

# The Nursery Industry in Miami - Dade County

prepared by Joe Garofalo

## BACKGROUND.

The nursery industry in Miami-Dade County is large & diverse. We have more than 950 nurseries certified by the FL Dept of Agric & Cons Serv. These nurseries vary in size from 1- 2-acre operations to very large businesses employing dozens of workers. We are the #1 Florida county in production of ornamentals .

Plants produced locally are of very high quality & go to retail garden centers all over the southern & eastern U.S.. A surprisingly large number of our palms & other tropicals end up in malls & office buildings all over the U.S., Canada, & Europe.

## CLIMATE.

Due in large part to a climate favorable for the production of tropical species in the open, a wide variety of crops is produced, including bedding plants, tropical foliage, indoor & outdoor palms, large tropical trees & shrubs, tender perennials, & specialties like herbs, orchids, & bromeliads.

There is a hot & humid rainy season (May-Oct), & a relatively cool dry season (Nov-April). A total of 65 in of rain is received annually, with 52 in falling during the 6 warm months. Irrigation is required year-round, even during the rainy season. This is supplied by shallow wells, usually six-inch diameter, unlined bores through the limestone, about 15 ft deep in the rockland & 10 ft deep in the east glades. Many of these wells are not covered or capped in any way.

The great advantage of climate is illustrated by the accommodations growers make in order to produce large, field-grown tropical material. They are forced to grow these crops on land that is low-lying & subject to frequent flooding. High beds are required to keep the plants out of flooded soil, & the fields are often inaccessible for several days in a row during the

rainy season. This is land that would be avoided if better land were available. Better land is available to the north, but too far north for tropical species.

## SOILS.

The soil used for field production is an alkaline clay called marl (pH 8.0+), which overlies limestone, & is found mainly in southeastern Miami-Dade, in the "east-glades" area east of the Redlands Agricultural District. There are also small areas of marl, called "finger-glades" in low-lying areas within the rockland. The marl varies in thickness from a few in to several ft. As plants are sold from these fields the layer of marl becomes thinner, which emphasizes the temporal nature of nursery production on marl.

The other major soil type used for nurseries is a "made" soil consisting of coral limestone scarified to produce 4-6 in of loose material one inch diameter or less, & classified as a very gravelly loam.

Undisturbed areas of rockland have consolidated rock to the surface, with no naturally-occurring soil cover except for a thin layer of organic matter derived from the vegetative cover.

These lands were originally prepared for vegetable & tropical fruit production, but are being converted to ornamentals as economic conditions change. Nurseries on the rockland are essentially limited to container production. It is rare to see plants dug from rock, but it is possible to do so if the initial land preparation includes digging & crushing of the rock in the row to a depth of two ft or more. This is essentially a trenching operation, & is generally used, in combination with bedding, only for tropical fruit tree crops. Land preparation & tree digging costs are high, & trees dug from such land are less likely to survive transplantation than trees dug from marl.

## TYPES OF NURSERIES.

There are basically three types of nursery operations in the county, including: (1.) Those which produce their crops, mostly woody ornamentals, in the ground.

These are the "field" nurseries; (2.) Those which produce their crops, both woody & herbaceous ornamentals, in containers in the open; & (3.) Those which produce their crops within structures, including (a.) shade structures, (b.) greenhouses (solid-cover structures), & (c.) structures which combine features of the two. There is also a small number of nurseries which are so highly specialized that they do not fit precisely into any of these categories.

## FIELD NURSERIES.

Field nurseries typically produce palms, trees & large shrubs, & sell them as "balled-&-burlapped" specimens for landscape use within U.S.D.A. climate zones 10 & 11, & in protected areas of zone 9b. This includes South Florida, the southern part of central Florida, & the West Indies. Some shipments also go to California, Latin America, & other warm-climate parts of the world.

The cost of land, either purchased or rented, & the heavy equipment required for handling large specimens, is very high. These costs are compounded by the longer time required to grow plants to large sizes. The income per unit area of production land over time, however, is probably the lowest of the types of nurseries.

Some of these nurseries intercrop the larger species, which require full sun, with smaller, more shade-tolerant species. This practice produces early income from sale of the smaller plants, but also requires more labor. Some managers replant immediately in the spaces made available when plants are harvested, keeping the land in constant production. This is most common in nurseries which intercrop. Other

managers, however, prefer essentially even-aged planting blocks from which all plants are sold within a short period, then the land is prepared & replanted with even-aged liners.

## CONTAINER NURSERIES.

The container nurseries require land that is both level & compacted, but through which water flows freely. Most growers cover the soil with a groundcover cloth which allows water to move through, but discourages or stops both weeds & root growth. These nurseries use containers of various sizes, some large enough that they can produce landscape plants nearly as large as those produced in field nurseries.

## NURSERIES WHICH GROW IN STRUCTURES.

The nurseries which produce plants under a cover of one sort or another include those which specialize in tropical foliage, in a group of closely related plants (orchids or bromeliads, for example), & those bedding plant producers who market over a large area outside Miami-Dade. It is common for bedding plants to be grown both under shade & in full sun, depending on the species, during most of the year, with no solid cover for frost protection; but under a solid cover & with heating available during Dec - Feb. The risk of damaging frost is minimal, especially for plants grown under a shade cover. However, the ability to supply customers with scheduled deliveries throughout the year is very important for such growers, therefore cannot be left to chance.

There are highly specialized nurseries which produce large plants for use in interiorscapes, especially shopping malls & large office buildings. The large palms & trees are produced in field nurseries in full sun in order to achieve rapid growth, then they are dug, potted, & moved into very tall shade structures or shaded greenhouses, depending on their value & how tender they are. Several light levels are employed, based on the conditions where the plants will be used.

They must remain under shade conditions until the entire canopy of sun leaves is replaced with shade leaves which will not drop when the plants are installed in their final environment. The process typically requires a minimum of one year, but may require two or more years for some species.

**TECHNOLOGY.**

The level of technology used in local nurseries varies considerably. Many of the specialty-crop nurseries use the most sophisticated technology available, & some of the smaller nurseries use virtually none. Modern irrigation & fertigation equipment are common, and many growers utilize liners produced in tissue culture labs. Overhead sprinklers are used for frost protection.

Many growers use the services of soil testing labs & plant disease & insect diagnostic clinics. The use of private labs, scouting services, & consulting specialists is increasing, as is the use of the local Cooperative Extension Service. The increasing use of computer technology in climate control, advertising, & many other aspects of the nursery business illustrates how technically advanced many of our growers are now, & how advanced many more will be in the future.

**TRENDS.**

A number of trends can be observed in the nursery industry in Miami-Dade County. These include the following, which are listed & very briefly discussed:

(1.) The development of large, consolidated nurseries producing a diversity of crops, often formed when smaller firms merge, but also formed when family farms or partnerships divide so separate but affiliated units can concentrate on certain crops or on certain aspects of the business.

(2.) New people are constantly entering the business, many with no nursery or farming background. These are often persons who have bought land “in the country” and quickly realize that they need an agricultural exemption to help with their property taxes.

(3.) There is also a trend of vegetable growers, & to a lesser extent, tropical fruit growers, diversifying into the production of ornamentals as their principal crops become less profitable, markets disappear, or competition from off-shore & local production force them to seek new crops.

(4.) There has been an increased use of contract growing.

(5.) An increase in the number of “grower/ landscaper” firms which both grow & install plants, & in some cases, also maintain finished landscapes.

(6.) An increase in the production of native plants, driven by local landscape regulations which require a higher percentage (up to 80%) of natives in new landscapes; plus

(7.) An increase in wetland/wildland mitigation work, which utilizes many plants which fail to meet the established nursery grades for landscape plants.

(8.) An increased demand for plants meeting the specifications for the grades Florida Fancy & Florida No. 1.

(9.) Marketing is overwhelmingly by word-of-mouth, with landscapers returning to nurseries which have provided quality plants in the past & recommending these nurseries to other landscapers.

(10.) Some nurseries, especially those which produce liners, sell through brokers, or supply larger nurseries which grow-on & finish plants for the wholesale trade.

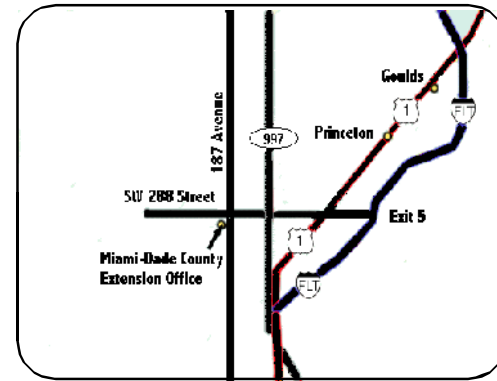
(11.) Very few production nurseries sell to retail customers.

(12.) The cost of land in the agricultural area is very high & rising. Land sales at \$25,000 to \$30,000 per acre are common.

(13.) It is becoming more difficult to comply with local & state regulations, & this is increasing the cost of production.

(14.) In recent years flooding & wind damage associated with tropical storms have become more common events.

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MIAMI-DADE COUNTY PROGRAMS ARE OFFERED TO ALL PERSONS REGARDLESS OF RACE, COLOR, RELIGION, NATIONAL ORIGIN, GENDER, AGE, DISABILITY, OR SEXUAL ORIENTATION. DISABLED INDIVIDUALS ARE REQUESTED TO NOTIFY PROGRAM AREA (305-248-3311) TWO WEEKS PRIOR TO PROGRAM IF AUXILIARY AIDES OR ASSISTANCE IS REQUIRED. DISABLED PARKING SPACE AND WHEELCHAIR RAMP AVAILABLE.

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**In Writing**

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 Fact-sheet No. 58  
 Prepared by Joe Garofalo,  
 Extension Agent, Commercial Ornamentals  
 Miami-Dade County Cooperative Extension Service  
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**Miami-Dade County / University of Florida  
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