

# Puerto Rico's Tropical Agriculture Research Station 100 Years of Tropical Research

Story by Ricardo Goenaga and Sidebar by Larry Shore  
Photos courtesy of the Agricultural Research Service

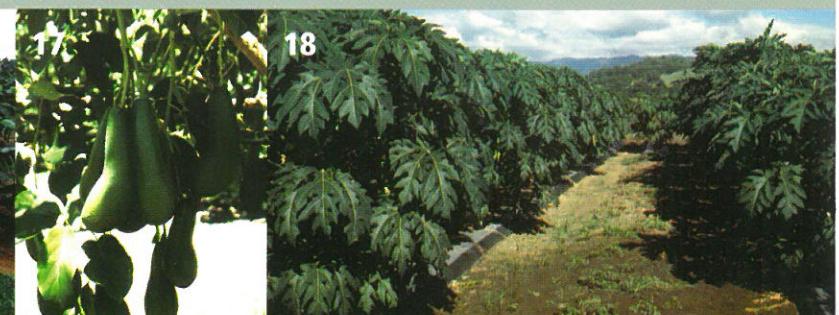
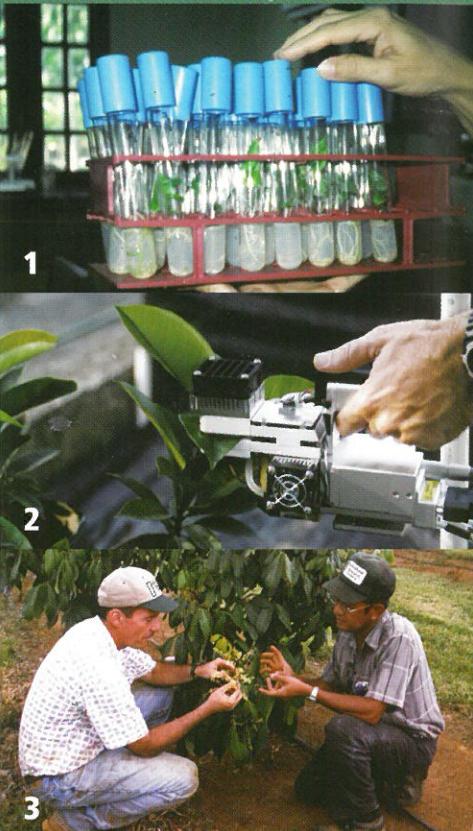
The Tropical Agriculture Research Station, operated by the USDA's Agricultural Research Service, had its beginning in 1901, when Congress appropriated \$5,000 and directed the Secretary of Agriculture to establish an experiment station in Puerto Rico to study agricultural problems of interest to the island. The Governor of Puerto Rico, cooperating with the island's communities and the U.S. Department of Agriculture, selected the present site of the station at Mayaguez: the farm known as Hacienda Carmen, 235 acres donated by the City of Mayaguez.

At its inception, this facility was known as the Federal Experiment Station. In 1975 it became the Mayaguez Institute of Tropical Agriculture (MITA), and in 1982 was renamed the Tropical Agriculture Research Station (TARS). Since 1961 it has been part of the Agricultural Research Service's Tropical Crops and Germplasm Research Division.

When established, the Federal Experiment Station was the island's only institution for agricultural research, and horticultural research has always been prominent in the station's program. In the past, both tropical- and temperate-zone vegetables, as well as fruit and ornamental cultivars, were introduced from all parts of the world for evaluation in Puerto Rico. The station still maintains an extensive collection of germplasm consisting of about 275 genera and 450 species; this is one of the largest collections of tropical trees available in the Western world. The station's grounds are often visited by botanists, horticulturists and taxonomists from around the globe.

Common on these grounds are exotic plants such as cinnamon, nutmeg, rubber, vanilla, black

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1. Two main goals of the TARS National Germplasm Repository project are regeneration and maintenance of virus- and disease free banana and plantain clones. 2. An instrument for measuring photosynthesis in tropical fruit crop production systems research. 3. Plant Physiologist and TARS Research Leader Ricardo Goenaga (left) and Agronomist Edmundo Rivera inspect an early flowering longan tree. 4. In 1901, the U. S. Congress authorized the establishment and maintenance of an agricultural experiment station in Puerto Rico. Thus TARS, the Tropical Agriculture Research Station, (known earlier as the Federal Experiment Station) was founded. Originally called Hacienda Carmen, this 235-acre farm was made available jointly by the Puerto Rican government and the city of Mayaguez in 1902. 5. Longan fruits from an early bearing clone. 6. Mangosteen, often called the "Queen of Fruits." Research is being done into the effectiveness of varying shade and fertilization treatments in reducing the mangosteen's lengthy juvenile stage. 7. A cluster of atemoya. Six atemoya clones are currently being evaluated. 8. A cluster of lychee. Six lychee clones are being evaluated under minimum tillage and intercropped with bananas. See also photo 16. 9. The TARS germplasm collection boasts 28 plantain and 84 banana accessions. 10. Rambutan fruit, one with exposed pulp. The rambutan clones under evaluation are intercropped with banana. 11. In the TARS germplasm collection are 47 mango and 45 avocado accessions. These clones are backups for similar Agricultural Research Service programs in Miami. 12. Nine carambola clones are being evaluated on various soils and along with leguminous cover crops. 13. A study screening papaya cultivars for acid soil tolerance. Each plot was differentially limed to obtain a variety of soil aluminum concentrations. 14. Agronomist Edmundo Rivera (left) and Technician Tomas Miranda examine a young rambutan tree. Clones under evaluation are intercropped with banana. 15. Cacao tree in the germplasm collection. 16. Lychee clones under minimum tillage and intercropped with banana. 17. Avocados in the germplasm collection. 18. Young papaya trees under study.