



**REPORT OF THE  
UNIVERSITY OF  
MISSOURI-ORISSA  
UNIVERSITY OF  
AGRICULTURE  
TECHNOLOGY  
STUDY TEAM**

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## INTRODUCTION

One of the subjects which has been given major emphasis by University of Missouri staff members who have worked with college faculties and state officials in India has been the principles involved in the Land-Grant programs of education in the United States. The coordination of research, resident teaching and extension in one institution, availability of results of research and programs of education to every citizen who wishes to use them and participation by people in planning extension programs have been explained to the Indians. The possibility of adapting this system of research and education, which has been successful in the United States, to conditions in India is recognized by many Indian leaders.

The Orissa government, with advice and assistance of University of Missouri staff members, enacted legislation, in 1961, to establish the Orissa University of Agriculture and Technology. The two divisions which were originally included in the University were the College of Agriculture and the College of Veterinary Science and Animal Husbandry. Plans are being made to add Colleges of Arts and Sciences, Engineering and Home Science. Programs of research, resident teaching and extension are to be included in the work of the University.

Because Indian educators and state officials are not familiar with the details of organization, administration and operation of a university of this kind, the University of Missouri must accept increased responsibility for assisting in the development of Orissa University.

In order to secure a more detailed understanding of the needs of Orissa University on which to base a more comprehensive plan of the work to be done by the University of Missouri, three faculty members went to India in March, 1965, and made an intensive study of the situation. The group worked with University staff members at Bhubaneswar, Orissa University administrators and faculty, Orissa state officials, AID personnel and Government of India representatives in New Delhi and staff members of the four other United States universities working on similar programs in India.

This report was written by the three men after their return to Columbia. It outlines the major problems and responsibilities of Orissa University and the principal responsibilities of the University of Missouri in assisting in the development of a truly "peoples" university in Orissa.

This new university, properly developed, can become the research and educational center which will give farmers in Orissa the technical knowledge with which to modernize their agriculture and produce the food which is now a limiting factor in the economic and social development of the people.

J. H. Longwell, Director  
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REPORT OF THE UNIVERSITY OF MISSOURI-  
ORISSA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY  
STUDY TEAM\*

I. PURPOSE AND NATURE OF THE REPORT

This report is written primarily for the use of the University staff at home and abroad concerned with the Missouri-Orissa University Program. It is intended as a partial basis for plans directed to the Orissa University and for making adjustments at home to facilitate improvements in the program.

The report is not intended as an evaluation of the efforts and achievements of the University of Missouri-Orissa University of Agriculture staff in years past. The Committee recognizes that present effort and plans for the future rest on changes started by the diligent effort and achievement of predecessors who often had no opportunity to see the fruits of their labor materialize. The University of Missouri staff and the Indian personnel are to be commended for their efforts resulting in legislation which made the Orissa University of Agriculture and Technology possible and for pursuing a course of action which is gradually making such a university a reality.

The University of Missouri effort at assistance and information exchange, first directed to the development of extension, research and teaching related to agriculture in Bihar, Orissa, West Bengal and Assam, now has been narrowed area-wise and concentrated to helping a single University, namely, the Orissa University of Agriculture and Technology.

This more concentrated and comprehensive approach has posed new problems of how the University of Missouri may be of greatest assistance to the Orissa University of Agriculture and Technology.

Objectives for the Study Team were originally stated as follows:

1. Determine the role of Orissa University in developing the agriculture of the State.
2. Determine areas of high priority needs in which the University of Missouri can participate and indicate priorities, if possible.
3. To determine ways in which resources of the University of Missouri (particularly professional manpower) can be more effectively utilized in mutually agreed upon developmental goals.
4. Determine factors and conditions which impede maximum use of U. S. personnel with recommendations for changes to insure more effective use of the special abilities of persons involved.

Some re-definitions of these objectives have occurred as the Study Team learned more about the situation at the Orissa University of Agriculture and

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Technology. Consideration was progressively directed to operational problems growing out of the present conditions and the projected developments. This report should be read in conjunction with the University of Missouri Semi-Annual Report on its program in India (May 1 to October 31, 1964) for an assessment of the present situation<sup>22</sup> and for some view of the future, the projected plan for the University in the Fourth Five Year Plan.<sup>6</sup>

The Study began with a close scrutiny of the written report of group leaders from past years<sup>11,28,25</sup> voluminous reports relating to the general state of Indian agricultural and industrial development<sup>9,11,17,19,20,29,30</sup> anthropological and sociological studies generally related to the problem,<sup>18,34</sup> accounts of various Indian experiments to increase agricultural production,<sup>2-5, 14-17,37,38</sup> a number of general treatises and a study of contractual arrangements between Agricultural Colleges in the U.S. and sister institutions in developing countries<sup>7</sup> and reports of previous conferences relating to U.S.-Indian agricultural college contractual relationship.<sup>1,31</sup>

This report is based upon information obtained by the study team in India from files of the group leaders, field trips, study tours and extended interviews with the U.S. technicians, interviews with the Indian staff in the Orissa University, with the Board of Management at Orissa University and from consultations with Dean Elmer Kiehl of the University of Mo. College of Agriculture who as administrative representative for the University of Missouri has had five years experience with the contract and has visited India three times in connection with it.

The Study Committee has drawn heavily from the ideas and thinking of the Indian and American personnel. Members of the latter read tentative versions of the report and offered suggestions most of which have been incorporated in the final document. Actually many of the suggestions offered by the Indian staff and American technicians are already being implemented. Although the invaluable assistance of the latter in preparing the final report is gratefully acknowledged, the Study Committee must and does assume responsibility for such imperfections as may exist. The study tour ended in New Delhi with conversations and suggestions from personnel of the Rockefeller Foundation, Ford Foundation, the Agency for International Development, the Indian Council for Agricultural Research and the Indian Agricultural Research Institute directly concerned with agricultural educational and developmental matters. Many insights and ideas were gathered from these sources.

The Committee recognizes that the final statement is not inclusive of all important problems that should be considered, but believes that it provides a suitable tentative basis for projected activities of the Missouri College of Agriculture in Bhubaneswar and for needed adjustments in the program at home. This report takes into consideration perceived or anticipated developmental problems and projected future development in the Orissa University.

## II. UNIVERSITY OF ORISSA ORGANIZATION RELATIONSHIPS AND DEVELOPMENT

Probably the highest priority problem at the University is one of defining duties, responsibilities and relationships of the various positions in the Univer-

sity organization and of inculcating basic concepts regarding its operation. The Ouat staff members are involved in a new set of novel circumstances for which they have had little prior experience. The situations involved need to be identified and working relationships established as soon as possible. In some cases, as with the Director of the Experiment Station, new statutes may be required. In others action by the University administration may be the solution.pared by O. N. Liming of A.I.D. Delhi, will no doubt be helpful.12

Fortunately there are now relatively advanced prototypes of rural universities in India from which advice on many matters can be obtained. These include the Punjab Agricultural University at Ludhiana and perhaps the I.A.R.I. in New Delhi. It would seem that much could be gained by obtaining consultants from these Universities in regard to special problems where competence exists. For example, help surely could be obtained in changing from the present system to the trimester system and to internal examinations. Two publications growing out of the efforts at Ludhiana that should be very helpful are:

Ronald B. Thompson, Suggested Procedures for Student Admission, Registration and Record Keeping in the New Indian Universities. The Ohio State University and U. S. Agency for International Development Mission to India, April, 1964.

Punjab Agricultural University, Information for Students. Punjab Agricultural University, Ludhiana, 1964-65.

Also frequent contacts of personnel of the Orissa University and of the Board of Management with the appropriate persons in the more developed universities should be encouraged.

As the University becomes increasingly operational more use needs to be made of short time consultants for specific assignments. This may involve sending carefully selected officials from the Orissa University to the University of Missouri or comparable officials from the latter to the Orissa University or even an exchange study tour arrangement. Cases in point would be the Comptroller and the Registrar both of whom will have a new set of duties and responsibilities for which they will have little or no prior experience. Persons holding these new positions will have the additional responsibility of teaching others about forms, procedures, and actions required to permit compliance with yet unstated administrative regulations.

There is also a crucial need for helping the Board of Management and key administrators in the University develop concepts and basic philosophies for the operation of the Rural University and the role that they can have in developing such an institution. The American technicians should search for ways to help the Board develop these understandings and to obtain information that will be helpful to them in making basic decisions. Frequent contact with developments and personnel at other Indian Universities should be helpful. Perhaps a trip to an American Agricultural University should be considered. Certainly, such an experience would be useful to selected high level officials of the University. This would include the President, the Director of the Experiment Station, the Director of Extension and perhaps the Deans.

In all cases where such trips are to be undertaken careful planning and orientation prior to the trip and follow up sessions after their return must be provided. Also, careful specification of the objectives of the study team before departure and careful planning at the University of Missouri will be necessary. Some provision to relieve the home staff of sufficient duties to take care of the educational needs of the visiting team will also be essential for best results. The kind of technicians needed and their qualifications will be further discussed under a section bearing that title.

Although hierarchial arrangements with deference to superiors is an essential feature of an organization as an Agricultural University, there may be no real need to maintain the rigid requirements that prevail in the Government service from which most of the present staff have been deputed. Agricultural universities have been granted added degrees of freedom so that they can be more responsive to local needs. Just as a university is accorded more autonomy, so ought individuals within the system. Delegation of authority where possible and simplified procedures for obtaining official sanctions where authority is retained should be encouraged. Experimentation in faculty involvement in university matters and the exchange of ideas vertically as well as horizontally should be encouraged. This applies particularly to lines of communication between persons with first-hand experience in the activities of the university, e.g. extension personnel who actually work in the field, people who repair the pumps used in the village and classroom teachers.

Government by the elite will become progressively less necessary as a competence develops in the lower echelons of the society. Such competence already exists in the university framework.

There is an additional need to encourage innovation in the various activities of the university and reasonable protection from adverse actions when innovative efforts prove unsuccessful.

New freedom means new responsibilities. The Committee knows of no means of insuring the latter but recognizes that direct rewards for the desired kind of achievement should help. Such has been suggested elsewhere. Many of the faculty are well aware of the pressures to which they are subjected and of their increasing vulnerability as their individual autonomy increases. Such pressures could easily occur with the faculty under the internal grading scheme. Here as under other circumstances vigilance must be maintained and in so far as possible safeguards provided against these pressures.

The present group leader has suggested the formulation of a clear-cut statement of the basic concepts and ideas regarding Land Grant colleges and that it be communicated by all. This excellent idea is being implemented. Also there is a need for forward planning and program projection to insure that efforts through the years are additive and cumulative and that continuity in program efforts be maintained.

### III. FACULTY MORALE AND RELATIONSHIP

There is probably no problem facing the OATU University administration that is more important than the present crisis in faculty morale. It is imper-

ative that pay scales be set at least as high as for government employees with commensurate amenities or with other compensating features in lieu thereof. This must be done at the very earliest possible date to hold the present University faculty and to attract a competent new staff. University Grant Commission pay scales have been recommended in the Fourth Five Year Plan. This should be adequate. However, it is assumed that appropriate amenities will include periodic pay increases within grade as in the government service and appropriate guarantees for security in employment.

If upon adoption of the recommended pay scales positions are open to competition it will be very important to have clearly defined professional specifications for each position in advance. Qualifications for the Deans of the various colleges are specified in the Act<sup>30</sup> and the Statues.<sup>9</sup> Others will have to be developed or obtained from other sources. Those already existing will need to be examined for likely revision of requirements.

In addition to revised pay scales and attendant amenities it would seem desirable to provide additional ways of rewarding high level faculty achievement. Some possibilities would include:

1. Monetary or non-monetary awards for the:
  - a. outstanding teacher of the year
  - b. outstanding research worker of the year
  - c. outstanding extension worker of the year
2. Salary increments for meritorious service.
3. Paid expenses to some kind of meeting of a professional improvement nature.

It would further seem that some thought should be eventually directed to professional improvement of the present faculty possibly by subsidized study in India if feasible and abroad if necessary. Perhaps some internal efforts to improve teaching and testing procedures could be considered.

Efforts to improve faculty esprit de corps are needed. Completion of plans for a modest faculty recreation centre, adequate schools for their children and greater involvement of the faculty in matters vital to the operation of the new university would surely help. Certainly consideration should be given to delegating authority, facilitating communication among faculty members and the administration and to minimizing procedural difficulties in carrying out faculty assignments. An additional consideration is the provision of an environment conducive to work and encouragement of faculty members in their respective assignments. Personal encouragement of capable faculty members by the American personnel is needed.

#### IV. THE PARTICIPANT TRAINING PROGRAM

The Participant Training Program in which 27 of the Orissa University of Agriculture and Technology staff have participated has contributed materially to the development of the extension, research and teaching programs of the University. Three of these participants now occupy positions as Department Chairmen in the University; 19 are employed elsewhere in the University. Although only five have moved elsewhere, mainly to Government service,

those who left have generally been high calibre men who could have contributed substantially to the development of the University. They may return if tenure and security become more stabilized and if the University Grants Commission pay scales are adopted as requested.

Now with many better qualified staff members having been selected for participant training, mostly for the M.S. Degree, the time has come to emphasize the selection of persons for Ph.D. Degree training who either hold or are scheduled to hold strategic positions in the various Departments or who may be expected to strengthen specific aspects of the various departmental programs.

Hopefully selection can be made more on the basis of highly selective specialities than primarily on a "worthy candidate" or other basis. Much effort should also be made to arrive at a clear cut understanding of the conditions of the employment of the participant upon his return and obligations incurred in accepting the proposed training. In so far as possible, conditions of the employment upon return should be agreed to both by the administration and the candidate. Should departmental personnel changes become necessary in the absence of the participant, consideration should be given to how the newly acquired skills and knowledge will fit into the new situation.

The University of Missouri faculty and administration are convinced that 18 months must be allowed for the M.S. program and at least 30 months for the Ph.D. Even with the 18 months requirement proper timing of arrival of the participants would be necessary, e.g., if students arrive by September 1 they perhaps could finish degree requirements by the end of January of the second year following (17 months). However, the only time available for practical training, travel and other activity would be about 5 weeks between the summer and fall terms. Additional time even in these cases would seem advisable. Criticisms that participant students are completing course work almost to the day of departure has been predicated on the need to finish degree requirements, thus depriving the students of desired practical training. Students coming on degree programs should arrive on the campus for briefing at least 5 days before registration.

The time period of the non-degree participant should be limited to no more than 8 months, and should be eliminated except for administrative personnel and very special purposes. Students should probably be accepted for degree programs only.

Dissertation proposals for the Ph.D. Degree and the means of completing them must remain flexible, but provision should be made to allow selected students to return to India for conducting needed research either under the direct supervision of the participant's advisor or under a designated faculty member of the University of Missouri in India. The former would help establish closer working relationships between the two universities in addition to providing more realistic training from the students. The thesis problem should be on a problem related to Indian agriculture and closely related to the participant's intended work upon his return to India.

Under existing conditions, the participant may need to return to the U.S. to complete his dissertation and submit himself for the final examination. An al-

ternative arrangement for which provision should be made eventually would be to constitute a Committee of qualified professionals in India to conduct the examinations by joint arrangement among the participating universities in the various AID programs. The last would be an appropriate activity for the Executive Secretary for Council of American Universities for Rural Development now under consideration. The state-side advisor should pass on the thesis.

Before a candidate for a degree is approved for travel to the University of Missouri careful specification of the kind of training needed by the candidate and agreeable to the Orissa University administration should be communicated through channels to University of Missouri. This would enable Department heads and Professors who will be responsible for the advisement and training to review the program for acceptance, rejection or recommended revision prior to a candidate's admission. The appropriate University of Missouri officials including the Office of Admission should be sure that the training needs can be met including the allocation of extra time and resources required. Once accepted the study program should be executed in compliance with the contract and the needs of the students, making sure in all cases that such non-academic training as may be prescribed and/or deemed advisable is completed.

A more adequate assessment and reporting of the students' progress at the University of Missouri is needed by India officials particularly on students for whom Ph.D. training is requested while the M.A. or other training is in process. Such reports are necessary as a basis for recommendations that will be required in the future.

Some means of helping participants get started in appropriate research projects upon their return to India is needed. Limited financial assistance and professional guidance should be considered with adequate maintenance of contact with the returned participants to encourage use of their new knowledge and to provide assistance in special projects which they may undertake.

A study committee was inclined to feel that AID in Washington should provide some compensation to University of Missouri departments to help defray costs of dissertation research done by Indian students. They ordinarily take more staff-time than the general run of American students. There was also some feeling that provision should be made to support the dissertation research of U.S. students in India where it can be done under the supervision of the student's advisor.

Provision is now being made through AID Delhi and the Indian Agricultural Research Institute for a joint training program involving course work at the University of Missouri and at IARI with a degree in most cases being taken at the latter institution. Under this arrangement only courses of study for which adequate training cannot be obtained at IARI will be taken at the University of Missouri. It is recommended that careful consideration be given to possibilities for such an arrangement when making recommendations to send participants abroad. More training should be obtained in this manner in the future. Perhaps, assignment of students to such places as the International Rice Institute in the Philippines and the East-West center in Hawaii may be considered in special cases.

## V. RESEARCH

### Present Situation

The inadequacy of the present research program is generally realized and acknowledged. One measure is the vacancy of 1/3 or more of the authorized research posts in the University. Even this measure underestimates the inadequacy because there is need for a greater number of posts than now authorized.

On the plus side is the competent, enthusiastic leadership being provided by the present Experiment Station Director.

### Goals

1. The research program must be directed to the agricultural problems of the cultivator. The usual goal of increasing food production might usefully be rephrased to that of increasing the productivity and income of the cultivator.
2. The research program should develop a limited number of research areas in depth. India seems just a little more susceptible than the States to the general problem of research proliferation. A few areas of good, relevant research will have far more effect than a program that gives superficial attention to every commodity of the State and every research idea of the faculty.
3. Now is the time for OUAT to develop some criteria for allocating scarce research resources among the tremendous number of research possibilities. Such criteria should be widely discussed within the faculty and, after adoption, should be applied thoughtfully and firmly in the funding of research projects and in the creation of additional research posts. Among the more relevant criteria are these:
  - a. the potential contribution of this commodity or this research to the economic development of Orissa's agriculture, and
  - b. the particular research interests of the faculty.

These two criteria are more often complementary than contradictory, but there are conflicts, and the resulting compromises may vary considerably. Now is the time to develop general research policy concerning such conflicts. A consistent policy will develop a stronger research program and a better faculty morale than a weak or non-existent policy.

4. The potential economic value to Orissa of research on any particular commodity or research area defies precise prediction. However, we can and must make judgments as to relative orders of magnitude. When we argue for appropriations for agricultural research which might otherwise go into industrial research or into building a steel plant, we are making such a value judgment. Likewise, the tremendous acreages of paddy in Orissa and the low paddy yields urge for a considerable emphasis upon research to increase those yields. The potential development of irrigation in the dry season argue for some emphasis upon research on the adaptation of new vegetable and other crops. Irrigation from reservoirs, wells and streams has a tremendous potential that is being rapidly developed under the leadership of Governor Khosla and others in the Orissa Government. Efficient management of this

water requires the solution of a host of related problems in farming practices, varieties and fertilization as well as problems of drainage, salinity, and efficient water use. Failure to obtain answers in any one of several significant areas may greatly hamper the effective use of such water. Therefore, careful attention should be given as soon as possible to a comprehensive program that provides timely answers to the crucial problems related to water use in Rabi season.

#### Suggested Steps Toward the Above Goals

1. Give research its proper place in the functions of the university. The present attitude suggests that research will get done if there is any time remaining after the teaching is done. Teaching, research and extension are co-equal functions in an Agricultural university. If enrollment expands rapidly in the next five years it is quite possible that the university will be short of faculty throughout the period. Even if enrollment has to be limited, the goal of two-third teaching and one-third research should be implemented immediately.
2. Continue to push hard for the coordination of research, teaching and field education (extension). Otherwise, the orientation of research toward real work-a-day agricultural problems will not be obtained.
3. Expand the faculty at least as fast as projected in the university's Five-Year Plan.
4. Give incentives to the individual growth and development of all the research faculty. Junior Faculty who show professional promise should be encouraged to prepare projects, and they should receive proper credit in publications relating to their efforts.
5. Central funding of the university research rather than finance through schemes in the Government Departments is absolutely essential.
6. Continue the development of the project system of research administration now being instituted. However, a simpler system of project approvals should be evolved eventually. From the point of view of the individual researcher - who does the work if any is done - there are now four potential obstacles to the approving of his project: the Department Chairman, the Dean, the Research Advisory Committee and the Director of the Experiment Station. This is a bit too much.
7. Plan and develop as rapidly as possible the principal research facilities: laboratories, library and central farm.

#### VI. EXTENSION EDUCATION

A much expanded field educational program with cultivators in Orissa is needed if food production objectives in the State are to be achieved. It is generally agreed that increased productivity and higher net incomes to cultivators will result only if scientific knowledge and methods are applied. Farming in Orissa is done by large numbers of individuals in largely independent operations. It follows then that these individual cultivators will need to learn the new scientific methods, and how to apply them to their farms. Furthermore these new ideas and methods must be fitted into their social and other values.

With the above condition and situation prevailing, only an educational program taken directly to the cultivator is likely to make the necessary impact and persuade him to change to a new kind of farming. Also, the educator who teaches the cultivator needs to know both scientific agriculture and how to teach. In addition he will need to identify himself with farm people who come to regard him not only as a teacher but also a friend in whom they can have confidence. This requires that the university train an effective type of field educator. It was believed in Orissa that the new agricultural university would be qualified to do this educational job, and was accordingly assigned this responsibility.

Two approaches are being made by the Orissa University of Agriculture and Technology. One is to develop the authorised Field Education Division (Extension Education Service) of the O.U.A.T. to carry an educational program directly to farm people. The second is to use these trained personnel to work with and help improve the teaching skills of the C.D. and N.E.S. Education workers who are directly in contact with the cultivators.

Experience indicates that it is difficult to combine effectively the duties of education and the responsibilities for obtaining supplies in the same person. Conflicts of interests may arise or one may be carried on at the expense of the other. This is as true in India as in other countries. Thus the University program will be directed only to education of farmers and functionaries.

A primary objective of the university will be to develop an effective field educational organization. The other and almost equally important objective will be to develop an extension education and methods teaching section. Young men and women who are capable of doing the job of education with farm people and with extension workers in other agencies of Government must be graduated. The University must have its own field organization to provide this training. Otherwise it cannot learn how to teach farmers successfully or how to train extension education specialists who can successfully teach and train others.

Very significant beginnings already have been made in selected villages near the university largely through demonstrations concentrated in carefully selected villages, tours, and village meetings with cultivators. Another significant feature of the program is the involvement of village production committees in the planning, organization and promotion of recommended changes. To achieve the larger extension education objectives, a larger professional staff and a more comprehensive extension education program will be needed. Major emphasis should continue to be directed to village demonstrations in the years immediately ahead but eventually looking to a wider utilization of methods directed to larger audiences, e.g., use of the mass media. Organizationally the program should be headed by a fulltime Director of Extension Education with an additional staff at the University roughly as follows:

1. Associate or zonal directors responsible for field extension education activities in designated areas depending on the areal scope of efforts undertaken.
2. Extension subject matter specialists including cooperation and youth work in addition to those directly concerned with the usual agricultural

- production subjects. Where possible and pertinent, each should be housed with and be a part of the respective subject matter departments to encourage integration of the teaching, extension and research activities of the University. Their work should be directed primarily to educating farmers and they should be employed as soon as possible.
3. An appropriately staffed information service to assist in the preparation of educational materials for farmers and extension workers. To do this, a staff consisting of an information specialist, projectionists, photographer, artist and perhaps others with supporting staff and equipment and supplies will eventually be needed.
  4. An expanded extension education staff to teach extension education methods to field workers who will be required as farmer education is expanded to additional areas.
  5. An extension education field staff with direct line responsibility from the Director at the College to village workers charged with cultivator education at the local level. In addition to the central effort of educating cultivators through local demonstrations and individually directed effort the expanded program should include:
    1. effort to educate cultivators through the mass media,
    2. meetings to assist informal leaders (e.g., village agricultural committees, youth organization leaders and local cooperative boards) better perform their special functions and to serve as disseminators of farm information,
    3. short courses at the University and selected outlying centers for such intermediaries as village school teachers, state agricultural and extension officers, cooperative officers and village level workers,
    4. Broad use of the University and other soil testing services.

Many direct benefits to increased agricultural production should accrue from educational effort directed to local leaders who will in turn become informally involved in educating others, and to officers who administer various state agricultural programs. This kind of extension activity would be compatible with the present policy of administering agricultural extension effort through the State Department of Agriculture.

The attempt to apply the cultivator education program first to a 20-village area and to expand as trained personnel and resources become available, seems to be a sound approach to the cultivator education responsibility assigned to the University. The goal is to cover at least two districts by the end of the Fourth 5-year Plan.

This and the activities previously enumerated require sustained effort on the part of the University administration and thus a need for consultants for number of years. Office space, special audio visual equipment and vehicles will also be needed. However, in arranging office space care must be taken to encourage integration of research, extension and teaching programs of the University.

## VII. THE LIBRARY SITUATION NEEDS

A well organized and properly stocked library that serves both students and staff is essential to any university. Fortunately the Orissa University of Agriculture and Technology recognized this fact quite early and began construction of a suitable building for a library that would serve the needs of the entire student body and staff. This building is now well along in construction and should be completed within the next year. By bringing all university library facilities together in one building space can be released where the present libraries are located for other uses such as offices, classrooms or laboratories.

### Well-Trained Librarian Necessary

Library science is well developed and librarians for modern libraries must be well trained in this science. The librarian for the new library of the Orissa University of Agriculture and Technology will have a tremendous job in establishing a completely new library in a new building. This task constitutes a real challenge to the entire staff but the leadership and direction must come from the librarian.

Therefore, it is important that a capable young man be selected for this post and sent to an Indian University or abroad for training in Library science. After he returns and the library building is ready for use it may be desirable to enlist the services of a competent and experienced librarian from some other university to assist the Orissa University of Agriculture and Technology librarian organize the new library and initiate its service to the students and staff.

### Library to Serve the Needs of the Whole University

Fortunately the new general library building is located very near the other buildings on the campus of the Orissa University of Agriculture and Technology so that the students and staff from all departments can conveniently make use of these new facilities. By combining all library books, journals and facilities, the students and staff will have access to many more books and journals than they could in separated libraries.

A general library will avoid duplication and thereby minimize the cost of equipping and stocking the library. It will also reduce the operation costs in providing library services for the student and staff.

If desired the library could be organized along sectional or subject matter lines to improve its services to the different colleges.

### Stocking a New Library

A very important problem in developing a new library is the selection of books and journals to be stocked. It is obvious that only those most needed to serve the students and staff can be purchased. Present stocks are somewhat limited and need to be expanded by adding books, additional journals and back issues of some journals.

It would appear logical to ask those most concerned with reference materials to make the selections needed. Therefore, it is suggested that the staff be given an opportunity to list books and journals they consider necessary to improve teaching research and extension. It might be helpful to ask the staff

counterparts at the University of Missouri to make suggestions for books and journals in their respective fields. In any case appropriate staff members in the appropriate departments at the University of Missouri should examine the lists submitted by the Indian staff to be sure that certain selected listings are included and perhaps make substitutions where better references are available.

Text Books Stocked by Library

Another service that the library could provide for the students would be to stock several copies of the textbooks used and keep them on reserve in the reading rooms and the library being open long hours.

It is hoped that ultimately the cost of text books can be reduced so that students may purchase their own. This would be most desirable so that they could begin to assemble their own personal libraries for use in their work after graduation.

## VIII. TECHNICIANS, CONSULTANTS AND INFORMATION EXCHANGE

There will continue to be a need for consultation regarding the basic concept, organization and management of an agricultural university. This must be a primary activity of the group leader. He must be one who can command the respect of professionals in the agricultural university and in Government and who can communicate effectively with them. These qualities should be coupled with top level ability as an administrator, enthusiasm for the assignment, and unusual energy. The agricultural area of specialty probably will make little difference.

Continuity needed at all levels for projected and developing programs is crucial in this position. When personnel changes are made, particularly in the group leader position, the terms of the new and old one should overlap by at least two weeks. Another way of providing continuity and support to this position is to permit return to the U.S. for consultation with the old group leader and other university officials as necessary. In like manner consideration might be given to sending the new group leader to India prior to the beginning of his term perhaps as a member of the yearly inspection team or as a short time consultant.

One or more of the other technicians should be qualified to assist in the generalized roles above envisioned. Although high level capacity in their own specialty is necessary, such persons must also be able to assume high priority assignments quite unrelated to their own specialties when the need arises. Arrangements with the University of Missouri should be such that when information and advice on novel situations is requested it should be supplied immediately. Technicians are and probably should continue to be mainly two year consultation assignments. However, there is a need for a number of short term assignments, for very specific special purposes. This need is likely to continue. A case in point is the position of the Registrar.

In all cases where special skills are needed a careful assessment of present developments in India should be made before selecting technicians. With new agricultural universities in India at more advanced stages of development than the Orissa University of Agriculture and Technology, consul-

	6	8	8	8	7	6
Description of talent	1965	1966	1967	1968	1969	1970
1. Group Leader	McKinsey					
2. Research Advisor	Poehlman	Horticulture	Soil or field crops		Soils, crops or horticulture (rice specialist)	
3. Animal Science (Dairy)						
4. Agronomist experienced in irrigation						
5. Agriculture Engineer	Parker Johnson					
6. Home Science						
7. Extension (field operations)	Meeker - Extension					
8. Extension Training		Extension Training	Information Specialist			

tation from or study tours to these institutions undoubtedly can be advantageously arranged. Such would have the added benefit of legitimated ideas and procedures in India and of providing adaptations more suitable to Indian conditions than may result from direct contacts with American universities.

The kinds of technicians which appear to be needed in the next six years are listed below. However, it is likely that availability, added non-technical qualities and dedication to the cause will often over-ride the purely technical competence, proper timing considerations in the selection of consultants.

#### List of Technicians Needed

- |  |  |
|--|--|
| Administrative Technician                  | With competence in Land Grant College philosophy, organization and management, high level administrative ability and enthusiasm. The administrative consultant should normally serve as the group leader.  |
| Research Technician                        | in a series of research specialties but with competence to advise in general research matters other than own specialty and for at least one at all times, ability to advise regarding the internal planning and management of the research programs of the college and development of the agricultural experiment station grounds. |
| Extension Education                        | with knowledge regarding the development, organization and operation of extension programs in their broad aspects and preferably with some administrative experience in relation thereto.  |
| Information Specialist                     | to help plan publication, radio and audio-visual programs of the university  |
| Library Science                            | to assist in the development of the new library and in assessing library needs and requirements.   |
| Agriculture Tools Specialist               | to assist in the preparation of practical training courses in the design, maintenance and repair of agricultural tools currently in use and in prospect, e.g., pumps, sprayers, electric motors and small internal combustion engine.  |
| Teaching, internal examination and grading | to assist with the orderly, transition to internal examinations and the improvement of teaching under the trimester system; perhaps also student-faculty relationships.  |

Campus planning consultant	to assist in the location and physical arrangement of buildings and the acquisition of land.
Consultant to the registrar	to provide assistance in setting up a student record system associated with internal examination.
Consultant to the comptroller	to provide assistance in setting up a suitable monetary records system for the university.
Agricultural Engineering	at least six months before the Agricultural Engineering College is actually started a consultant who understands the organization and operation of such a college in its applied as well as its theoretical aspects ought to be on hand.
Home Science	Also at least 6 months before the Home Science College is started it would be well to have an American consultant who can assist in the development of such a college particularly in its applied aspects.
Irrigation and water management	an agronomist with competence in the production of irrigated crops.
Extension training specialist	to develop a program with the Community Development and Agricultural Extension programs of the state government to help them improve their educational work.

## IX. FACILITIES AND SUPPLIES

The best assessment of needs for building, equipment and supplies available is found in the fourth Five Year Plan for the University to which the reader should refer. It will be observed that buildings requested include a workshop, machine shed, a threshing floor, and living quarters for the staff and labor force for the Experiment Station; office and laboratory building, cattle shed, machinery sheds and a threshing floor for a regional research station; godown and staff quarters for a rice research station; an unspecified number of buildings for students in a variety of places and curricula; a shopping center, guest house, school building, hospital, and variety of other buildings ancillary to the administration and operation of the university; a number of buildings for a new livestock farm, two entire new campuses (agricultural engineering and home science) and other buildings and facilities no doubt overlooked. If to this is added the laying out of roads, electrification, irrigation and other development of experimental farms there can be little doubt as to the need for assistance in campus planning of considerable magnitude in the very near future.

Listings of needs for equipment, and facilities are included in the plan. However, prior to any large-scale action to acquire either books or equipment through AID a systematic assessment of needs and adjustment of lists in the light of budgetary limitations will be required.

Where suitable equipment can be purchased in India this should be encouraged; also insofar as possible, U.S. equipment for which adequate servicing would be possible.

#### X. COOPERATION BETWEEN THE HOME CAMPUS AND THE GROUP LEADER AND TECHNICIANS LOCATED AT ORISSA

To be most effective at the Orissa University of Agriculture and Technology, there must be very close working relationship between the University of Missouri at Columbia and the staff stationed in Orissa.

Better communication between Missouri and Orissa is needed. The group leader should be kept informed of all developments affecting the work at the Orissa University of Agriculture and Technology, such as, contract negotiations with US AID. This contract must soon be revised. Likewise, the group leader in India should report regularly to the home university as to the progress of the program at the Orissa University of Agriculture and Technology and any anticipated needs.

Records show that there is too much delay in getting equipment and supplies from the U.S. to India and much of the delay is due to University of Missouri's system of handling purchase orders.

1. There needs to be some one who has the primary responsibility of expediting movement of personnel, commodities and equipment, and personal effects. If an expediter could carry all such orders through the regular channels much valuable time could be saved. It appears that well recognized and responsible firms with whom we have been dealing cannot be trusted to expedite movements and push shipments. If some one at the University would follow through on all these matters with the same vigor that an individual would exercise personally, short-cuts could be found, companies with whom we do repeat business would develop a new respect for expeditious handling of our needs, and these movements could be expedited significantly. If for the next few technicians who moved, someone checked on the movement of their personal effects every third day, significant delays would be eliminated on those particular shipments and a pattern that provided more rapid movement would be established by the firms handling the shipments.

2. Because of the importance of prompt handling of the paper work and rapid movement of technicians aids, personal effects, and commodities in general, the University should remove them from routine handling and give them special handling. It is recognized that such special handling costs more in dollars and in time than does the routine handling of similar paper work for regular university business. However, everything else connected with the India program costs more in time, trouble and dollars than a similar operation would on our campus. There should be ample overhead in our contract arrangement to provide the personnel time needed to give special attention to

these needs. A delay of one week at three different points of paper processing on the campus means at least two and a half weeks of unnecessary anxiety and waiting on the part of the technician in India. Telephone calls to clarify matters or speed up procedures off the campus should be used if time can be saved.

3. If a series of regular and semi-automatic checks could be established which would involve such regular checks on all paper work, orders, and movements by the group leader, the Campus Coordinator, and the Purchasing Department there likely would be introduced considerable speed up in these regular processes. A letter from President Ellis advising Purchasing to give priority to all orders from the Missouri University Program in India would be very helpful in expediting orders.

4. The fact that there is a continual flow of foreign students and others into the office of the Campus Coordinator is testimony to the effective operation of that office on their behalf. However, it is inefficient in that every visit interrupts the entire office staff. If someone doing the ongoing paper work were removed to a private office where he could work at least six and one-half hours each day uninterrupted, efficiency would increase.

5. The group leader in India should have a counterpart at the University of Missouri, who would assume responsibility for planning, developing and administering activities at the University necessary for supporting the operation in India. Duties of this counterpart would include activities as follows:

a. To work with participants and their advisors in developing and carrying out their graduate program including practical training and selecting a thesis problem related to food production in India.

b. Prepare visual aids and other teaching materials for the group leader and technicians located in India.

c. Serve as the expediter of supplies, equipment, etc.

d. Keep the group leaders in India informed of the progress being made by the Indian students. He could also smooth out any academic problems before they become too serious or lead to failure.

e. Serve other liaison functions between the two universities.

## XI. SITUATION AND PROSPECTS

The Orissa University is in a position of potential growth and development if certain promising conditions favorable to growth materialize and it is in a precarious position if they do not.

An aggressive forceful leadership in the university has not developed. This is a condition also noted in the Marvel Baker report.<sup>1</sup> The transition from direct dependence on Government to semi-autonomous existence has been very slow. Arrangements for making the transfer have been piecemeal and are still far from complete. The agricultural university concept is not well understood and has not been accepted by some of the administrative staff of the university and the Board of Management. Lack of confidence in the university administration and reluctance to relinquish authority seem to be factors that cause some government officials to hesitate in giving it their complete support.

Since it will take a long time for Indian farmers to develop into a strong power group who could support the university, this direct and heavy dependence upon government cannot be eliminated in the immediate future. Fortunately, the Governor and a few top leaders have provided enough leadership for the university to survive thus far. But it should be clearly understood that the loss of a few friends in Government could ruin this university.

On the positive side of the ledger a top official in Government has assured the Missouri group leader and Dean Kiehl that he is taking steps to secure the most capable man that can be found in India as the next President. With such leadership the Orissa University of Agriculture and Technology has a real opportunity to develop into a first class modern agricultural university. There are many capable men on the faculty who can, with proper support, develop into excellent teachers and research workers. With encouragement from the administration, the faculty morale will improve and personnel will make university staff work a life-long vocation. Twenty-two faculty members trained at the University of Missouri are now on the staff and 14 are scheduled to return shortly.

The well-developed forward-looking Fourth Five-Year-Plan developed by the university staff in consultation with the Missouri technicians is tangible evidence of its interests in using its assets to help build one of the leading agricultural universities in India. Dean Kiehl has just spent one month of his time in this joint endeavor and the University of Missouri is paying the salaries of the three professors assigned to the Study Team that made this report.

The University of Missouri-Orissa University program is staffed with a dedicated team of U.S. consultants who are well suited to working with top government and university officials. They are working effectively to organize and operate the university and to develop the research and extension programs. The optimism and dedication of the team for the University of Missouri-Orissa University operation is an additional asset. Also the prospects for getting capable replacements are better than at any previous time.

Furthermore, the pressure of population on food supply in India, virtually compels a government program of promoting agricultural production with agricultural research, teaching and extension as necessary parts of this effort.

We believe that the University of Missouri should respond with a vigorous, well planned technical assistance program which presupposes the ultimate success of the Orissa University of Agriculture and Technology. However, it should be clearly understood by all concerned, including prospective technicians, that the basic agricultural university concepts may not be successfully implemented at O.U.A.T. in spite of our best efforts. The University could continue as an educational institution but not contribute materially to the agricultural development of the State.

There is need for the Missouri group to direct more attention to extending its influence to students. Some already have direct contacts with them as in the practical aspects of agricultural engineering and field work in extension education. Others have little opportunity to demonstrate their talents.

It is suggested that the time has come when the Missouri group could well do some teaching. Limited participation in regular class work may be desirable as soon as the trimester system is adopted. This could have additional advantage of demonstrating appropriate teaching methods. A series of special seminars each year for senior students and faculty on the concepts and operation of land grant colleges should be considered. Such teaching should be valuable not only for its subject matter but also for its "spillover" effects in demonstrating American concepts on higher education. While teaching by Americans has some difficulties and requires valuable time, it will help build needed bridges of understanding with faculty and students which may not be built in any other way. Care must be taken to insure that maximum effect is obtained and that Missourians do not become substitutes for Indian staff.

A fundamental difficulty in India understanding of Land Grant concepts is their failure to perceive the necessity of educating the cultivators. For example, a recent Indian evaluation of the IADP "Package Program" describes it as a "new experiment of agricultural production by providing the farmers all the supplies and services . . .". The emphasis is upon supplying him things, not knowledge. Granted that the cultivator needs both physical inputs (fertilizer, seeds, etc.) and technology (scientific know-how) efficient use of the former cannot be obtained without the later. T.W. Schultz (University of Chicago) recently dramatized the problem by asking what Indian food production would be if India suddenly had all the capital inputs that American farmers have (29). The prospect is that Indian agricultural production would actually decline the next year after introduction because of inability to use modern inputs. Obtaining an understanding and appreciation of the need for educational inputs is going to be a long hard battle, but its success is of life and death significance not only to OUAT but to India's millions. The Study Committee believes that one of the best ways to supply this information is through agricultural universities that combine research, teaching and extension (farmer education).

## XII. FINANCIAL SUPPORT

Although the Committee recognized the prime importance of financial support for the University, this was not selected as a major area of consideration. This has been given careful thought by both the United States and Indian personnel at the University in preparation of the next 5 year plan. Unless adequate financial support can be obtained for the University, the Committee feels that there will be no need for an intensified effort on the part of the University of Missouri or perhaps any at all. What is adequate, probably can best be left to the judgment of the Missouri team at Bhubaneswar in consultation with the local University administration and AID Delhi.

Apparently funds could have been made available to the University that were not because of failure of the administration to make requests and push possible programs. Perhaps the immediate problem of finance is overshadowed by more pressing problems in such a manner as to minimize the former. Ag-

gressive developmental efforts would create financial needs of an immediate nature which could not be met with the present budget.

## SUMMARY STATEMENT WITH RECOMMENDATIONS

This report has been prepared as an assessment of conditions existing at the Orissa University of Agriculture and Technology and the University of Missouri regarding the cooperative program of the two universities and as a partial guide for planning and program projection. It has been written primarily for the University of Missouri staff at home and in India. The sections which follow summarize observations regarding present and anticipated areas of concern with policy statements and recommendations for the University of Missouri staff at home and in India.

### 1. University Organization, Relationships, and Development

The Agricultural University at Bhubaneswar is in a crucial stage of development. The enabling legislation and statutes under which it can operate have been formulated, but the necessary definition of relationships in an organization of the university have not occurred; nor has a vigorous administrative leadership emerged. Transfer of research and extension education functions from the State Department of Agriculture and Animal Husbandry, to the University with adequate control of personnel is not complete. The Fourth Five Year Plan for the University has been submitted to the State Government for approval, requests for suggested amendments in the statutes have been made and steps are being taken to select a new President.

There are at least three alternatives that the University of Missouri may pursue in relation to the Orissa University of Agriculture and Technology. It may continue effort at about the same level as in the past, it may intensify activity with or without increased attention to influencing University policy or it may discontinue the joint endeavor. The Committee favors the second with concerted attention to influencing developmental efforts that will be instrumental in building an agricultural university aligned with the agricultural potential and needs of the State.

#### Policy statements and recommendations for:

(The Administration at Missouri)

- a. Continue and intensify support to the Orissa undertaking in anticipation of a stronger administration and more substantial financial support.
- b. Direct special attention to discovering resources which may be used and ways of making maximum use of them in supporting the joint university effort.
- c. Recognize the present possibility of relatively high returns from small additional investments such as in consultants, special provisions for graduate students research, observation tours, etc. Implement such recognition with creative imagination on programs and vigorous negotiation in connection with the next contract.
- d. Take immediate steps to determine and specify contract provisions to be included in the contract for 1966. Since O.N. Liming will attend the

Campus Coordinators' Conference at the University of Missouri in July, arrangements should be made to have him spend two or three days here with the group leader (who should also return) in finalizing provisions of the contract. Also consult those at the University who are squarely involved in operations at the secondary or administrative assistant level.

- e. Make a concerted attempt to inform the University of Missouri staff about the India program with the view of enhancing support on the campus. Departmental staff should be involved more than at present in making decisions about equipment, supplies and books ordered and perhaps other materials. Also, make a concerted attempt to involve returned technicians in the University of Missouri-Orissa University program to maintain their interest in the program and to take advantage of their experience.
- f. Make necessary arrangements to coordinate university efforts involving the India program and to increase effective communication and understanding among those involved in and responsible for it. This should help minimize operational problems involving programs, technicians, participants, and staff.
- g. Press strongly for provision of PL-480 funds to be used in replacement of Section 402 funds which expire with the present University contract. Provision of limited resources available to technicians with minimum restrictions is highly essential to effective work.
- h. Investigate the possibility of making available "diplomatic Dispatch Service" to AID contract personnel for quick transfer of personal effects and needed supplies in India.
- i. See that some of the University overhead or other funds granted for the operation of the participant training program gets to a point where the added work is required. One place will be in the departments in which training is being received and where theses and dissertation research is being supervised.
- j. If reasons for delay in providing needed equipment are not already known, make a systematic investigation of same and take such measures as may be necessary to eliminate them. Special handling and special procedures may be required; if so the University should do the necessary adjusting.

It would seem that walking through urgent requests, which is already done in some cases, and a very definite systematic system to insure orderly procedural movement of orders would be appropriate. The foregoing is of particular importance since the chain of operation for the acquisition of supplies is long at best and subject to many unanticipated delays.

- k. Definite provisions should be made to allow time for technicians to prepare for their new assignment abroad and go through a period of orientation prior to leaving; this to include some instruction in administra-

tive procedures at the Coordinator's Office in relation to own personal needs and for carrying out the intended programs.

(The Missouri personnel in Orissa)

- a. Formulate basic land grant college concepts and purposes for being in India and communicate this to administrators, government officials and the Board of Management frequently.
- b. Give maximum priority to
  - i. helping administrators in the system anticipate problems in advance and prepare for them
  - ii. getting and organizing information and thoughts that will help administrators or Board of Management arrive at prudent decisions in organizing and managing activities of the university.
- c. Encourage delegation of authority in university matters relating to faculty relationships and simplification of procedure for obtaining official sanctions.
- d. Carefully assess the possibilities for study tours to India agricultural universities and experienced personnel there for special assignments before seeking assistance abroad.
- e. Get involved in activities that will make the American staff better known to and accepted by students and faculty.
- f. Plan educational experiences that will help the Board of Management understand the purpose, organization and management of an Agricultural university, e.g.
  - (a) Basic Land Grant College concepts
  - (b) What the American team is trying to do
  - (c) Role of the Board in helping build the University
- g. To the degree feasible encourage efforts related to meeting the needs of a developing agriculture with a food production emphasis and to the degree possible concentrate assistance to these ends.
- h. Exert more effort to involve returned participants in University activities and development.
- i. Maintain a set of up-to-date catalogues covering at least most anticipated equipment and supply needs to which specific reference and description can be made so needs are clearly understood when the orders reach Columbia.
- j. In submitting orders clearly specify those things which are urgent and those for which a few months delay can be tolerated. For urgent items indicate how urgent in terms of time and why. This will forestall unnecessary expenses and will provide support for what may appear to be excessive expenditure when questions are raised at the time of audit. Also make a special attempt to anticipate needs with orders being placed sufficiently in advance to avoid an undue number of rush orders. Certain time consuming procedures can probably not be eliminated.
- k. Push plans to build and equip houses for U.S. technicians at the OUAT Campus for reasons suggested in Background Materials for Executive

Visitors Conference, 1965<sup>13</sup> and as an added incentive to enlist the services of technicians and consultants in the Orissa program.

## 2. Faculty Morale and Relationships

- a. It is imperative that conditions of service and wage scales be set at levels which will attract and hold first class faculty. The failure to do this thus far has created very poor morale and has led to a considerable loss of faculty.
- b. Rewards for professional achievement need to be developed much further.

## 3. Experiment Station Research

Funds and staff are very inadequate, but competent leadership and some research accomplishments are encouraging.

The research advisor in the next few years should concentrate on assisting the University in:

- a. developing staff and their competence, including individual help and encouragement of the research personnel,
- b. developing the research facilities--particularly the experimental farm,
- c. developing standards for keeping the research focused squarely upon the goal of increasing the productivity and income of the cultivator,
- d. developing criteria for allocating scarce resources among the many research possibilities.

## 4. Extension Education

- a. The potentialities for achievement by an extension program are tremendous. Orissa's agricultural resources are grossly under-utilized because of the cultivator's lack of scientific know-how. Present achievements with the University pilot program with cultivators are very encouraging.
- b. Extension work in India has several unique problems including:
  - (1) a lack of understanding among many officials of either the possibility or the necessity of teaching scientific know-how to cultivators,
  - (2) the great scarcity of farm supplies and their control and distribution through a cumbersome governmental extension organization,
  - (3) the limited number of Indian staff who, presently, are both interested in and capable of working effectively with cultivators,
  - (4) the difficulties of transportation and communication and
  - (5) the very limited scientific know-how of extension workers at the village level.

- c. The University has developed a significant program in several villages through direct field work by their extension specialists in conjunction with a special group of village workers. The direct demonstration program is serving a very important training function as well as achieving significant increases in the cultivator's production. This program should be extended as rapidly as personnel permits.
- d. As soon as feasible, extension education needs to be expanded to a greater variety of audiences using all the proven methods of extension education. An appropriately staffed information service to assist in preparing and distributing educational materials needs to be developed. A great multiplication of university extension efforts through others will be required if coverage of Orissa is to be obtained. However, the quality of extension education at the cultivator level should be jealously safeguarded even at the cost of limiting geographical coverage.
- e. Assign a liaison function to the extension education specialist to determine training needs, emerging problems and to figure out ways that the University can effectively relate to the IADP\* and proposed IAA district programs in the state. It is on the frontiers of intensive effort relative to agricultural development that problems in need of special attention will likely occur. The research and extension education divisions of the University should capitalize on these resources for developmental possibilities.<sup>8</sup>

#### 5. Library Situation and Needs

Within a year or two the University will have a large new library building. A well-trained librarian to take charge of the library is urgently needed.

The Missouri team should be alert to help in the securing or training of such a librarian. A training tour in the States or a short-term consultant from the States may be needed.

Assistance should be given in the selection and procurement of books and journals.

#### 6. Technicians and Information Exchange

- a. The posts of group leader and advisors in research and extension administration are key ones requiring men of administrative and leadership skills and also fairly broad visions. Other things equal, professional competence in crops, horticulture, or soils is desirable for the research advisor.
- b. An effectiveness in planning and recruiting is needed which will provide overlap between technicians and their replacements and perhaps

\*Intensive Agricultural Development Program now operating in 14 districts of that many states in cooperation with the various states, the Government of India and the Ford Foundation. Scales down versions of these operations are being widely introduced in many additional districts under the IAA designation.

- a prior short-term visit for the next group leader. Timing is as important as it is difficult to manage. Therefore, special measures need to be taken on the Columbia Campus to get recruiting done on time.
- c. In 1966, we should place in India:
    - (1) a new group leader one month before McKinsey leaves,
    - (2) an agronomist experienced in irrigated crops,
    - (3) a home economist
    - (4) a replacement for Meeker if he does not stay another term
    - (5) a replacement for Parker if he does not stay another term
  - d. Several short-term consultants for assistance in the Registrar's office, the Library, Campus planning, etc., will need to be recruited in the next 6 months.
  - e. The job of recruitment and preparation of so many people as technicians in the next 20 months will be a very heavy one, if properly done. The Columbia Campus needs to be prepared to spend the necessary time.
  - f. The "mix" of the technician team as to competencies, personalities, etc., needs to be given some consideration, the idea being to maintain a program. The present or the pending Group Leader needs to be involved, whenever at all possible, in making appointments.
  - g. For technicians recruited from other universities, provide through AID-Washington to allow physical arrangements for departure to be made at the home university and for the recruited members to retain insurance, retirement and other benefits at home university.

## 7. Participant Training

- a. In spite of problems and some disappointments with this program, our overall appraisal is that it is a very useful form of technical assistance.
- b. To reduce confusion and dissatisfaction as to the selection process, it is very important that the Group Leader initiate, with other responsible authorities, the development of a consistent and equitable set of ground rules for selection. Consultation with personnel at the candidate level may help in finding a more acceptable procedure.
- c. Selection should be guided by the criteria of university needs and the intellectual abilities of the various candidates. A Ph.D. candidate should not be sent if there is the slightest doubt as to his ability. Likewise the Columbia Campus should conscientiously apply the same academic standards to Indian students as to Americans.
- d. Participants should assume a clear cut moral responsibility to serve the Orissa University of Agriculture and Technology for a minimum of three years upon their return. Likewise, OUAT should hold the same or better position for each participant upon his return.
- e. Ph.D. training should be emphasized. Non-degree programs should be greatly curtailed if not eliminated. The minimum time allowances should be 18 months for the M.S. or 30 months for the Ph.D.
- f. Specifications as to training needs, terms of training, etc., are not being transmitted effectively to the students advisor in Missouri. Steps should be taken to correct this.

Orientation for advisors is needed to provide a better understanding of:

1. the participant personally,
  2. the program proforma,
  3. reporting on behalf of participants and necessity for same,
  4. program financing for participants and related regulations.
- g. The Ph.D. candidate and his advisor should be encouraged to select a dissertation topic which is as relevant as possible to his future efforts in India. Whenever feasible, the doctoral research should be done in India with provision made for same in the new contract arrangement; perhaps for sending selected U.S. graduate students to India where adequate supervision of research is possible.
- h. A more thorough system of evaluating and reporting the progress of participant trainees working on advanced degrees would seem desirable, particularly if this University is to be asked to recommend selected candidates on master degree programs for continuance on the Ph.D. degree as was suggested in a selection committee meeting in Bhubaneswar. This would also seem desirable for those on Ph.D. programs, particularly in cases where discontinuance of the Ph.D. program may be recommended. There are indications that better use of existing reports with some improvement of same would do much to meet this need.

In all cases a clear understanding of the conditions (length, and nature) of the training to be received should be created at all levels where participants are recommended for non-degree programs this should be clearly understood before departure from India and strictly adhered to here except for changes by mutual agreement between this University and AID-Delhi including the Government of India.

The following time and activities schedule is recommended by the Campus Coordinator's office:

1. Select participants in time to get proposed programs to the University of Missouri by April 1.
2. Allow two months for examination, recommendations, acceptance, rejection and reporting to the Group Leader in India by June 1.
3. Negotiate all necessary changes in the program including time allotment for completion.
4. Have final corrected proforma with approvals from all concerned in the hands of the participants before final arrangements are made for travel to the U.S.

This should minimize apprehensions about time allotments and many disagreements about programs to be pursued.

- i. The Committee is of the unanimous opinion that the University and departments involved should be compensated for additional expenses incurred by participants engaged in graduate programs at the University.

One possibility would be to increase fees (by Board of Curators, if necessary) to be designated as a research fee or a special handling fee for AID participants only. The amount should be based on a reasonably accurate estimate of additional costs incurred.

## 8. Facilities and Supplies

An extensive building and expansion program is planned for the University. A presently determined need for special equipment and supplies will increase as various University programs develop:

- a. A plan in sufficient detail to obtain land for the University should be made immediately to insure that the land necessary for development will be available when needed.
- b. Obtain the services of a campus planner within six months, if possible.
- c. When selecting technicians obtain one within a year who can assist in planning and developing the experimental farms of the University.
- d. Develop a system for periodic assessment of equipment needs.
- e. Recommend purchase of Indian equipment when available and of suitable quality. Selection of foreign equipment should be made with servicing considerations in mind.
- f. Urge departments to inventory library and journal needs and assess adequacy of library holdings, as soon as feasible; with provision for periodic assessments.

## 9. Home Campus--Orissa University Relationships

Communication between the two universities is slow at best but unnecessarily so in some cases. Neither Campus knows much about what the other is doing. Delays in the acquisition of supplies make it difficult for technicians to carry out their program objectives.

### Recommendations

- a. Increase communication between staff and administration in the two universities by:
  - (1) sending monthly reports back to Missouri for appropriate distribution with recommendations for action at Missouri
  - (2) sending pictures and news notes for inclusion in various news releases,
  - (3) prompt answering of letters in India and the U.S.A.
  - (4) have the group leader return for the Campus Coordinators Conference in the United States and the Campus Coordinator spend a month each year in India.
- b. Reorganize administrative offices at Missouri to minimize delays in acquisition of requested supplies and equipment.
- c. Take steps to facilitate the handling of personal effects of technicians including follow up with frequent reporting of status of action to persons in India involved.

- d. In India strengthen organization for taking care of legitimate personal needs of the staff to enable quick devotion of attention to intended assignments.
- e. Apply the counterpart idea to the University of Missouri with responsibility and accountability for planning, developing and administering activities at the University of Missouri for supporting the operation in India vested in one person or office. This idea may also well be extended to departmental representatives who could render assistance and advice in regard to the joint program. This could include checking book lists, making recommendations for changes and/or additions in books as well as supplies requested by the group leaders office. Some provision of this type of service at the University in collaboration with the departmental specialities seems to be necessary.

#### SUGGESTIONS FOR AID-WASHINGTON AND AID-INDIA

1. Take steps to enhance the student textbook writing program in collaboration with United States and selected Indian authors.
2. Push plans to develop a resource for the repair of scientific instruments and the training of Indian personnel to assume these responsibilities either on a single or multi-university basis.
3. Push plans to develop the proposed council of the United States universities for World Development in India for reasons set forth in materials prepared for the Executive Visitors Conferences, 1965 (page 55).<sup>13</sup>  
This is highly desirable in the light of present developments of agricultural universities in India and the contribution that they are able to make to each other by proper communication and information exchange.
4. Give thought to planning, advisement--work sessions for group leaders on special types of problems, e.g., preparation and justification of university budgets and matters designed to create better mutual understandings and helpful relationships between people in the field and AID-Delhi.
5. Finalize plans for joint use of consultants and/or technicians by the various agricultural universities in India under the AID contract and in connection therewith provided advance information to all contracting universities of the special talents to be made available and of the advance joint planning where feasible.

#### GENERAL SUGGESTIONS

1. At all levels complaints are heard about how someone else to whom each must relate is not paying adequate attention to his own legitimate needs thus impairing operation of their programs. Since in many cases this also turns out to involve things that the complaining office did not do properly, a better set of operating instruction, perhaps in manual form, to which ready reference can be made, should be prepared and appropriately distributed. Matters where this difficulty has come to the attention of the Committee include acquisition of equipment and supplies, preparation of

- budget and budgetary support, travel of technicians and participant training, often at quite different levels in the operation of the program.
2. Carefully assess the financial needs of participant training under conditions of living that participants have chosen for themselves and collectively rearranged compensation among the various universities accordingly. Accumulation of cash reserves to be sent home and which may be spent in a conspicuous manner upon return is no morale builder among participants at home.
  3. Examine provisions for purchase of books and other supplies which would enhance the usefulness of the returned participant and provide more liberal allowances for these purposes if desirable.
  4. Determination of the status of budgets under which to operate and against which charges can be made is difficult to determine whether this be sought at the University of Missouri or in India. Necessary steps to correct this situation should be taken at whatever level necessary to insure that the group leader in India can at all times know what resources he has at his disposal. There is some indication that at least a partial solution is knowledge from and use of records which are already available plus exercise of more care in meeting necessary obligations for maintaining them.
  5. As a general condition in negotiating new university contracts, the current group leader should be consulted and perhaps the AID office in the participating country. Although conditions of the contract at one level, as for example, University of Missouri-AID Washington, may not be able to specify desired conditions at another level, as for example, AID-Delhi-Government of India, these should be worked out in full communication with and support of each other with mutual support being given in each case.
  6. Also in negotiating the new contract persons most closely associated with the operation of the program in the Campus Coordinator's office and elsewhere should be consulted. The Committee is convinced that many helpful suggestions can come from this source and some embarrassing omissions avoided.
  7. A concerted effort should be made to provide for personal needs of technicians and their families which might otherwise prove time consuming or sufficiently disconcerting to impair the work of the technician. Local personnel who know most about taking care of matters in the local setting should do so. The local AID office should be authorized to and have resources to do this. Building, equipping houses for technicians and arranging services in relation thereto is an example. Perhaps, also such things as making arrangements for schooling of children could be considered.

#### PARTICIPANT TRAINEE REACTION STUDY

A survey of trainee reactions to training received at the University of Missouri is in process. Questions have been directed to those who have returned to India and are now on the job. Results of the study will be available eventually for limited use.

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