Chapter-VI

SUMMARY AND CONCLUSIONS

Agriculture is the mainstay of the Indian economy. Despite of the phenomenal growth in the production of foodgrains, we have a challenging task of increasing our food-grain production to meet the needs of our ever-increasing population, which has already touched one billion mark. This is a gigantic task and requires continuous upgradation and updating of the knowledge and skills of extension workers and effective transfer of technology to farmers.

A wide range of extension teaching methods are being used in India. The extension worker has to choose the best suitable method according to the prevailing situation as well as availability of the resources. These methods differ in their effectiveness and applicability from learner to learner. It is, therefore, important to study the relative effectiveness of various extension teaching methods used in imparting knowledge to the target groups.

Keeping this in consideration, the present study entitled, "Relative effectiveness of selected extension
teaching methods in imparting knowledge about hybrid seed production technology in sunflower to Agricultural Development Officers of the Punjab State" was undertaken.

6.1 OBJECTIVES OF THE STUDY

The study was undertaken with the following specific objectives:

1. To assess the gain in knowledge of the Agricultural Development Officers about hybrid seed production technology in sunflower through selected extension teaching methods.

2. To evaluate the relative effectiveness of selected extension teaching methods in imparting knowledge about the hybrid seed production technology to the Agricultural Development Officers.

3. To find out the relationship, if any, between the selected socio-personal characteristics of the Agricultural Development Officers and the knowledge gained through selected extension teaching methods.

6.2 METHODOLOGY

The study was conducted on 120 Agricultural Development Officers spread over the whole Punjab state (two from each district). A group of 20 ADOs was selected for each training programme (method demonstration, video and slide-tape synchronisation) for two consecutive years, i.e. 1995-96 and 1996-97.

The video, slides and tape on the topic of hybrid
seed production of sunflower were prepared with the help of subject matter specialists as there was no such material existing earlier on this topic. The same text was used for all the methods. The personal information sheet and knowledge tests were prepared to collect the relevant data. The knowledge test was objective in nature.

The item analysis was used to find out the level of difficulty of the test. The item difficulty index ranged from 10 per cent to 90 per cent. The reliability of the test was worked out with the help of test-retest method. The coefficient of the test was highly significant ($r = 0.871$) and its intrinsic validity was 0.93. The content validity of the test was also ensured by the experts of the subject.

The knowledge test was administered to the respondents before and after the treatments. The gain in knowledge was calculated by taking the difference between the post-test and pre-test scores of the respondents.

The data were analysed by using the paired 't-test' and analysis of variance to study the differences between the mean gain in knowledge due to different extension teaching methods. The coefficients of correlation were worked out to see the relationship, if any, of various socio-personal characteristics like age, mass media exposure and job experience, with gain in knowledge of the respondents. However, Chi-square tests were applied to find
out the bearing of level of education, marital status and family background, if any, on the gain in knowledge caused by various extension teaching methods.

6.3 RESULTS

The important results obtained from the study are as follows:

6.3.1 Socio-personal Characteristics of the Respondents

It was observed that the age of respondents varied from 30 to 56 years. However, 62.50 per cent of the respondents were aged from 40 to 55 years. Majority of the respondents (64.17%) were graduates followed by post-graduates and diploma holders. Majority of the respondents had regular exposure to radio and television. The exposure to agricultural literature was not quite regular for most of the respondents. Most of the respondents selected were married and having rural background. The respondents in the three selected extension teaching methods were matching with regard to their socio-personal characteristics.

6.3.2 Overall Gain in Knowledge

When all the treatment groups were merged together overall gain in knowledge of the majority of respondents was found to be of medium and high level. The 10 per cent respondents had poor gain in knowledge.
6.3.3 Relative Effectiveness of Selected Extension Teaching Methods in Terms of Gain in Knowledge

The study revealed that the respondents treated with method demonstration scored the highest mean gain scores in knowledge followed by those treated with video and slide-tape synchronisation method. The gain in each case was significant. The selected extension teaching methods differed significantly from each other with respect to their effectiveness on gain in knowledge and there was a significant difference amongst the knowledge gain scores of treatment groups as a result of their exposure to the selected extension teaching methods. However, when the gain in knowledge was analysed for each of the sub-topics, group exposed to slide tape synchronization gained maximum knowledge in crossing techniques and the group exposed to video had the highest knowledge gain in evaluation and conversion of inbred lines. Method demonstration was found to be the best method in case all the other three sub-topics, i.e. hybridization of sunflower, development of inbred lines and procedure for hybrid seed production.

6.3.3 Relationship of Socio-personal Characteristics with Gain in Knowledge Through Selected Extension Teaching Methods

It was revealed that there was negative and
significant relationship between the age of the respondent and gain in their knowledge through all the selected extension teaching methods. Exposure to mass media was positively and significantly correlated with the gain in knowledge. It was also found that the level of education had a significant bearing on the gain in knowledge. However, there was no significant relationship of other socio-personal characteristics like job experience, marital status and family background with gain in knowledge.

6.4 CONCLUSION AND IMPLICATIONS

The following practical implications emerge from the findings of the study.

→ The trainers should use a variety of methods according to the nature of sub-topic and characteristics of learners to make the learning experiences more interesting by introducing variety. For topics involving practical field work method demonstration should be preferred while for fundamental and conceptual topics video and slide tape synchronization should be preferred.

→ While deputing the ADOs for training involving field job and practical work, preference should be given to young officers with higher qualification. This will help in utilizing their initiative, energy and
capabilities in a better way. The services of ADOs in the high age categories may be utilized for desk jobs like preparation of technical reports, coordination of quality control work, etc. This will be helpful in utilizing their experience and maturity.

- The ADOs should be encouraged to watch and listen regular agricultural programmes of TV and radio. All the newspapers published in Punjabi bring out regular weekly supplements on agriculture and rural development. ADOs should be encouraged to read these supplements. The farm literature of PAU, particularly books on "Package of Practices", monthly magazine and Annual Hand book should be provided free to the ADOs by the State government by purchasing these from the University out of government funds. This will not only help in improving their competence directly but also in increasing the efficiency of training programmes.

6.5 RECOMMENDATIONS FOR FURTHER STUDIES

1. Similar study can be undertaken on a larger sample to get more authentic results.

2. Similar studies can be repeated with the other topic to draw broad generalizations.
3. The study can be conducted with more number of extension teaching methods or with the other extension teaching methods not selected earlier or by keeping one group as control group.