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EXTENSION

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2000 Florida Cotton Production Guidelines: Introduction¹

Richard Sprenkel and Mike Donahoe²

Cotton Production in Florida

Cotton was a major crop in Florida in the early part of the 20th century. Acreage declined over the years, but this has not been a steady decline because acreage has responded to price fluctuations. Yields and acreage of cotton in Florida Since 1978 are shown in Table 1.

There are several factors a farmer must consider in deciding whether to grow cotton or increase his acreage. First of all is the predicted price of cotton. Because prices may fluctuate during the year and estimated prices may change, it would be best for a grower to know current prices. He should also keep in mind the cost of production. According to estimates of the University of Florida, the total cost of growing cotton (cash expenses and fixed costs) would be more than \$590 per acre in 2000. Naturally, a farmer should estimate production costs for his farm. Also, yield potential should be estimated for each farm. The yields given above represent production capabilities of some of Florida's better loamy sands and sandy loams of the upper panhandle, where practically all of Florida's cotton is grown. As growers plant on sandier soils that have less water and nutrient holding capacity, lower yields may occur under stress conditions.

At one time distance to a gin was important, but modules have allowed cotton to be hauled farther in module trucks. The availability of harvesting equipment is important. Growers who have been planting cotton may have harvesting equipment to meet their needs, but others would have to arrange for custom harvesting. Growers who expect to grow cotton indefinitely may want to consider buying new equipment.

Insect management will require considerable attention and input. Fields should be scouted for insects twice a week and, when treatment is warranted, equipment should be available that can meet the needs for insect control. Although insect management in some fields may require several chemical applications, most cotton farmers in Florida make fewer than 4 applications per season. There may be other pest problems (nematode or weed) on a farm which could influence the decision to plant cotton.

Review of the 1999 Cotton Crop in Florida

Fields planted in late April and early May generally had enough soil moisture to establish a stand. However, dry conditions during May delayed crop emergence until June in other fields. Growing

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2. Richard Sprenkel, Professor, Department of Entomology, Institute of Food and Agricultural Sciences, University of Florida, North Florida Research and Education Center, Quincy FL 32351.

Mike Donahoe, Santa Rosa County Extension Director, Milton FL 32583.

conditions were hot and dry throughout the season. This resulted in rapid crop development with reduced yields in many early planted fields. Fiber staple was short from many of these early maturing fields.

Thrips populations were at below average to normal levels. Granular insecticides were used on most fields at planting and provided adequate control.

Lygus bug populations were low all season throughout the area. Approximately 6% of the acreage received an application for Lygus. Early season square set was generally high.

Heavy aphid infestations developed in most fields during late June and early July. The beneficial fungus disease, *Neozygites* spp., began reducing populations the second week of July. The fungus was slow to develop due to dry conditions. Low levels of aphids persisted for the remainder of the season but did not result in yield or quality losses.

Beneficials were at high levels all season where insecticides were not used. They developed on the early aphid population and helped provide control of worm pests. Fire ants were abundant all season in fields grown under strip-tillage. (Approximately 50% of fields were grown using this method of conservation tillage.)

Bollworm and tobacco budworm populations were extremely low all season and did not cause problems in either conventional or Bt cotton. Conventional varieties averaged less than one application for these pests. Many fields did not require treatment.

Both beet and fall armyworm infestations were very low all season. Few, if any, fields required treatment for these pests.

Southern armyworms were found in scattered fields throughout the area during mid-season. Feeding was confined mainly to leaves and blooms. No economic injury was observed. Approximately 200 acres were treated once with organophosphates or pyrethroids.

Stink bugs were present in low to moderate numbers through mid season. Populations increased to

damaging levels in many fields following migration from corn in August and peanuts in September. Highest infestations occurred in field borders adjacent to peanuts. Approximately 70% of fields received an application for stink bugs.

Overall, this was the lightest cotton pest year with the fewest number of insecticide applications in at least 23 seasons. State yields are expected to average 520 pounds of lint per acre.

Table 1. Cotton acres harvested and yield in Florida, 1978-1999

Year	Acres Harvested	Yield (pounds)
1978	3,600	506
1979	3,400	565
1980	5,900	610
1981	17,000	601
1982	15,000	627
1983	12,000	608
1984	17,000	847
1985	22,500	693
1986	19,000	707
1987	29,000	646
1988	29,000	566
1989	29,000	574
1990	36,500	609
1991	50,043	710
1992	50,000	776
1993	50,000	696
1994	68,000	735
1995	109,000	440
1996	100,000	672
1997	100,000	655
1998	80,000	480
1999	95,000	525

Table 2. Estimated cotton yields in several mid-south and southeastern states in 1997 and 1999.

State	<u>Estimated Yield (lbs lint/acre)</u>	
	<u>5-year average</u>	<u>1999</u>
Alabama	650	549
Arkansas	750	715
Florida	573	589
Georgia	676	580
Louisiana	692	708
Mississippi	767	708
North Carolina	646	486
South Carolina	671	419
Tennessee	621	501
Virginia	719	667