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Institut Pertanian Bogor * University of Wisconsin

GRADUATE EDUCATION PROJECT



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REPORT NO. 5

MOORE

MANAGEMENT OF AGRICULTURAL EXPERIMENTATION RESEARCH

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MANAGEMENT OF AGRICULTURAL EXPERIMENTATION RESEARCH

1. Administrative procedures for organizing and managing IPB's experimental farm system.

A. There will be a central administrative office for experimental farms headed by the Director of Experimental Farms (Who is also deputy director of the Research Institute).

In the central administrative office there will be an Executive Secretary of the Experimental Farms System, who with appropriate staff will handle the following responsibilities :

1. Purchase and dispense all general supplies for use on all farms.
2. Handling of receipts from all farms with proper accounting methods.
3. Handling of all personnel matters including pay rolling for all farms employees, including those paid with government funds.
4. Processing of all requests for projects on experimental farms and preparing a list of such requests for consideration for approval by The Director of Experimental Farms.
5. Prepare a list of all projects approved by The Director of the Research Institute and The Director of Research.
6. Prepare a final list of all projects approved by The Director of Research for circulation to all Faculties and Research Centers.

Inventory of approved Experimental Farms projects

All projects approved for Experimental Farms should be given a separate number and a designation to show the farm/farms to be used for the project. For example the farm designation could be abbreviated as Darmaga - DAR; Babakan - BAB; Cikarawang - CIK; Sukamantri - SUK; Tajur - TAJ; Pasir Sarongge - SAR; Gunung Walat - WAL; Jonggol - JON.

No number would ever be used for more than one project, but any project being conducted on more than one farm would have the same number for every farm. For example a project title "Weed Control in Rice" conducted on The Babakan, Tajur, and Pasir Sarongge farm could be designated BAB, TAJ, SAR - 1 in contrast with a project titled "Insect Control in Soybeans by Time of planting" conducted on the Darmaga and Cikarawang farms could be designate DAR, CIK - 2. As a project is completed the number for that project would never be used again.

A sample of the Wisconsin list is attached to show projects arranged by Experimental Farm and by the Department. We urge that IPB have a list by Department (or Faculty or Research Center) as well as by Farm.

7. Maintain operational records for all farms showing projects initiated and projects completed.

The central office of Experimental Farms will also be responsible for the preparation of an annual budget for Experimental Farms. This budget will show details of salary, supplies, travel and special capital requests for facilities (buildings) and equipment. Estimates of receipts from produce will also be made in connection with budget preparation.

The central office will determine a fair charge for services and supplies to be furnished for all projects and, where appropriate, arrange for payment to Experimental Farms by those projects that can be charged.

The central administrative office of Experimental Farms will be responsible to annually assemble the research reports for projects carried out on Experimental Farms during the year and prepare them for publication in an annual report to the Research Institute.

B. Each Experimental Farm will have a superintendent. Who will be responsible to The Director of Experimental Farms for all operations on his farm.

All superintendents will meet together with The Director of Experimental Farms at such times and for such purposes that the Director deems necessary.

Each superintendent will be responsible to review the requests for projects on his farm and advise The Director whether all requests can be accommodated. He will also assign space on his farm to all projects that have final approval.

C. Each Experimental Farm will have a foreman. Who will be in charge of day to day operations on his farm and any other duties assigned to him by the farm superintendent. The foreman's duties will include keeping a record of labor and supplies furnished for each project on his farm as well as a total of hours of work for each laborer.

2. Plans for effective use of Experimental Farms in all of IPB's programs of research, instruction, and public service.

Each of The Experimental Farms should be considered as a possible site to carry out research on a range of crops. There is a real opportunity to compare varieties of secondary crops in the various locations. Such studies could be of real value to farmers located under different climatic conditions on Java and may help in transmigration areas on other islands.

Each farm will be surveyed and mapped to show the present useage of each area and to determine the best future useage. Each farm should then be divided into fields and small plots. Each field and plot should be given a permanent number so that adequate records can be kept from year to year for each space. The survey and mapping could be a class exercise for students in soils and agricultural engineering.

Such a record will aid in deciding crop sequence and could be of value in interpreting results of research.

In this regard it is recommended that in so far as possible specific areas be set aside for "long range" use for undergraduate instruction and public service so that such useage will not jeopardize research programs by staff and graduate students. It is also recommended that some areas be set aside for specialized work such as herbicide studies, nematode studies and soil fertility trials.

A large scale map showing the farm layout should be prepared for each farm for display in the office of The Director of Experimental Farms and a similar map could be displayed at each farm as appropriate. Smaller copies could be used each year to record the field and plot use for that year or part of the year.

These maps should also show the location of all roadways, buildings, and utility lines as they are added. Both overhead and underground services should be shown including electricity, water, telephone, and waste.

In connection with the use of Experimental Farms for comparative studies of various crops it is recommended that the meteorological equipment purchased under the MUCIA program be installed at once and that people be instructed in its proper use and maintenance and be assigned responsibility for continuous data collection.

2a. Procedures for the assignment and use of Experimental Farms space and facilities for research purposes.

A special form will be used to request the use of Experimental Farms. This form will include information on such things as :

- a. Title of project
- b. Which farm or farms are requested

- c. Name of project leader or leaders
- d. The requesting department or research center
- e. Whether project is inside or outside contract
- f. Amount of matching funds required
- g. Amount of project funds available to Experimental Farms for projects execution
- h. Whether the project is a continuing one or not
- i. The anticipated length of the project
- j. a brief description of the project including the objectives and the general procedure.

The request form will also include information on needs for facilities, labor, animals, supplies, and equipment. The labor request should indicate whether the labor is needed for land preparation, planting, cultivation and maintenance, record taking, harvesting, etc.

It may be important to show a priority rating of high, medium or low to aid in choosing among projects if not all requests can be honored.

Finally every request must be approved by the department or research center head and The Director of Experimental Farms before it is submitted to the Director of the Research Institute. A proposed form is attached.

- 2b. Plans for effective use of Experimental Farms in IPB's teaching program at undergraduate and graduate levels.

Specific areas will be set aside for undergraduate instruction that involves student participation.

Special forms will be used for departments to request land, facilities, labor, and equipment. These forms will be similar to those used for research projects but with minor modifications to include information on number of students and how many will be carrying out individual projects.

Provision should be made for determining a fair charge for service and supplies provided and arranging for payment to Experimental Farms.

4. Strategies for use of production from Experimental Farms to finance the development and maintenance of the farms.

The use of production for income from Experimental Farms will be incidental to the basic program of farms for research, instruction and public service.

As long as any farm is not needed to full capacity for research, instruction, and public service land can be devoted to production for income as long as such production does not jeopardize the research, instruction, and public service functions of the farm. Also crops produced in connection with the research, instruction, and public service programs should be available for sale.

However, anticipated receipts should be used to supplement the budget for farm operation and maintenance, and operation and maintenance should not have to depend on receipts from sale of produce.

A realistic budget should be prepared each year to carry out all farms programs, and estimated receipts from the sale of crops and from charges to research projects and instruction should be only a part of that budget.

We understand that receipt monies can be retained by the Experimental Farms for use through a special foundation account, but we believe that all receipts should be handled through the central administrative office and under the control of the Director of Experimental Farms. Appropriate accounting methods should be followed to handle both receipts and expenditures.

This procedure will not prevent individual farms from having local cash accounts for small purchases but will provide more businesslike account control.

Experimental Farms Projects No. _____

RESEARCH INSTRUCTION AND DEMONSTRATION PROJECT REQUEST INFORMATION

Date _____

Experimental Farm or Farms _____

Project leader (s) _____

Department/Research Center _____

Project Title _____

This is a Research Instruction Demonstration Project

Indicate whether outside contract Yes No and if outside contract

The amount of matching funds required _____

The amount of project funds available to
Experimental Farms for project execution _____

Is this a new or continuing project: Continuing _____ New _____

Anticipated length of project _____ years , or months

Description of work (include objectives and general procedure)

PHYSICAL NEEDS OF PROJECT ON EXPERIMENTAL FARM

- Space - office
- laboratory
- storage
- land
- greenhouse

- Labor - Provided by Farms Department
- How Much?
- For What Purpose?
- Provided by requesting department

ANIMALS - Provided by Farms Department
 Provided by requesting department

SUPPLIES - Provided by Farms Department
 (including feed, seed, fertilizer, chemicals)

Provided by requesting department

EQUIPMENT - Provided by Farms Department

Provided by requesting department

List names of personnel working on this project and indicate approximate percent of time of each devoted to project on experimental farm.

Additional comments :

Priority _____

Signed _____ Date _____
 (person who prepared request)

APPROVED :

Department Head	_____	Date	_____
Dean or Research Center Head	_____	Date	_____
Director Experimental Farms	_____	Date	_____
Director Research Institute	_____	Date	_____
Director of Resarch	_____	Date	_____

5. Plans for future collaboration of advisor and for short term training of IPB staff.

Propose that both Amris and Muchtar come to Wisconsin to study our Experimental Farms system in detail. It may be desirable to have them at the same time at least part of the time, but this would not be absolutely necessary.

Perhaps Amris could stay for a shorter time and not visit all of the farms. However, since each of our Wisconsin Experimental Farms is different from the others in some regard, either Amris or Muchtar should visit all of them and have an opportunity to consult with each superintendent and foreman and observe how each is operated. A study can be made of the kinds of records kept and the reports made to the administrative office in Madison. Such a study may aid in choosing a proper system for IPB experimental farms operations.

Sufficient time should also be spent in Madison to learn how purchases, payrolls, time reports, receipts, and other operational matters are handled for the different experimental farms.

Any future use of the Wisconsin adviser in Indonesia should be determined after Amris and Muchtar return from America and additional visits of the adviser are deemed necessary.

A d d e n d u m

We recommend that consideration be given to making the special farms for the study of secondary crops in East Java and on Sumatra and Sulawesi official parts of the Experimental Farms system. This proposal seems especially appropriate since Experimental Farms personnel are used in connection with these projects and the director of experimental farms has been appointed already to coordinate the paper work for the operation of these farms.

We would also encourage closer cooperation between IPB experimental farms and experimental farms operated by other universities and by the Ministry of Agriculture. It would seem to be especially appropriate that graduate students from other universities and from The Ministry of Agriculture being trained at IPB could do thesis work on such farms.

IPB Experimental Farms should also be used for public service activities at IPB. These activities could include formalized short courses for extension personnel in the Ministry of Agriculture as well as persons in other government ministries or institutes. Field days could be held for farmers, foresters, city dwellers, etc, and demonstration plots could be open to all the public for inspection at any time. On Wisconsin Experimental Farms appropriate literature is available in demonstration plots for visitors to take selfguided tours.

The development of germplasm collections is regarded as a most significant program and we recommend that the collections be continued and increased to include in so far as possible all materials relevant to Indonesian needs.

The publication of abstracts of research and the use of seminars to report completed research is excellent. We recommend that consideration be given to using seminars to discuss research proposals by graduate students and to give progress reports or research underway.

Additional Recommendations

Unless there is some university policy against it, we believe it would greatly increase efficiency and save money to install a central gasoline supply pump. Such a system should enable gasoline to be purchased more cheaply and would provide an easy procedure to keep an accurate record of the gasoline used in each vehicle. In this regard it is recommended that a monthly and yearly record of mileage, gasoline use, and maintenance be maintained for each vehicle.

We understand that IPB does not now have a central supplies store to handle general office and laboratory supplies and chemicals. We believe that such a system also would increase efficiency and save money. If such a program is desired I will be glad to arrange for appropriate persons from IPB to visit our purchasing and stores departments in Madison and help in setting up a stores department for IPB.

COMMENTS ABOUT EXPERIMENTAL FARMS VISITED

This report includes a brief statement about the IPB experimental farms visited during my visit. The farms include Tajur, Darmaga, Babakan, Sukamantri, Pasir Sarongge, Cikarawang, Gunung Walat, and Jonggol.

It is recommended that the Darmaga area be studied in great detail and that as much of the best agricultural land as possible be retained for experimental, teaching, and public service use, with separate areas for each as proposed earlier in this report. The experimental areas should be reserved primarily for those research projects that require daily or almost daily supervision.

Special consideration should also be given to using the Tajur Cikarawang, and Babakan farms only for projects that require close supervision. We question the advisability of using any of these three farms for herbicide work.

The Sukamantri farm should be reexamined with the possibility of removing coconut plantings to provide additional space for other crops such as pineapple and various secondary crops. This farm should be an ideal location for determining the true cause of the death of many clove trees. This has the potential of becoming a serious national problem, and work on the Sukamantri farm should be undertaken as soon as possible.

Pasir Sarongge seems to be ideally suited to its present use but additional work could be initiated with secondary crops.

The use of the Gunung Walat farm almost entirely for forestry work raises the question whether it should be included in the experimental farm system. The work with both trees and animals is extremely important but the role of experimental farms in the operation of this farm seems to be unclear.

The Jonggol farm has great potential to become the primary research farm in the experimental farms system. Obviously if this potential is to be realized an all weather road will have to be constructed. The current work with cloves, rambutan, durian, rubber and other permanent crops seems to be well planned and research with annual crops also should make significant contributions to Indonesian agriculture. The development of the pasture area is well under way and it is hoped that animals can be put on the area in the near future.