

New Plants for Florida: Tropical Fruit¹

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FAES tropical fruit breeding began in 1930 with the establishment of the Homestead Subtropical Experiment Station, now called the Tropical Research and Education Center (TREC). S.J. Lynch, H.S. Wolfe, G.D. Ruehle and L.R. Toy introduced germplasm of numerous tropical crops for testing and evaluation. Their efforts, along with those of subsequent TREC scientists during the 1940s and 1950s, resulted in superior guava, sapodilla, and loquat varieties with improved fruit yield and quality. Later scientists C.W. Campbell, Simon Malo, and J. Popenoe continued to introduce, evaluate and select superior tropical fruit. These efforts lead to the release of **Cariflora** papaya and the **Homestead** guava. The **Golden Star** carambola is now used as a main source of rootstocks for high-pH, calcareous soils. The **Ruehle** avocado, released in 1962, remains a minor commercial variety today. Cariflora papaya has been identified as one of the most papaya-ringspot-tolerant varieties ever produced and has been used throughout the world (e.g., Taiwan, Thailand, Latin America, Hawaii) to further the development of superior papaya-ringspot-resistant varieties. From the mid-1950s to the 1970s, researchers released a number of superior Tahiti lime selections. In addition, TREC introduced the **Mauritius** lychee from South Africa in 1952, the **Magaña** mamey sapote from El Salvador in 1961, and the **Mysore** raspberry from India

in 1948. Currently, Mauritius lychee is the major lychee, and Magaña is the second most important mamey sapote variety grown in Florida. Several superior sapodilla varieties grown commercially today were released by TREC.

Today, the tropical fruit program includes the evaluation of superior passion fruit and carambola varieties and evaluating open-pollinated seedling material of mamey sapote and carambola. A molecular genetics project for papaya seeks to develop resistance to ringspot virus, to improve cold tolerance, and to select for superior insect and disease resistance and superior fruit quality and yields. There are ongoing projects to perfect the use of tissue culture and molecular genetics to aid selection for improved resistance to sunblotch viroid, mango anthracnose fruit resistance, and avocado phytophthora root-rot rootstocks in avocado, for fruit anthracnose resistance in avocado, and to evaluate and select superior rootstock germplasm from open-pollinated West Indian type avocados for phytophthora root-rot-resistant rootstock.

Florida tropical fruit industry acreage has fluctuated during the past 70 years due to natural disasters, foreign competition and changes in U.S. demographics. Today, there are about 13,000 acres in cultivation, with an economic impact of over \$100 million annually.

1. This document is Circular 1440, one of a series of the Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date August 2003. Revised April 2010. Reviewed July 2013. Visit the EDIS website at <http://edis.ifas.ufl.edu>.
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For more information about tropical fruit varieties, see the following EDIS publications:

[HS 1 The Sapodilla \(Manilkara zapota, Van Royen\) in Florida](#)

[Circular 1024 The Avacado](#)

[HS 49 The Longan \(Dimocarpus longan Lour.\) in Florida](#)

[HS 4 The Guava](#)

[FC-30 The Mamey Sapote](#)

[HS 28 Barbados Cherry](#)

[HS-5 The Loquat](#)

[HS 11 The Papaya](#)

[FC-8 The Tahiti Lime](#)

[HS 23 Dooryard Fruit Varieties](#)

Table 1. FAES tropical fruit varieties selected or bred at TREC, Homestead.

Tropical Fruit	Variety	Date of Release
Guava	Redland	1941
	Supreme, Ruby	1946
	Homestead	1989
Sapodilla	Prolific	1941
	Brown Sugar	1945
	Tikal	1959
White sapote	Dade	1943
Mamey sapote	Copan, Mayapan, Tazumal	1980
Black sapote	Merida	1988
Canistel	Oro, Trompo	2001
Barbados cherry	Florida Sweet	1956
Avacado	Ruehle	1962
Loquat	Wolfe	1965
Carambola	Golden Star	1965
Lime	10 Tahiti lime selections	1975
Papaya	Cariflora	1986