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## **IMPACT OF HURRICANE "ANDREW" ON TROPICAL FRUIT ACREAGE IN DADE COUNTY**

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### **ABSTRACT**

The major tropical fruit production area of Florida and of the United States suffered a near fatal blow on 24 August 1992 from Hurricane Andrew. A more direct hit could not have occurred. The Florida Agricultural Statistics Service was scheduled to conduct its biennial survey of tropical fruit trees in Dade County in October of that year. Because of the storm, that survey was postponed until March of 1993. Results of a grove by grove count indicate the heavy losses of avocado, mango, and especially lime trees. More tree and acreage loss is anticipated because of continuing tree mortality and changing grower decisions as to rehabilitation or removal and resetting. Production and potential production is greatly reduced. Growers are now faced with difficult replanting decisions because of increased imports, changing government trade policy, and of course, future weather threats.

Dade County is the major tropical fruit production area of Florida and the United States. Since the turn of the century, this area has produced ever increasing amounts of tropical fruits—first, for the local population, and with the arrival of the railroad, for northern U.S. markets (Fig. 1).

Although imports of limes from Mexico and production of avocados from California have increased in recent years, Florida's production of these two crops has also steadily increased. But Hurricane Andrew, which passed directly through the major production area on 24 August 1992, greatly affected current and future production of these crops.

### **TREE CENSUS**

The Florida Agricultural Statistics Service was scheduled to conduct the biennial tree census survey in Dade County in October 1992. Because of the storm, the survey was postponed until March 1993, in order to give growers time to make decisions concerning viability of trees and groves. Although not all decisions on every grove had been made by March, a relatively accurate picture of what was remaining at that time was produced.

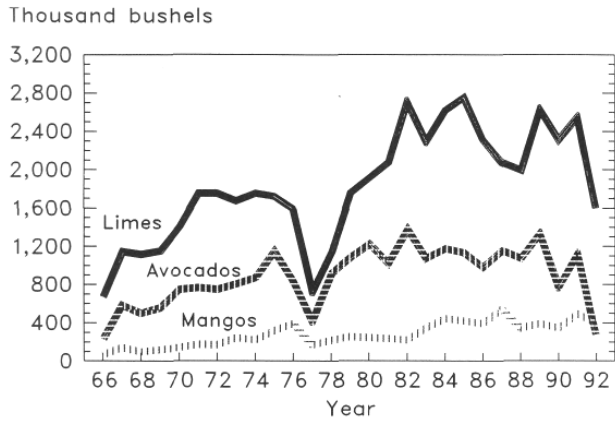


Figure 1. Florida tropical fruit production.

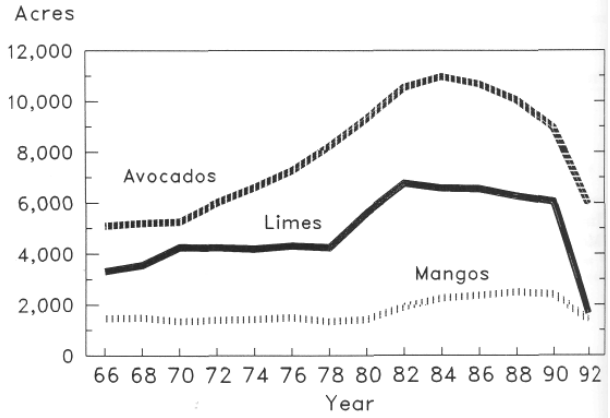


Figure 2. Dade County acreage.

Table 1. Dade County lime acreage.

	1990		1992	
	Acres	%	Acres	%
21 years and older	961	16	103	6
11-20 years old	2,955	49	839	50
1-10 years old	2,155	35	726	44
TOTAL	6,071	100	1,668	100

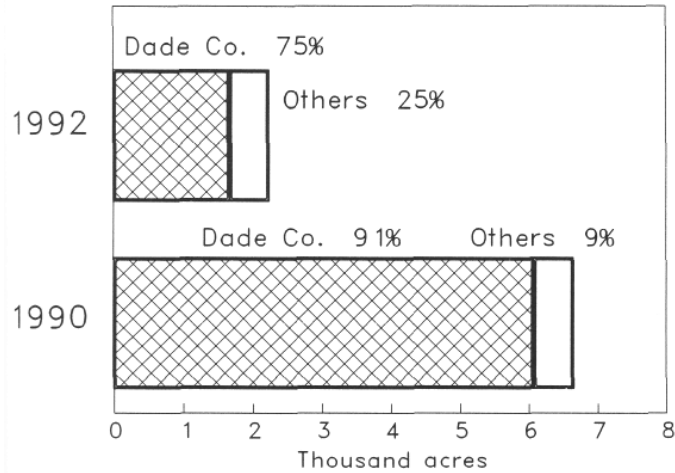


Figure 3. Lime acreage in Dade County and Florida.

Table 2. Dade County avocado acreage.

	1990		1992	
	Acres	%	Acres	%
21 years and older	4,100	46	3,125	52
11-20 years old	3,331	37	2,660	45
1-10 years old	1,556	17	180	3
TOTAL	8,987	100	5,965	100

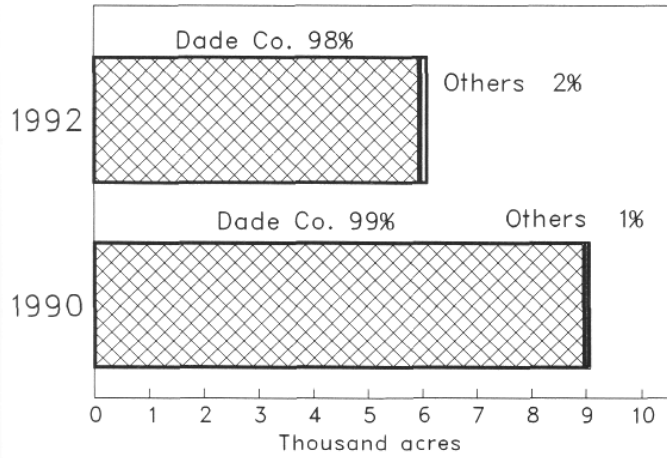


Figure 4. Avocado acreage in Dade County and Florida.

Table 3. Dade County mango acreage.

	1990		1992	
	Acres	%	Acres	%
21 years and older	856	35	567	41
11-20 years old	385	16	431	31
1-10 years old	1,183	49	400	28
TOTAL	2,424	100	1,398	100

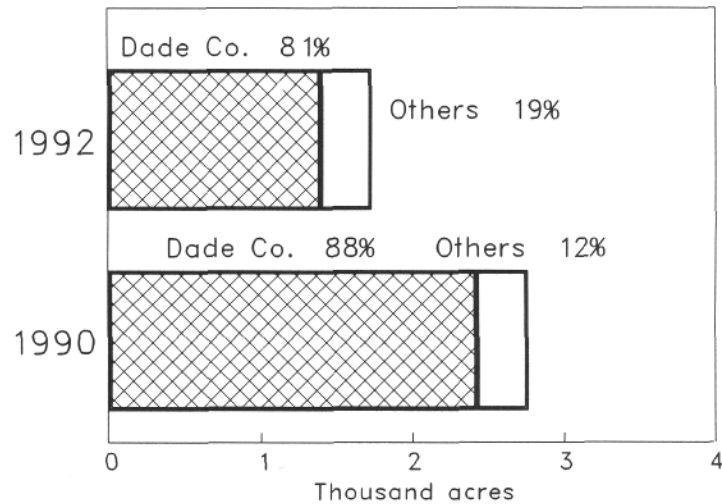


Figure 5. Mango acreage in Dade County and Florida.

Crews visited every grove and grove site that existed before the storm and updated records as to tree numbers by age and type of fruit. Many lime groves were gone. Many other trees were damaged to various degrees and some continued tree mortality is expected. Other groves, especially avocado, had been rehabilitated and were in a productive state. Results of the survey were published 23 April 1993 in *Tropical Fruit* (Fig. 2).

Analysis of tree number and acreage changes indicate that limes were the most affected. Total lime acreage in Dade County at 1,668 is down 73% from 6,071 acres in 1990 (Table 1). Statewide total acreage is 2,235 compared to 6,647 in 1990. Dade County has 75% of the total state acreage compared to 91% in 1990 (Fig. 3).

Avocados are down 34% from 8,987 acres to 5,965 (Table 2). Statewide acreage is 6,104 compared to 9,078 in 1990. Dade continues with most of the State's total primarily because of freeze losses in the 1980s in other counties of the State (Fig. 4).

Mangos are down 42% from 2,424 acres to 1,398 (Table 3). Statewide acreage is 1,732 acres compared to 2,759 in 1990. Dade County now has 81% of the state total acreage compared to 88% in 1990 (Fig. 5).

Very little replanting of any fruit type had occurred after the storm. Dividing the acres into age groups of 1-10 years, 11-20 and more than 20 and comparing that to the same categories before the storm shows the shift in age of trees. The shift shows the loss of older trees and the higher proportion of young lime trees remaining after the storm.

In addition to the classification of alive or dead for lime trees, a further division of "standing" or "down" was made to try to evaluate viability and potential for recovery of remaining trees. Results showed that 35% of lime trees 5 years and older were blown over but still alive; most of the younger trees were standing. It is anticipated that most in this blown over category will not recover or return to full bearing potential and will eventually be lost.

Many avocado trees that were blown over were pruned and set up and are producing fruit in limited quantities. Avocado acreage has been decreasing in Bade County for several years with mangos also decreasing since 1988. Many mango trees were broken and may take longer to recover than avocados.

## **CONCLUSION**

Many factors will affect current and future production from Bade County. However, first there must be viable trees. Replanting has been minimal, principally because of the limited amount of nursery stock available. Other factors may also greatly affect the replanting process. Imports of fruit from Mexico and Caribbean Countries have increased and present unknown marketing factors for the present and future. Competition for available land in Bade County is also strong and, of course, weather conditions and events are always a threat. The potential exists for avocados and mangos to return to near pre-storm levels of production but lime production will require the replanting of trees to even approach these pre-storm levels.