

## A RESEARCHER'S VIEW OF THE POTENTIAL FOR TROPICAL FRUITS ON SANDY AND ORGANIC SOILS OF FLORIDA

T. W. YOUNG

*IFAS Agricultural Research and Education Center  
Homestead*

There is considerable relatively warm agricultural land with sandy soil and some organic soil in about the southern half of Florida where a number of subtropical and tropical fruits can be grown successfully. Where urbanization is not impending, and land prices not prohibitive, the potential for profitable commercial production of certain fruits is good. The financial success of such a venture, of course, is dependent on whether there is a market for the produce. The following comments are based on the premise that such a market exists or can be developed in reasonable time. Only fruits and areas seeming to have reasonably good commercial possibilities are discussed.

*Avocados (Persea americana Miller)*. The domestic market for avocados is increasing and increased production probably could be absorbed profitably. With adequate soil drainage and selection of varieties tolerant to low temperatures likely for the particular area to be planted, present Florida varieties could succeed on sandy soils in some areas of Martin, Palm Beach, Broward, Hendry, Collier Counties, and on up the coast to about Manatee County. Warm areas in the Ridge in Highland and perhaps southern Polk Counties are also suitable. With good drainage, avocados do especially well on the custard apple muck along Lake Okeechobee from about Canal Point to near Clewiston. Investigations are in progress to find rootstocks that hopefully will induce more cold tolerance in avocados and for more cold tolerant varieties. If successful, such research could extend commercial avocado culture farther up the state.

*Limes (Citrus latifolia Tanaka)*. Soils suitable for limes have about the same drainage and temperature requirements as for our present commercial varieties of avocados. Commercial production of limes is possible as far north as the Ridge in southern Polk County. Limes grown in these areas should be considered primarily as processing fruit because the crop is not often early enough to make the early, high-priced, fresh fruit market. Sometimes, by light picking on a late fall crop, enough of the smaller sizes left on the tree will

hold and mature in time for the highly profitable early market.

*Lemons (Citrus limon L.)*. Soil and temperature requirements are about the same for lemons as for limes except that it is not advisable to put lemons on organic soil because rank vegetative growth requiring excessive pruning likely would result at the expense of fruiting. Florida lemons go mostly to processing, but a small fresh fruit market probably could be expanded profitably.

*Mangos (Mangifera indica L.)*. The demand for Florida mangos has gradually increased in recent years. Sandy soil areas along the east and west coasts warm enough to be suitable for mangos are being urbanized rapidly. Little or no commercial plantings of mangos is likely in these areas. Mangos on organic soil (custard apple muck) near Canal Point have been quite successful. If land prices are not prohibitive, the potential is good for commercial production of mangos on land relatively near the Lake from about Canal Point to Clewiston. Mangos will tolerate without damage somewhat poorer soil drainage than avocados or citrus.

*Guavas (Psidium guajava L.)*. There is a good steady market for processing guavas. Both sandy and organic soils in warm locations in the southern half of the state can be used successfully for guava production. They do well on wetter soils than avocados or citrus. Prolonged temperatures around 26 F will kill mature trees back to stumps, but with favorable weather, the stumps sprout and trees may be back in full production in 2 or 3 years.

*Carambolas (Averrhoa carambola L.)*. In recent years the popularity of carambola has increased until the fruit is often found in northern as well as local markets. Its versatility gives it a good potential for profitable expansion of production. Any of the well drained soils in warm locations in about the same range as for limes are suitable. It is advisable to use vegetatively propagated plants such as the 'Golden Star' rather than seedlings for both quality and quantity of fruit.

*Lychees (Litchi chinensis Sonni.)*. Any reasonably well drained sandy or organic soil south of about the latitude of Winter Haven is suitable for lychees, but on organic soils they are inclined to remain vegetative rather than fruitful. When the

lychee industry was expanding rapidly about 20 years ago it was thought that the lychee might be a noncompetitive substitute tree crop for citrus in spreading decline areas because of its resistance to attack by the burrowing nematode (*Radopholus similis* (Cobb) Thorne). The irregular and light bearing habit of the 'Brewster' variety with a short harvest season, which made up practically all commercial plantings, plus the difficulty of picking fruit (approx. 30/lb) from large trees, the 1962 freeze which killed or severely damaged a large portion of the plantings and urbanization combined to reduce commercial acreage to about 100 acres. The demand for lychee fruit, even at relatively high prices, is generally good. Reasonable effort to overcome obstacles to supplying this demand is justified. A search is being made for varieties of

acceptable quality, more fruitful than 'Brewster' and maturing at different times, to spread the season. Combination branch girdling-top pruning trials are being conducted to see if the yield of 'Brewster' can be increased on tops of reduced size for easier picking. Dwarfing rootstock trials are needed.

Other fruits with possibilities of a profitable commercial venture on these soils include: banana (*Musa paradisiaca* var. *sapientum* Kuntze), Barbados cherry (*Malpighia glabra* L.), canistel (*Pouteria campechiana* (HBK) Baehni), macadamia (*Macadamia ternifolia* F. Muell.), papaya (*Carica papaya* L.), pineapple (*Ananas comosus* (L.) Merr.), sapodilla (*Manilkara zapotilla* (Jacq.) Gilly), and longan (*Dimocarpus longan* (Sprang.) Skeels).

## THE IMPACT OF URBANIZATION ON DADE COUNTY'S SUBTROPICAL FRUIT INDUSTRY

ALLAN R. BLY, ASSISTANT DIRECTOR

Metropolitan Dade County Planning Department  
Miami

"Fruit growers of (Dade) County are seriously concerned about creeping urbanization which has encroached upon some of the most productive fruit lands."

These words were an understatement when first expressed in the 1963 University of Florida publication *Agricultural Growth with Urban Expansion in Dade County, Florida* (1). Today, they are totally inadequate to communicate the crisis to Dade's subtropical fruit industry posed by suburban development. Whereas, at the beginning of the decade of the sixties, 16,000 acres of the land in Dade County were devoted to avocado, lime, mango and other specialty and citrus fruits; by 1970 less than 12,000 acres of such groves existed—a reduction of more than 25 percent. During the same interval, the urban area increased by 47,000 acres—over 35 percent. The good news is that the total value of the fruit grown on these lesser acreages has more than quadrupled. While the problem of this important segment of Dade's agricultural industry has intensified, so have the community's planning and implementation efforts for dealing with it. In the preparation of the original

General Land Use Master Plan for the County, the Planning Department staff designated the principal grove areas of South Dade as estate residential areas (with a maximum development density of 1.9 units per acre). In the implementation of the plan, little effort was made to bring existing zoning into line with the plan and, until recently, limited success has been recorded in resisting zoning changes that were contrary to the plan. In the ongoing updating of the County's Comprehensive Development Plan more extensive community involvement, intensive analysis and effective implementation processes are being used to plan for South Dade's grove areas.

These processes are reflected in the three major phases of the project. The first phase calls for the identification of the goals, objectives and policies that will guide the preparation of the revised long-range land use, community facilities and transportation plan framework. In the accomplishment of this phase, six citizen task forces named by the Planning Advisory Board and County Commission have affirmed the goal that "agriculture should be encouraged as a viable economic use of Dade County's land" and urged that the community "should preserve a designated area of agricultural and general use land in South and West Dade as a greenbelt." More specifically, the citizens have focused on the establishment of "creative taxation