

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The present investigation 'A Study of Teachers' Problems, Attitudes and Output related to Research in Agricultural Universities of India' was taken up with the following objectives :

1. To find out the problems of the teachers in doing research of agricultural universities of India, in respect of personal problems, problems due to lack of material resources, human-relations and administrative duties.
2. To find out the attitudes of the teachers toward research in general and toward specific aspects of research i.e. importance of research, conducting research, guiding research and disseminating research.
3. To find out the research output of the teachers.
4. To explore the differences in teachers' problems, attitudes and production of research according to their personal characteristics.
5. To study the various relationships and inter-relationships among personal characteristics of the teachers and their problems, attitudes and research output.

All the professors and associate professors from all the Colleges of Agricultural Universities and in addition assistant professors from Colleges of Home Science, i.e. 1303 teachers constituted the population of the study. Fifty percent sample was drawn by the systematic stratified random sampling technique. Thus, 664 teachers from 19 agricultural universities of India comprised the sample of the study.

Mailed questionnaire method was used to collect data for the study. Questionnaires were mailed to 664 teachers of 19 agricultural universities all over India. Two reminders to the teachers and one request to Deans of colleges, were sent to enhance the return of questionnaires. The final number of the returned questionnaires was 345 (51.95%) of the sample). Ten questionnaires had to be discarded due to incomplete information. The data were computerised using the following statistical tools. Mean was used to compare the attitudes and to find out the intensity of problems of the teachers. Median and percentage were employed to categorise the teacher according to different degrees of favourableness of attitudes and research output. The chi-square tests and the Pearson-product-moment correlations were computed to determine the significant differences and

relationships respectively, among problems, attitudes, research output and personal characteristics of the teachers.

5.1 Findings Related to Problems

The teachers faced 'often' the lack of time, 'sometimes' the problems of transportation, 'rarely' the problem of laboratory facilities, personal problems and lack of library facilities. Administrative duties hindering the conduct of research were faced 'rarely' or 'sometimes'.

5.1.1 Specific Findings with Regard to Problems

Personal problems faced by all the teachers in doing research were : lack of sincere guidance, uncooperative respondents, lack of statistical knowledge and number of family responsibilities. In addition to these problems, the young teachers of 20 - 30 years of age with less teaching experience and low level of academic qualifications pointed out the problems of lack of confidence, lack of adequate training in research methodology, lack of Ph.D. degree and command over English language.

Lack of time was experienced 'sometimes' due to lot of clerical work and too many teaching assignments and 'rarely' due to excess of extra-curricular activities and a number of staff meetings.

The teachers having M.A. or B.A. or B.Tech. degree faced 'rarely' the problems of lack of library facilities while the teachers irrespective of their characteristics, 'very rarely' faced the problems of lack of library facilities.

Laboratory related problems were felt by the teachers of colleges doing more basic research. Uncooperative and inactive laboratory attendants were pointed out by teachers having low academic qualifications.

The teachers regardless of their characteristics faced the problem of transportation.

The Heads or Incharges of the departments faced 'sometimes' the problems of too much paperwork and shortage of staff in the department, hindering their research activities.

The teachers differed significantly in the perception of lack of intimacy among staff due to their university and professional status; lack of cooperation from Head/Dean due to their college and place of residence.

The teachers differed significantly in their problems in doing research according to their university, college, marital status, teaching experience and place of residence.

Age of the teachers was positively related to lack of transportation facilities. Teaching experience of the teachers was positively related to (1) personal problems and ⁽²⁾ lack of time. The teachers who had recently received their last degree, faced more problems. Lack of transportation facilities was negatively related to academic qualification of the teachers.

The areas of problems i.e. personal problems, lack of time, lack of library facilities, lack of laboratory facilities, lack of transportation facilities, lack of cooperation from Head / Dean, lack of emphasis on production by the Head / Dean and lack of intimacy among staff, were highly interrelated at significant levels.

In addition, lack of funds, lack of junior and senior staff, centralised system of administration and lack of incentives, were the problems pointed out by many teachers.

5.2 Findings Related to Attitudes

The teachers held 'favourable' attitudes toward research.

Except the teachers of Colleges of Agricultural Engineering and College of Fisheries, more than 50 percent of the teachers held 'highly favourable' attitudes toward guiding research. 'Highly favourable' attitudes toward

disseminating research were found to be held by the female teachers, unmarried teachers, the teachers of 20 to 30 years of age and the teachers of the status of assistant professor; when the teachers were classified according to their sex, marital status, age and professional status respectively.

Significant differences in the attitudes of the teachers were observed due to their university, college, academic qualifications, sex and teaching experience.

Lesser the academic qualifications, more favourable were the attitudes of teachers toward guiding and disseminating research. The older the last degree received by the teacher, the more favourable were the attitudes toward disseminating research. More than 50 percent of the teachers of the status of assistant professor, were found to have 'highly favourable' attitudes toward disseminating research, when classified on the basis of median. But the correlation test indicated that higher the status, more favourable were the attitudes of the teachers toward disseminating research. Positive correlation was found between professional status of the teachers and attitudes toward disseminating research.

Different aspects of attitudes toward research i.e. attitudes toward importance of research, conducting research,

guiding research and disseminating research, were found to be interrelated at significant levels, except the relationship between attitudes toward conducting research and guiding research.

5.3 Findings Related to Research Output of the Teachers

On the whole, almost 22 percent of the research output was in the form of research papers published. Research guided and examined at both M.Sc. and Ph.D. level constituted 28 percent of the total research output of agricultural universities. Production of literature was mainly related to teaching and extension. Colleges of Agriculture were found to have produced maximum research (56 percent) and literature (55 percent), as compared to other colleges.

Specifically, the teachers were found to differ significantly in guiding and examining the research due to their college, academic qualifications and sex.

Age, professional status and teaching experiences of the teachers were positively related to research guided and examined. Lesser the distance between the place of work and place of residence, more was the

production of research.

The teachers were found to be differing significantly in the production of literature due to their college. Positive correlations were observed between literature produced and age, academic qualifications, year of receiving the last degree, professional status and teaching experience of the teachers. Production of research, literature as well as dissertations guided and examined were significantly related to each other.

5.4 Findings related to Interrelationships among problems, Attitudes and Output related to Research

Research that was produced, guided and examined was positively related to lack of laboratory chemicals and materials; and lack of transportation facilities.

The problems of lack of time, lack of laboratory chemicals and materials etc., lack of cooperation from Head/Dean, lack of emphasis on production by Head / Dean and lack of intimacy among staff were related positively at significant levels to attitudes of teachers toward research.

Research produced, guided and examined and production of literature were not significantly related to attitudes

of the teachers toward research.

It may be concluded briefly that the teachers rarely faced problems in doing research. They held 'favourable' attitudes toward research. On the whole, the research output was low. Some problems were related to research output and some to attitudes. Attitudes were found to have no relationships with aspects of research output.

Recommendations for Further Study

As a result of carrying out the present investigation, the investigator felt that some problems needed to be explored further.

1. Teachers of assistant professors' status from all the colleges of agricultural universities need to be studied in respect of their research problems, attitudes and output.
2. The study could be replicated over a period of time with the teachers of agricultural universities, to study the change in their problems, attitudes and output related to research.
3. Case Studies of certain leading agricultural universities regarding problems, attitudes and output related to research could be undertaken over a period of time.
4. Colleges in respect of field of specialization of the teachers, can be studied with regard to research activities.

Recommendations for the Authorities of Agricultural Universities of India

1. The findings of the study revealed that the problem of lack of time was experienced quite intensively by the teachers. Lack of time was reported either due to heavy work load or too much of clerical work. The Heads of Incharges experienced the lack of time due to too much paper work or shortage of teachers in the department. It is suggested that academic work of the department should be equally distributed among the teachers of the department. Unnecessary clerical work should be taken away from the teachers, so that more research could be produced.
2. The departments facing the problem of shortage of staff due to lack of posts in the department may be sanctioned more posts. Part-time teachers can also help to some extent. If the lack of teachers is due to non-availability of qualified staff, more teachers can be trained and also the conditions of appointments could be relaxed if the candidates are otherwise competent.
3. The lack of funds, and centralised system of administration, were pointed out by the teachers (40 out of 150) as problems hindering their research work. Provision of more financial aid and decentralisation of power may reduce to some extent the problems faced by the teachers.
4. Means of transportation could be increased to make vehicles available for research to the teachers. A few auto-rickshaws if purchased may help to overcome the transportation problems to some extent.

5. More cooperati~~on~~ from Head or Dean is required to facilitate the research work of the teachers.
6. The teachers (20 out of 150) expressed that the problems of lack of incentives and lack of academic environment in the department or college were impeding their research work. Proper incentives and due recognition to the deserving teachers are essential to keep their morale high which may induce them to produce more research.
7. The attitudes of the teachers were found to be favourable. Though the findings also revealed that attitudes were not significantly related to research output, the attitudes should be strengthened to a degree which may result in more production of research by the teachers.
8. There is a great need to disseminate research findings. Though the agricultural universities have their Journals of Research, the researches need to be circulated among all the other universities of India.
9. In addition to university library, college or departmental library, if provided, may also motivate the teachers to do research and produce literature.
10. Since teachers having Ph.D. degree, produced more research, ~~more~~ teachers having lower qualifications should be deputed for doctorate programmes.

11. It was found that the male teachers had guided and examined more research than female teachers. The research output of female teachers can be increased if they are provided with higher academic qualifications (by deputing them for higher studies) and elevated to higher professional status.
 12. It was found that the teachers ~~staying~~ on the campus produced more research than those staying away from the campus. The agricultural universities should have more residential houses, so that maximum number of teachers could be accommodated. Campus accommodation provided to the teachers is expected to increase the research output of the universities in all aspects.
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