience.

The data in table also shows that 48% of the respondents were having 16 years and above experience, 22% were 1-5 years, 17% were 11-15 years, while 13% respondents were having experience of 6-10 years. The data reveal that most of the respondents were having 16 and above years experience. This means that most of the respondents were well versed in their area by having a long experience. Similar observation have been made by Terry (2004) stated that extension agent having 15-19 years of experience having well versed in their field and perform better. The chi-square calculated value is 5.802, implies that is no significant association in the years of service experience of the respondents in the selected districts.

Table-III: Distribution of respondents on service experience

District	Service experience in years				Total
	1-5	6-10	11-15	16 & above	
Swat	5 (21)	2 (8)	5 (21)	12 (50)	24
Bunair	13 (22)	8 (14)	9 (16)	28 (48)	58
Total	18 (22)	10 (13)	14 (17)	40 (48)	82
χ^2 Cal. = 5.802, χ^2 Tab. at 5% = 7.814728					

Source: Field survey, 2012.

Professional degree helps in the practical field

Professional degree is a common felt of the community which help them in their practical life. It is helpful for the professionals in performing extension activities. Table IV exhibit the professional degree profile of the respondents. Data main findings show that in district Swat, 9(38%) respondents agreed that professional degree was helpful, six (25%) were strongly agreed, 2(8%) undecided, 3(12%) were disagreed, while 4(17%) respondents were strongly disagreed with the help of profession degree in practical field.

In district Buneer, 25(43%) strongly agreed that professional degree was helpful, 16(28%) were agreed, while 6(10%) undecided the same criteria. Five (9%) respondents were disagreed, while 6(10%) were strongly disagreed with the statement that the professional degree were helpful in the practical filed.

The table also presents that out of total 82 respondents, 38% were strongly agreed, 30% were agreed with the statement that the professional degree is helpful in the practical filed. While 10% of the respondents each undecided and disagreed with the statement, 12% were strongly disagreed with the statement that professional degree was helpful. It is concluded that most of the respondents were agreed with the help and positive outcome of professional degree in practical field of service.

These results were related with the findings of Khan *et al.* (2005) stated that the professional degree was helpful in performing extension activities. The chi-square value implies that most of respondents strongly agreed that the professional degrees are helpful in the practical field. So, here H_0 is rejected by accepting H_1 .

Table-IV: Distribution of respondents on professional degree help in practical filed

District	Opinion of respondents					Total
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Swat	6 (25)	9 (38)	2 (8)	3 (12)	4 (17)	24
Bunair	25 (43)	16 (28)	6 (10)	5 (9)	6 (10)	58
Total	31 (38)	25 (30)	8 (10)	8 (10)	10 (12)	82
χ^2 Cal. =30.28559, χ^2 Tab. at 5% =28.86929943						

Source: Field survey, 2012.

Changes needs in agriculture syllabi of the major subjects

Agricultural development implies the shift from traditional methods of production to new, science based methods of production that include new technological components, new crops and/or even new farming systems. All these methods are thought in different subjects of agriculture. Concept of respondents for change syllabi is presented in Table-V. It is evident from the data in table that in district Swat 10(42%) respondents agreed, 5(21%) strongly agreed with the statement that “syllabi of the major subjects must be changed”. While 3(12%) respondents undecided, 4(17%) disagreed, while 2(8%) respondents strongly disagreed with the changes in agriculture major subject syllabi

In district Buneer, out of total 58 respondents, 38(65%) respondents strongly agreed, 10(18%) agreed with the change of syllabi of the major subjects for agriculture. While 5(9%) were undecided, 2(3%) disagreed, while 3(5%) respondents strongly disagreed with the change of major subjects for agriculture.

Data also shows that in the sample research area 52% respondents strongly agreed, 25% agreed with the change for syllabi of the major subjects for agriculture. While 10% were undecided, 7% disagreed, 6% were strongly disagreed with the statement of change of syllabi of major subjects for agriculture. It is concluded that most of the respondents were in the favor of change in syllabi of the major subjects. The same observation was reported by Bembridge *et al.* (1987) stated that modifications in the syllabi of major subjects of agriculture are needed and includes the modern technology techniques. Chi-square for major subjects changes in agriculture subjects that there was an association between the variable of interest among the individuals.

Table-V: Distribution of respondents on changes in major's subjects of agriculture

District	Opinion of respondents					Total
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Swat	5 (21)	10 (42)	3 (12)	4 (17)	2 (8)	24
Bunair	38 (65)	10 (18)	5 (9)	2 (3)	3 (5)	58
Total	43 (52)	20 (25)	8 (10)	6 (7)	5 (6)	82
χ^2 Cal. =35.0359, χ^2 Tab. at 5% =28.86929943						

Source: Field survey, 2012.

Receiving of in-service trainings

In service training is the part of each and every organization. Also an in-service training program was imparted in agricultural extension department. These training improving the knowledge, capacity and capabilities of their employ to specialized in the advance methods and technology. Respondents were questioned to explain their opinion in this regard which is discussed in table-VI. The data show that in district Swat, out of total 24 respondents, 16(67%) got in-service training, while 8(33%) respondents did not get in-service training during their service period. While in district Buneer, out of total 58 respondents, 40(69%) respondents got in-service training, while 18(31%) did not get in-service training during their service period.

Data in table further depict that in the study area 68% respondents got in-service training. However, a small portion of 32% respondents did not get any in-service training during their service period. It is concluded that majority of the respondents got in-service training while those who did not have any training were young and freshly recruited in the department. This result was confirmed by the findings of Garforth (1997) stated that majority of the employed in organization got in service training. Also Khan *et al.* (2005) reported the same results.

Table-VI: Distribution of respondents on the basis of receiving of in-service trainings

District	Training received		Total
	Yes	No	
Swat	16 (67)	8 (33)	24
Bunair	40 (69)	18 (31)	58

Total	56 (68)	26 (32)	82
-------	------------	------------	----

Source: Field survey, 2012.

Training proved to be helpful for duty performance

The in-service training program was introduced for agricultural extension agents. This program was considered helpful in performing of duties. The data collected from the respondents in this regard presented in table-VII. The data show that in district Swat, out of total 24 respondents, 11(46%) were in the view for partial help of training on duty performance, while 5(21%) respondents rendered it vast beneficial in performing of duties. Eight (33%) respondents hushed in this regard. While in district Buneer, out of total 58 respondents, 10(17%) answered for fragment beneficial training, 30(52%) narrated that training was helpful for performing of duties. While 18(31%) were not in the favour of the statement that training help in performing of duties.

Data presented also show 25% respondents were having the idea of somewhat beneficial training in the performing of duties, 43% reported for helpful training, while 32% respondents did not adopt nor reject this consideration. It is concluded that most of the respondents were of the view that training was helpful in performing of duties. Same results were reported by Khan *et al.* (2005).

Table-VII: Training has proved to be helpful for duty performance

District	Importance of training			Total
	To some extent	To great extent	Not at all	
Swat	11 (46)	5 (21)	8 (33)	24
Bunair	10 (17)	30 (52)	18 (31)	58
Total	21 (25)	35 (43)	26 (32)	82

Source: Field survey, 2012.

Access to audio-visual aids for transfer of technology

Audio/visual aids data system links domestic television sets, through telephone lines, to information stored on centrally located computers. It is considered as a source of information and transfer of knowledge to the people. Audio/visual can be used in a number of ways i.e. radio, television, newspapers, pamphlets, internet etc. The data of audio/visual aids is presented in table-VIII. The data findings shows that in district Swat, out of total 24 respondents, 7(29%) were having the facility of audio/visual aids, while 17(71%) were not eased with audio/visual aids for transfer of technology. While in district Bunair, out of total 58 respondents, 22(38%) respondents were facilitated with audio/visual aids, while 36(62%) were not having the competence of audio/visual aids for transfer of technology whenever they need.

Data also shows that in the whole study area 35% were having the facility of audio/visual aids for transfer of technology. Mostly (65%) of respondents were not having the efficiency of audio/visual aids for transfer of technology whenever they need. It is concluded that most of the respondents were not having audio/visual aids facility for transfer of technology. These results were confirmed by Damrong and Kiattisak (1985) who pointed that most of the extension agents not having access to different aids for transfer of technology to farmers.

Table-VIII: Distribution of respondents on access to audio-visual aids for transfer of technology

District	Access to audio-visual aids		Total
	Yes	No	
Swat	7 (29)	17 (71)	24
Bunair	22 (38)	36 (62)	58
Total	29 (35)	53 (65)	82

Source: Field survey, 2012.

Effect of audio/visual aids on working

Audio/visual aids is considered as a source of information and transfer of knowledge to the farming community. It can be used as a source of knowledge i.e. computer, radio, television, internet. It has a great effect on working period. The data of audio/visual aids is presented in table-IX. Data finding shows that in district Swat, out of total 24 respondents, 20(83%) respondents were in the favour of audio/visual aids effect their working efficiency, 4(17%) were not agree that audio/visual aids effect their working efficiency. While in district Buneer, out of total 58 respondents, 37(64%) reported that audio/visual aids effect their working efficiency, 21(36%) respondents rendered that their working efficiency was not affected by audio/visual aids.

The data also show the effect of visual aids on working efficiency. It is evident from the figure that 70% respondents were in the courtesy of audio/visual aids affect their working efficiency, while 30% narrated that their working efficiency was not affected by audio/visual aids. It is concluded that most of the respondents were of the view that audio/visual aids affect their working efficiency. The same findings were reported by Khan *et al.* (2005) stated that the audio visual aids effect the efficiency of extension workers.

Table-IX: Distribution of respondents on effect of visual aids on working efficiency

District	Effect of visual aids on working efficiency		Total
	Yes	No	
Swat	20 (83)	4 (17)	24
Bunair	37 (64)	21 (36)	58
Total	57 (70)	25 (30)	82

Source: Field survey, 2012.

Satisfaction with the information of new technology

Farmers cannot successfully adopt a new technology unless they are aware of it and learn how to incorporate it into their farming systems. For this purpose information about modern technology must be practiced. Respondents were asked whether they are satisfied with the information of new technology provided to them. The data is presented in table X. Data show that in district Swat, out of total 24 respondents, 10(42%) were agreed with the information of new technology, 5(21%) were strongly agreed that new technology was provided to them by high-ups. While 2(8%) were undecided the same criteria, 4(17%) were disagreed, 3(12%) were strongly disagreed with the provision of new technology furnished by their department. In district Buneer, out of total 58 respondents, 18(31%) were strongly agreed with the information of new technology, 12(21%) were agreed with the provision of new technology. While 6(10%) undecided the same paradigm, 12(21%) were disagreed, 10(17%) respondents were strongly disagreed with the idea that new technology was provided to them by their department.

The data also show that out of total 82 respondents, 28% were strongly agreed, 27% were agreed that new technology was provided to them by high-ups, 10% respondents undecided the same pattern. While 20% respondents were disagreed, 15% were strongly disagreed with the provision of new technology furnished to them by their department. It is concluded that most of the respondents were satisfied with the provision of new technology. The same findings were reported by Malik (1988) who stated that lack of transferred of new technology on time effect the extension agents services. Chi-square is 33.9403 suggest that there is association between the variable of interest among the respondents about the satisfaction of new technology in agriculture in the selected area.

Table-X: Distribution of respondents on satisfaction from the information of new technology

District	Satisfaction of respondents from new technology					Total
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Swat	5 (21)	10 (42)	2 (8)	4 (17)	3 (12)	24
Bunair	18 (31)	12 (21)	6 (10)	12 (21)	10 (17)	58
Total	23 (28)	22 (27)	8 (10)	16 (20)	13 (15)	82
χ^2 Cal. =33.9403, χ^2 Tab. at 5% =28.86929943						

Source: Field survey, 2012.

Methods of conveying information to the farmers

The mission of extension agents is to provide research based information, educational programs, technology transfer that focused on the issues and needs of the farming community, enabling them to make decisions about their economic, social and cultural well being. Extension educational programs have yielded satisfactory results if the form of conveying information to the farming community is according to their need and requirements. The data presented in table XI explain the response of respondents for the form of conveying information to the community. These forms are printed material, demonstration methods, demonstration results, verbal methods and any other technique which the extension agents use for conveying of information. The data show that in district Swat, out of total 24 respondents, 12(50%) reported that they convey information by demonstration methods to the farmers, 13(13%) said for transfer information as printed material, 1(4%) by demonstration results, 2(8%) by verbal methods and 6(25%) respondents transfer the information by different methods according to the farmers need. While in district Buneer, out of total 58 respondents, 34(59%) narrated that they impart information by demonstration methods, 8(14%) were reported for transfer information as printed material, 6(10%) by demonstration results, 3(5%) by verbal methods and 7(12%) respondents pass the information by different methods of delivery to the farmers.

The data also reveal that out of total 82 respondents, 56% rendered that they impart information by demonstration methods, 14% transfer information as printed material, 8% by demonstration results, 6% by verbal methods and 16% respondents transfer their information by different methods of convey to the farmers. It is concluded that most of the respondents conveying information by demonstration methods to the farmers. This results were supported by Khan *et al.* (2005) stated that most of the extension in Punjab province of Pakistan used demonstration method for transfer of information to farmers. Chi-square for the methods of conveying information to the farmers suggested that there is an association between the variable, so H_1 was accepted by rejecting H_0 .

Table-XI: Distribution of respondents on methods of conveying information to the farmers

District	Methods of convey information to the farmers					Total
	Printed material	Demonstration methods	Demonstration results	Verbal methods	All methods	
Swat	3 (13)	12 (50)	1 (4)	2 (8)	6 (25)	24
Bunair	8 (14)	34 (59)	6 (10)	3 (5)	7 (12)	58
Total	11 (14)	46 (56)	7 (8)	5 (6)	13 (16)	82
χ^2 Cal. =40.096790, χ^2 Tab. at 5% =28.86929943						

Source: Field survey, 2012.

Linkages between agriculture extension and research

To increase productivity of agriculture in the country, it is necessary that there must be a strong coordination between the extension agents and agriculture research. This will help the extension agents to transfer the newly research technology for increase of productivity which leads to the better economic and social well being of the farming community. Data in table-XII explain the views of respondents about the effect of poor linkages between agriculture extension and research.

The data show that in district Swat, out of total 24 respondents, 9(37%) were strongly agreed that linkages between agriculture extension and research were poor, 6(25%) were agreed with poor linkages between the two departments, 2(8%) undecided for the poor linkages between agriculture extension and research. While 4(17%) were disagreed, 3(13%) were strongly disagreed with the poor linkages between extension and research.

In district Buneer, out of total 58 respondents, 40(69%) were strongly agreed that linkages between agriculture extension and research were poor followed by 10(17%) agreed with poor linkages between the two departments, 4(7%) were undecided about the statement. While 1(2%) respondents were disagreed, 3(5%) respondents were strongly disagreed with the poor linkages between extension and research.

Data also show that out of total 82 respondents, 60% were strongly agreed that linkages between agriculture extension and research were poor, 20% respondents were agreed with poor linkages between the two departments. While 7% respondents undecided 6% were disagreed, 7% were strongly disagreed with the poor linkages between extension and research affecting the working efficiency of extension workers. It is concluded that most of the respondents were strongly agreed with poor linkages between agriculture extension and research. This result was related to the findings of Maglinao (1997) who stated that that there exist unworkable, weak, ineffective or no linkage among research and extensions institutions and farmers. The chi-square for this is 31.028559 suggest the acceptance of H_1 .

Table-XII: Linkages between agriculture extension and research affecting the working efficiency of extension workers

District	Conception of respondents on linkages between agriculture extension and research					Total
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	
Swat	9 (37)	6 (25)	2 (8)	4 (17)	3 (13)	24
Bunair	40 (69)	10 (17)	4 (10)	1 (9)	3 (10)	58
Total	49 (60)	16 (20)	6 (7)	5 (6)	6 (7)	82
χ^2 Cal. =31.028559, χ^2 Tab. at 5% =28.86929943						

Source: Field survey, 2012

Conclusion and Recommendations

It is concluded for the findings of the study that majority of the respondents in the two selected districts were of old age. The Chi-square stated that there is no difference in age group of the respondents in the two districts. Majority (87%) were diploma holders, 11% having master degree, while two percent (2%) were having bachelor degree. Service experience helps individuals in providing opportunities to develop knowledge and help the population. Mostly (48%) of the respondents were having 16 years and above experience, 22% were 1-5 years, 17% were 11-15 years, while 13% respondents were having experience of 6-10 years. Professional degree is a common felt of the community which help them in their practical life. Mostly (38%) were strongly agreed, 30% were agreed with the statement that the professional degree is helpful in the practical filed. While 10% of the respondents each undecided and disagreed with the statement. Agricultural development implies the shift from traditional methods of production to new, regarding this 52% respondents strongly agreed, 25% agreed with the change for syllabi of the major subjects for agriculture. In service training is the part of each and every organization. In the study area 68% respondents got in-service training and 25% respondents were having the idea of somewhat beneficial training in the performing of duties. Also 35% were having the facility of audio/visual aids for transfer of technology. Mostly (65%) of respondents were not having the efficiency of audio/visual aids for transfer of technology whenever they need. Seventy percent respondents were in the courtesy of audio/visual aids affect their working efficiency. The findings further shows that 28% were strongly agreed, 27% were agreed that new technology was provided to them by high-ups. Mostly respondent conveying information by demonstration method to the farmer's. Regarding linkages 60% were strongly agreed that linkages between agriculture extension and research were poor. The whole findings of the study conclude that in the study area majority of the employed were old, not benefit for the trainings, used the old methods for demonstration and were diploma holder. On the basis of the study findings the following recommendations are forwarded for the policy makers for improvements the agricultural extension services in the area.

- i Employment of young and talented graduates, so that new skills and technology will be imparted in an easy way to the farmers of the area.
- ii Suitable and timely imported trainings for the existing staff so that their capacity will be built according to the modern challenges faced by agriculture sector in the upcoming years.
- iii Introduction and practice of new technology to the staff.
- iv Introduction of new and effective methods for extension agents for agricultural development in the area.

References

- Bassey, M. 1999. Case study research in educational settings. Open Univ. press, Celtic court, Buckingham.
- Bowen, C.F., Radhakrishna, R., and Keyser, R. 1994. Job satisfaction and commitment of 4-H agents. J. of Ext., 32 (1). Retrieved August 27, 2015, from <http://www.joe.org/joe/1994june/rb2.html>
- Cohen, L., Manion, L. and Morrison, K. 2002. Research methods in education. Routledge, Falmer. New Fetterlane, London.
- Damrongkiattisak, W. 1985. Communication effectiveness among extension agents and rice farmers in Northern Thailand. Unpublished doctoral dissertation. The Pennsylvania State Uni., U.S.A.
- Garforth, C., 1997. Supporting sustainable agriculture through extension in Asia. Overseas Dev. Inst., London, UK. OKI Natural res. per., pp. 21–4
- Glover, D., 1994. Contract farming and commercialization of agriculture in developing countries agricultural commercialization, economic development and nutrition (edited by j. von braun, eileen kennedy), p. 166-175.
- Heeks, R. 1999. Information and communication technologies: poverty and development. Development informatics working paper series. Ins. for Dev. Policy and Manag. (IDPM). Manchester, UK. pp. 172.
- Khan, M. A., M. Yaqoob, Gul, A. And S. Ahmad. 2005. Impact of professional factors on the working efficiency of agriculture extension field staff in Punjab. J. of Agri. and Soc. Sci. 1813–2235/2005/01–1–25–28 <http://www.ijabjass.org>
- Lind, D.A., W. G. Marchal, S.A. Wathen. 2006. Basic statics for business and economics. Fifth edition, McGraw-Hill Int. Edit. ISBN 007-124461-1, pp.466
- 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 Prawl, W. 1998. Reforming agriculture extension in Pakistan. proc. 3. National workshop on reforming agriculture extension in Pakistan, pp. 25–7. PARC Islamabad
- Mulayim, Z.G. 1995. Cooperative support systems for rural industrialization. Int. Turkish Cooperative Congress, Nov. 3-6, 1999, Ankara, Turkey.
- Rivera, W.M. 1996. Agricultural extension in transition worldwide: structural, financial and managerial strategies for improving agricultural extension. Public Adm. and Dev. 16: 151-161.
- Rogers, E. M. and F. F. Shoemaker. 1991. Communication of innovations: a cross-cultural approach. New York Free Press, 476 p.
- Rogers, E.M. 1995. Diffusion of innovations, 4th ed. New York: Free Press, 243p.
- Terry, B. D. 2004. Agents performance and customer satisfaction, J. of extension, Vol.42 (6), pp. 1 -10