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Relative Effectiveness of Selected Extension Teaching Methods for Imparting Knowledge about Poplar Cultivation to the Farmers

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ABSTRACT

The study was conducted in Gurdaspur and Hoshiarpur districts of Punjab among 120 poplar cultivators to assess the relative effectiveness of two extension teaching methods viz. lecture discussion and slides cum recorded messages. It was observed that mean knowledge gown score was more in the case of lecture discussion method (18.64) compared to slide cum recorded message method (15.25). It was also revealed that level of education and extension contact of farmer had positive and significant relationship with knowledge gain through the selected extension teaching method.

Key words: Effectiveness, agro-forestry

INTRODUCTION

Different extension teaching methods differ in their effectiveness and applicability from one situation to another and from learner to learner. The extension worker has to choose those extension-teaching methods which are most effective and suitable in achieving the educational objectives. It is thus useful to compare the relative effectiveness of the selected extension teaching methods in imparting knowledge about Agro-forestry to the farmers.

Therefore, the present study was designed to determine the relative effectiveness of selected extension teaching methods for imparting knowledge to the farmers about poplar cultivation, to study the gain in knowledge of the farmers about poplar cultivation through two selected extension-teaching methods and to study the relationship of selected socio-personal characteristics with gain in knowledge.

METHODOLOGY

The study was carried out in Gurdaspur and Hoshiarpur districts of Punjab. From each district one block was selected randomly and from each selected block, three villages were selected randomly falling within seven kilometers radius from the block head quarters. A group of 20 farmers was selected from each village. The content of the topic selected for the study was "Poplar cultivation".

Two extension teaching methods *viz.* Lecture-discussion and slide-cum-tape recorded message were selected. The relevant material on poplar cultivation was translated into local language and a lecture script was developed and recorded on a cassette recorder.

An objective type knowledge test consisting of thirty three items was developed. Pre and post test control group design was used. The knowledge test was administered to each group as pre-test and post-test. The difference mean knowledge gain score for each group was worked out, 't' test was used to know the significance of the difference between pre-test scores in a particular experimental group and to know the significance of the difference between mean knowledge gain scores of different treatment group.

RESULTS AND DISCUSSION

The findings of the study and the relevant discussion have been presented as follows:

Gain in knowledge though selected extension teaching methods

To measure the gain in knowledge, same knowledge test was administered to every group at two different occasions as pre-test and post-test. It was found that there was significant differences between the pre and post test scores in all the treatment groups.

However, no significant difference in pre and post-test scores was found in control group. It can be concluded that there was significant gain in knowledge of the respondents through all the treatments.

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Table 1: Effectiveness of selected extension teaching methods and combination of methods

Group	Treatment	Mean difference between pre and post-test scores	Standard deviation of difference between pre and post-tests	Standard error of mean difference	't'
I	L+D	18.67	4.46	0.706	26.44**
II	S+T	15.25	4.75	0.753	20.25**
III	CG	0.47	1.67	0.26	1.80NS

** Significant at 0.01 levelDegree of Freedom = 39
NS = Non-significant
L+D = Lecture-cum-Discussion
S+T = Slide-cum-Tape Recorded Message
CG = Control Group

As shown in Table 1 the mean knowledge gain scores of the different treatment groups were also compared with the mean knowledge gain scores of the control group. Significant differences were found in mean knowledge gain scores of control group and different treatment groups. It could, therefore, be concluded that there was definite gain in knowledge by the respondents through all the selected extension teaching methods.

Table 2: Comparison in mean knowledge gain scores of different treatment groups with control groups

Treatments compared	Difference between mean knowledge gain scores	Calculated 't' value
L+D, Control	18.20	24.54**
S+T, Control	14.78	18.92**

** Significant at 0.01 levelDegree of Freedom = 78
NS = Non-significant
L+D = Lecture-cum-Discussion
S+T = Slide-cum-Tape Recorded Message

Relative effectiveness of selected extension teaching mehods

The gain in knowledge of respondents was worked out by subtracting the pre-test scores from the post-test scores. Then the mean knowledge gain was calculated for every experimental group. To compare the effectiveness of the selected extension methods, the groups were ranked on the basis of mean gain in knowledge in descending order (Table 3). The data regarding relative effectiveness of the selected extension teaching methods have been shown in Fig.1.

Table 3: Ranking of groups according to their mean knowledge gain scores

Treatments comapered	Mean knowledge gain scores	Rank
Lecture-cum-Discussion	18.67	I
Slide-cum-Tape Recorded Message	15.25	II
Control Group	0.47	III

The relative effectiveness of the selected teaching methods was judged by making comparisons of the mean knowledge scores in different groups (Table 3).

Table 4: Comparison of selected extension teaching methods

Treatments compared	Difference between mean knowledge gain scores	Calculated 't' value
L+D, S+T	3.42	3.726**

** Significant at 0.01 levelDegree of Freedom = 78
NS = Non-significant
L+D = Lecture-cum-Discussion
S+T = Slide-cum-Tape Recorded Message

The data in Table 4 indicated that the mean knowledge gain scores of all the treatment groups differed significantly. It could, therefore, be concluded that selected extension teaching methods were not equally effective in imparting knowledge to the farmers about poplar cultivation. The findings of the present study are in agreement with those of Bhardwaj (1981) and Manchanda (1981) who reported that different modes of communication vary in their effectiveness to communication knowledge.

The data given in Table 4 further indicated that there was a significant difference between the mean knowledge gain score obtained through lecture-cum-discussion and slide-cum-tape recorded message. The data also indicated that the mean knowledge gain score in lecture-cum-discussion only treatment group was higher than the mean knowledge gain score in slide-cum-tape recorded message treatment group. It could, therefore, be concluded that lecture-cum-discussion method was significantly more effective than the slide-cum-tape recorded message.

Relationship of selected socio-personal characteristics with gain in knowledge

The socio-personal characteristics studied were age, educational level, mass media exposure and extension contacts of the respondents. Age and education variables were kept constant. Third order partial correlation coefficients were worked out to find out the relationship between knowledge gain (dependant variable) rendering the effect of the other selected socio-personal characteristics constant.

(i) Age

As shown in Table 5, the partial correlation coefficient between age of the respondents and their knowledge gain was negative but non-significant (-0.048). It was, therefore, concluded that age did not have significant relationship with knowledge gain. The finding were supported by Khanna (1980) and Bhardwaj and Hansra (1983) who had observed non-significant correlation between age and knowledge gain.

(ii) Education

As shown in Table 5, a positive and significant partial correlation coefficient (+0.2790) was found between education and knowledge gain of the respondents. Thus, it was evident that with the increase in education there was and increase in the knowledge gain of the respondents. The reason could be that education promoted more understanding and with increase in education the capacity for assimilation and retention is increased. Manchanda (1981) and Bhardwaj and Hansra (1983) who had found significant and positive relationship between educational level and knowledge gain.

(iii) Mass Media Exposure

As shown in Table 5 a positive but non-significant coefficient of correlation (+0.0568) was found between mass media exposure of the respondents and their knowledge gain. Thus, the relationship was found to be non-significant.

Table 5: Partial correlation between socio-personal characteristics and knowledge gain.

Socio-personal characteristics	Partial correlation value	Calculated 't' value
Age	-0.048	0.4297^{NS}
Education	+0.2790	2.470**
Mass media exposure	+0.0568	0.502^{NS}
Extension contacts	+0.3202	2.98**

** Significant at 0.01 level Degree of Freedom = 117
NS = Non-significant

(iv) Extension contacts

A positive but significant partial correlation coefficient (+0.3202) was found between extension contacts of the respondents and their knowledge gain (Table 5).

CONCLUSION

Selected extension teaching methods were significantly effective in imparting knowledge to the farmers about poplar cultivation. Selected extension teaching methods were also significantly varying in their effectiveness. Lecture-cum-discussion method ranked first in the effectiveness. Therefore, the maximum emphasis should be given to lecture-cum-discussion method for imparting knowledge to the farmers in the training courses. Level of education and extension Contact shad positive and significant relationship with knowledge gain through the selected extension teaching methods. Extension Contacts with the farmers should be increased to enhance the knowledge of the farmers.

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