1. GENERAL DESCRIPTION

Agricultural Environment in Taichung District

Taichung district including the areas of Taichung, Changhua and Nantou prefectures and Taichung city covers a total area of 738,700 hectares. Of which 197,922 hectares are arable lands. The ratio of paddy field to upland field is approximately 6:4. However, this ratio is changing yearly because of the recent governmental policy to increase the acreage of upland crops and reduce the acreage of paddy field.

The favorable climate in this district is suitable to grow different crops the year round. The mean annual temperature of this district is 22.4°C, July and August are the hottest months with a mean temperature of 28°C, while February is the coldest month with mean temperature of 16°C. The mean annual rainfall of this district in the past ten years was 1,740 mm. The distribution of rainfall is rather uneven around the year.

There are five major groups of soils in this district. Slate alluvial soils cover the whole Changhua prefecture where rice yield is the highest in Taichung district. Sandstone and shale alluvial soils are found mostly in Taichung and Nantou prefectures. Soil reaction in these areas ranges from slightly to strongly acid, and hence the yield of rice is usually lower than that in Changhua prefecture. Latritic soils which are very strongly acid and very poor in fertility are scattered in the highland areas. Mixed alluvial soils of sandstone, shale and slate are located in the west coast of Taichung prefecture. Because of its high sulfur content and poor drainage condition, rice yield in this type of soil is generally low. Red-yellow podzolic soils are mainly distributed in the mountainous areas where the soils are generally strongly acid.

History

Taichung, Changhua and Nantou Farmers' Associations established their own respective experimental stations in 1920. In 1924, all three stations were merged into one station and renamed as "Taichung Agricultural Experiment Station". The status of the station had been changed several times since then. It was given the present name and was placed under the Department of Agriculture and Forestry, Taiwan Provincial Government in 1960.

This station was formerly located in Taichung city. However, the experimental field was no longer suitable for the purposes of agricultural research due to the rapid urbanization of the city. A plan to move the station to rural area was therefore laid out in 1979. After 5 years of planning and construction, the movement was finally completed in March, 1984 at a total cost of NT$ 500,000,000. The new site of the station, located at Tatsuen, Changhua, covers approximately fifty hectares of land. The construction of the branch station at Puli, Nantou with an acreage of 17 hectares of slopeland was also completed at the same time.

Equipment and Facilities

The experimental farm of the station is properly equipped with irrigation and drainage systems. The main building consists of laboratories, offices, auditorium, and some conference rooms, etc. The agricultural extension building consists of an exhibition hall, offices, mass communication room and a training center.

The training center may accommodate 50 trainees at the same time. It includes an audio-visual classroom, teaching material room, home economics classroom, dining room, recreation room and bedrooms.

The main facilities of the station are insectary agricultural engineering workshop, cold storage room, agricultural climatological observatory, greenhouses, warehouses, etc. Dormitories are also available for single and married staff members.

Main laboratory equipments include scanning electron microscope, atomic absorption spectrophotometer, automatic analyzer, gas chromatographer, liquid chromatographer, UV spectrophotometer, microprocessors, ion analyzer, flame photometer, growth chambers, incubators, mini-computer and others.

Organization

This station consists of 1 branch station (located at Puli, Nantou prefecture), 3 technical divisions and 3 administrative offices. Each technical division is subdivided into several research labs as shown in the following scheme:

- Taichung District Agricultural Improvement Station
  - Crop Improvement Division
    - Rice Research Lab
    - Upland Crops Research Lab
    - Vegetable and Floriculture Research Lab
    - Pomology Research Lab
    - Protected Horticulture Research Lab
    - Farm Management Research Lab
  - Crop Environment Division
    - Pathology Research Lab
    - Entomology Research Lab
    - Soil and Fertilizer Research Lad
    - Plant Nutrition Research Lab
    - Agricultural Machinery Research Lab
  - Agricultural Extension Division
    - Agricultural Economics Research Lab
    - Agricultural Home Economics & Extension Education
  - Puli Branch Station
  - General Affairs Office
    - Document Section
    - Purchasing and Custody Section
  - Personnel Office
  - Comptroller's Office

Staff Members

There are 78 staff members, including 64 technical (13 senior and associate research fellows, 21 assistant research fellows and 30 research assistants) and 14 administrative personnels in this Station. In addition, the Station has 29 project employees, 69 skilled labors and 85 temporary field labors.

Functions

1. To conduct plant breeding work for the major crops of economic importance.
2. To improve the cultural methods of various crops.
3. To propagate and maintain the improved varieties of crops and other germplasms.
4. To study the problems of soils, fertilizers and plant nutrition.
5. To solve the problems of pest control, including forecasting the insect and disease epidemics.
6. To improve and design the farm machinery and implements.
7. To study the economy of farming systems in rural areas.
8. To carry out agricultural extension education, through providing technical service, training classes, field demonstrations and other measures to the farmers.
9. To carry out home economics education through training courses and other measures.