

## COMMUNICATION OF AGRICULTURAL INFORMATION THROUGH GROUP CONTACT METHODS IN PAKISTAN

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**ABSTRACT:-** The study was conducted in 2012 to examine the communication of agricultural information through group contact methods in Pakistan. Data were collected from 280 randomly selected farmers of four districts and analyzed using descriptive statistics. Survey method was used for data collection by researchers using a pre-tested research instrument. The results of the study show that sources of agricultural information used by the farmer respondents were seed/fertilizer dealers, workshops, panel discussions, role playing and brainstorming. However, seed/fertilizer dealers proved to be the most effective source of agricultural information followed by workshops, panel discussions, role playing and brainstorming. However, 28.93% of the respondents never contacted seed/fertilizer dealers while 31.78% occasionally contacted, 26.43% rarely contacted and 12.86% regularly contacted them for obtaining latest agricultural information in the study area. Likewise, 37.50%, 32.14%, 19.64% and 10.72% of the farmers rarely, occasionally never and regularly participated, respectively in the panel discussion for obtaining latest agricultural information. About 80.71%, 11.43%, 6.07% and 1.79% of the respondents never rarely, occasionally and regularly, respectively portrayed role playing for obtaining information regarding latest agricultural technology. As much as 62.14% of the respondents never took part in brainstorming, while 17.50%, 17.07% and 4.29% respectively, rarely occasionally and regularly took part in the brainstorming for obtaining information regarding latest agricultural technologies in the study area. The study concluded that seed/fertilizer, dealers, workshops, panel discussion, role playing and brainstorming are effective sources of agricultural information. Therefore, these may be made popular among the farming community.

*Key Words: Agricultural Information; Communication; Efficiency; Group Contact Methods; Agricultural Technologies; Transmission; Pakistan.*

### INTRODUCTION

Pakistan is an agro-based country. Agriculture contributes 21% to GDP, and creates opportunities of

employment for 45% of the country's total labour force. Majority (60%) of our country's population resides in countryside which directly depends for its livelihood on this sector (GoP,

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2011-12). Despite this massive contribution, the per acre crop yield in Pakistan is the lowest as compared to the world's averages (Khan, 2004). Yield also less than the potentials are obtained by local progressive growers, as well as got in other developing countries of the world and also due to the low and constrained performance of agricultural sector in developing institutional linkages and disseminating modern technology among the farming community (Farooq and Ishaq, 2005). In addition, the low per acre yields in Pakistan are due to various factors like; non-adoption of latest agricultural technologies and poor farm management by farming community (Farooq et al., 2007), short of information adapted to the local needs and deficient technical knowledge of farmers (Abbas et al., 2008). This can be increased considerably if the latest agricultural technologies are communicated to the farmers through efficient extension methods. However, effectiveness of a method depends upon selecting the right method, at the right time (Kerkhof, 1990). Similarly, diverse extension methods are found effective in varied situations and at different levels in adoption process. Group and individual methods are some of the extension methods through which messages concerning the latest agricultural technologies can reach farmers. Muhammad and Garforth (1995) have publicized that exposure of farmers to information is most likely to be an important factor that influence their adoption behaviour. So, the larger exposure will certainly enhance their awareness regarding the latest recommendations which lead the farmers to put these recommendations into practice in a precise

way. To achieve this objective, the extension agencies are disseminating new technologies using different means including mass, individual and group contact methods. All have their own strengths and weaknesses. Muhammad et al. (1990) concluded that method /result demonstrations, meetings, farm and home visits were more effective teaching methods as reported by majority of the respondents, whereas office calls, radio, TV, movies and signboards proved effective to some extent. Moreover, the relative effectiveness of teaching methods/ media, result demonstrations got the highest score and was ranked at the top among other methods. Daberkow and McBride (2001) stated that information from crop consultants/ specialists, had the largest impact on adoption of precision farming than media sources in the United States. Khan and Akram (2012) found that agricultural extension organizations are entrusted with the primary task of educating and disseminating the latest agricultural technologies to the farmers, using various extension teaching methods like individual, group and mass contact methods, which have wider coverage. Bukhari (2000), Butt (2002) and Muhammad et al. (2002, 2004) concluded that less information was obtained by farmers through mass media. Hussain (1997) affirmed the importance of radio by considering it as the most convenient and the most popular medium for agricultural extension. However, the mass media has a one-way communication i.e. from source of information to the receivers. They allow limited and delayed feedback, which is crucial for effective communication (Muhammad, 2005). Mahmood and

Sheikh (2005) found that awareness is the first step in the adoption process. Rahman (2005) concluded that the methods used to disseminate the messages of extension among the farming community comprise: planning a program, laying out demonstrations, holding field days, arranging trainings for farming community, farm walks, tours and visits to research stations, holding meetings, and establishing Farmer Field Schools (FFS) which stimulate farmers towards adoption of the latest agricultural technologies. Keeping importance of group contact methods in view, present study was planned to examine the effectiveness of group contact methods in communication of agricultural information to the farming community in the Khyber Pakhtunkhwa, Pakistan.

## **MATERIALS AND METHOD**

### **Area Study**

The study was conducted in 2012 in the four provinces of Pakistan including Khyber Pakhtunkhwa, Punjab, Sindh and Balochistan. From each province, one district each was randomly selected. These districts were Swabi, Muzaffargarh, Tando Muhammad Khan and Quetta, respectively.

### **Sampling Technique**

Gathering data from all the farmers of the 4 districts was not possible due to the constraints of time and finances. Consequently, a list of contact farmers was obtained from the departments of agricultural extension of the said provinces at district levels and as per Fitzgibbon and Morris (1987), 70 farmers from each of the four districts were

randomly selected, thereby making 280 farmer respondents.

### **Research Instrument**

Considering objectives of the study, a research instrument was developed to collect data from the randomly selected farmers of the four districts in the four provinces of Pakistan. The research instrument was pre-tested on 32 farmers of the study area by selecting 8 farmers from each of the districts. The likely errors and omissions were eliminated and the suggestions of the experts were incorporated in the research instrument for data collection.

### **Data Collection**

The researchers made contacts with the farmer respondents at their residences, fields, deras and other places of social gatherings for data collection. The researchers managed to explain the instrument in the local languages of the said regions because the respondents did not understand English language. The data thus collected was put to excel sheet of the computer for analysis. The scale used was 1 = very low, 2 = low, 3 = satisfactory, 4 = high, and 5 = very high. The researchers computed frequencies, percentages, rank order, score, means, and standard deviation. The data were analyzed through computer software called Statistical Package for Social Sciences (SPSS).

## **RESULTS AND DISCUSSION**

The researchers asked the respondents about their perceptions regarding the communication of agricultural information to them through group contact methods in their respective areas.

Sources of agricultural information for the farmer respondents were seed / fertilizer dealers (57.85%), workshops (47.50%), panel discussions (41.42%), role playing (24.28%) and brainstorming (12.85%) (Table 1). These results are supported by those of Rahman (2005) who stated that the methods used to distribute the messages concerning agricultural extension among the farming community include: program planning, laying out demonstrations, holding field days, organizing trainings and workshops for farmers', holding farm walks and tours and visits to research stations, holding meetings, and facilitating FFS' training sessions.

Data shows that seed/ fertilizer dealers were the most effective source of agricultural information for the farming community which stood 1<sup>st</sup> with mean value 3.32 and SD 1.17 followed by workshops, panel discussions, role playing and brainstorming which ranked 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> with mean values 2.89, 2.67, 2.54 and 2.52 and SD 1.29, 1.16, 1.21 and 1.27, respectively (Table 2). The brainstorming process was ranked as the least effective source of agricultural information by the respondents.

**Table 1. Distribution of the respondents according to their source of agricultural information**

Source of agricultural information	No.	%
Seed/ fertilizer dealers	162	57.85
Workshops	133	47.50
Panel discussions	116	41.42
Role playing	68	24.28
Brainstorming	36	12.85

Source: Field data n=280

The mean values show that seed/ fertilizer dealers as a source of agricultural information fell between satisfactory and good but tended towards satisfactory, whereas, panel discussions, workshops, role playing and brainstorming ranged from low to satisfactory but tended towards satisfactory categories.

The highest ranking of seed/ fertilizer dealers as a source of agricultural information was due to the reasons that respondents personally see various techniques and practices with their own eyes and get the opportunity to ask for the unclear aspects in the training. Similarly the lowest ranking of the brainstorming by the respondents may be due to the reason that they were not familiar with such methods of obtaining information in the study area.

These results are supported with those of Rajput (1997) who stated that seed/ fertilizer dealers have been effectively used in various developing countries for training of farmers as well as their wives in modern agricultural and home making practices. He added that primary aim of the centre is to show the participants that how farming can be done profitably through following modern skills involved in it. A number of training courses are organized for farm men and women like gardening, hygienic milk production and production of vegetables. The farmers' trainings include both the theoretical and practical training sessions however; leadership development is the most important role of seed/ fertilizer dealers.

About 28.93% of the farmer respondents never contacted agricultural seed/ fertilizer dealers for obtaining information regarding late-

**Table 2. Distribution of respondents according to the level of effectiveness of group contact methods**

Group contact methods	Rank order	Score	Mean	SD
Seed/ fertilizer dealers	1	932	3.32	1.17
Workshops	2	810	2.89	1.29
Panel discussions	3	745	2.67	1.16
Role playing	4	712	2.54	1.21
Brainstorming	5	679	2.52	1.27

Source: Field data n=280

st agricultural technologies, whereas, 3.78% farmer respondents occasionally contacted these seed/ fertilizer dealers however, 26.43% respondents rarely contacted (Table 3). However a good number of the farmer respondents (12.86%) regularly contacted seed/ fertilizer dealers for obtaining information regarding latest agricultural technologies in the study area.

As much as 38.93% of the farmer respondents never participated in workshops for obtaining agricultural information regarding latest technologies, whereas, 20.36% farmer respondents occasionally participated in these workshops however, 28.21% respondents rarely participated (Table 4). However, a good

**Table 3. Frequency of contacts with seed/ fertilizer dealers for obtaining information regarding latest agricultural technologies by respondents**

Frequency	No.	%
Regularly	36	12.86
Occasionally	89	31.78
Rarely	74	26.43
Never	81	28.93
Total	280	100.00

Source: Field data n=280

number of the farmer respondents (12.50%) regularly participated in workshops for obtaining information regarding latest agricultural technologies in the study area.

The overall lower participation of the farmer respondents in the workshops may be due to the reason that they were not aware of such activities in the area. Furthermore, may be these workshops are held at distant places from their vicinity. This situation shows that authorities concerned may not avoid masses of community rather give them confidence to come forward and participate in such workshops for getting information and improving their knowledge which will ultimately increase their per acre crop yield. These results are supported by those of Khatam (2011) who concluded that majority (72.5%) of farmers' participation in FFS activities were providing site for FFS (room for discussion), contribution of land for FFS (70.40%) and sharing knowledge with fellow farmers (56.10%) as reported by greater part of the farmer respondents.

About 37.50% of the farmer respondents were rarely contributed in panel discussions for obtaining information regarding latest agricultural technologies, 32.14%

**Table 4. Frequency of participation in workshops for obtaining information regarding latest agricultural technologies by respondents**

Frequency	No.	%
Regularly	35	12.50
Occasionally	57	20.36
Rarely	79	28.21
Never	109	38.93
Total	280	100.00

Source: Field data n=280

respondents occasionally contributed in panel discussions whereas, 19.64% never contributed in panel discussions whereas, 10.72% farmer respondents regularly contributed in panel discussions for obtaining information concerning latest agricultural technologies in the study area (Table 5). These results are supported with those of Amudavi et al. (2009) who concluded that dissemination of technology has been facilitated by a number of dissemination pathways including establishment of farmer field schools, holding field days, farmer teachers, fellow farmers, print media, public meetings and radio programmes.

About 80.71% of the respondents did not portray in role playing for obtaining agricultural information, 11.43% rarely portrayed in the role playing whereas, 6.07% occasionally portrayed role playing. However, only 1.79% of the farmer respondents regularly portrayed role playing for obtaining information regarding latest agricultural technologies (Table 6). The general lower portraying the role playing by the respondents may be due to the less interest of the respondents in joining such activities

**Table 5. Frequency of contribution in panel discussions for obtaining information regarding latest agricultural technologies by respondents**

Frequency	No.	%
Regularly	30	10.72
Occasionally	90	32.14
Rarely	105	37.50
Never	55	19.64
Total	280	100.00

Source: Field data n=280

as well as lack of awareness regarding role playing for gaining information regarding the latest agricultural technologies in the study area.

These results are supported by those of Daberkow and McBride (2001), who stated that information from crop consultants had the largest impact on adoption of precision farming than media sources in the United States. Khan and Akram (2012) found that agricultural extension organizations are entrusted with the primary task of educating and disseminating the latest agricultural technologies to the farmers, using various extension teaching methods like: individual, group and mass contact methods, have thus wider coverage.

About 62.14% of the respondents never participated in brainstorming for obtaining agricultural information while 17.50% respondents (17.50%) rarely participated in the brainstorming technique whereas, 17.07% occasionally participated in brainstorming (Table 7). However, 4.29% of the farmer respondents regularly participated in brainstorming for obtaining agricultural information. The general lower benefit of brain-

**Table 6. Frequency of portraying in role playing for obtaining information regarding latest agricultural technologies by respondents**

Frequency	No.	%
Regularly	5	1.79
Occasionally	17	06.07
Rarely	32	11.43
Never	226	80.71
Total	280	100.00

Source: Field data n=280

storming process by the respondents may be due to their less knowledge and low interest of the respondents in joining such activities for gaining agricultural information regarding the latest technologies in the study area.

These results are supported with those of Rajput (1997) stated that among group contact numerous extension education methods are used for dissemination of agricultural information among the farming community. These methods include demonstrations, meetings, group discussions, panel discussions, symposia, seminars, workshops, lecture technique, tour and field trips, role playing, field days, learning through brainstorming and buzz groups.

It can be concluded from the study that sources of agricultural information for the farmer respondents were seed/ fertilizer dealers, workshops, panel discussions, role playing and brainstorming. However, seed/ fertilizer dealers was the most effective source of agricultural information for the farming community followed by workshops, panel discussions, role playing and brain-

**Table 7. Frequency of participation in brainstorming for obtaining agricultural information by respondents**

Frequency	No.	%
Regularly	12	04.29
Occasionally	45	17.07
Rarely	49	17.50
Never	174	62.14
Total	280	100.00

Source: Field data n=280

storming. The brainstorming process was ranked as the least effective source of agricultural information by the respondents. It may imply that quite a large number of the farmer respondents were getting agricultural information from seed/ fertilizer dealers because they have to contact these dealers whenever they require farm inputs. Therefore, frequent training programmes may be arranged for the seed/ fertilizer dealers to keep them updated all the times. Similarly, workshops, panel discussions, role playing and brainstorming were also important sources of information for the respondents. However, the skill of farmers may be improved in exploiting these sources so that farmers' knowledge could be improved and thus their socio-economic conditions may get better through increased farm productivity and ultimately profitability.

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