

1. One billion, five hundred million people - half the population of the world -- depend upon rice for their basic daily nourishment. Yet in the tropics and subtropics, the areas of highest rice consumption, crop yields are inadequate. The Rockefeller and Ford Foundations, after investigating some of the factors limiting rice production, determined to establish a center to conduct basic research on the rice plant, to increase rice production and to develop new rice cultures.

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The Institute was established near Los Banos in the Phillipines, adjacent to the College of Agriculture of the University of the Phillipines and in the heart of the "rice bowl" of Southeast Asia.

2. In early 1962 dedication ceremonies took place attended by Diosado Macapagal, President of the Phillipines, Mr. John D. Rockefeller, Dr. George Harrar, and Mr. F. F. Hill, President of the Ford Foundation.

The Institute has been planned to be the finest instrument in the world for the gathering of knowledge about the rice plant.

4. It's physical facilities include an administration building, plant control center, service building, laboratories and residences.

5. The experimental farm that stretches away from the buildings has approximately 200 acres of land divided into plots of one-quarter hectare, all of which are equipped with an underground irrigation system and surface drainage ditches so that water can be brought to or drained from an individual plot at anytime.

6. Cultivation of the fields is accomplished by both modern and traditional methods for purposes of comparison though, institute engineers are working to improve the machines for more economical operation, the bullock, still remains the most common source of power in Eastern rice fields.

8. Once the soil has been prepared, the rice is carefully transplanted. Because of research demands, this is a painstaking process. The seed must be accurately placed into the ground and its placement carefully recorded.

9. Care of the plant continues with the broadcasting of fertilizer and

10. the removal of damaging weeds. Here too mechanized tools are tested and improved.

11. The plants are sprayed for further protection with ordinary and experimental insecticides.

12. Plant control, more accurate and specialized than that in the fields is maintained in the greenhouses.
13. Here technicians keep close watch on experimentally infected rice plants.
14. Or, they may apply insects -- in this case aphids -- to study the manner in which infection by insect spreads.
15. In six plant control chambers, unique in Asia, day-length and temperature can be regulated for even more precise growth control.
16. At appropriate stages of development grains and plants are gathered and brought to the laboratories for analysis and experimentation.
17. The plants to be used for chemical analysis are first dried in an electric oven...
18. then ground...
19. and bottled...
20. Subjection to chemical analysis determines the nutritional values of each plant-variety. Carbohydrates, protein, fat and other constituents relative to cooking are broken down and analyzed in the search for an improved plant. These investigations are all directed toward the

varietal improvement of rice plants. To increase tropical rice production, work is underway to find higher yielding varieties, resistant to diseases and insects, and responsive to increased levels of fertility.

23. Areas of exploration include the determination of the chemical structure of diseases, the nature of insect resistance in some varieties; the development of chemical compounds for use as herbicides, insecticides and fungicides and the investigation of possible uses of the by-products of the plant.

27. Physiological study gathers information about the germination and early growth of the sprouted seed . . . .  
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29. Since resistance and control of insects is a major factor in varietal sturdiness, pupae of various insects are kept in the entomological laboratory for application to the rice leaf for study. The most serious insect threat is the stem borer, which causes heavy annual crop damage.

31. Outside the laboratory, the scientist engaged in rice research must expect to get his hands dirty and his feet wet.



Soils and plant-soil relationships are examined for the chemical differences between submerged and upland soils.

35. Since blast disease is the most important rice infection one of the first jobs of the Institute is to find resistant chemicals and plant varieties.

37. Research work requires varied equipment. This boiler, water distiller, and demineralizer are examples of some of the general appliances serving the Institutes.

40. A machine shop serves to create special tools and experimental parts for field machinery.

43. In addition to the laboratories and classrooms, the scholars find a comprehensive library stocking pertinent technical journals and research works along with rare literature available on microfilm. Under the supervision of a trained librarian, research findings can be circulated to all interested parties throughout the world, though the library serves as another research too, it also provides a place of study away from the research-scholars own room.

46. Every care has been taken so that the scholars and residents feel at home. The kitchens -- currently serve about 160 meals a day under the supervision of a professional home economist who takes great pains to vary the diet of the boarders.

44. Lounges are available for recreation and relaxation.

49. The rooms of the residents are spacious and each double room has a private bath and balcony.

50. Research and experimentation provide only partial benefit to the world if not combined with a competent and thorough training program. During his stay at the Institute the scholar participates in increasingly advanced research projects under experienced investigators. In this way, through combined research and study, the student is ready to return to his own country with the fullest possible knowledge of the rice plant, its growth and use.