

Table 2. Fruit production of original tree of 'Homestead' guava, TREC Homestead.

Year	Tree age	Number of fruit	Fruit wt (kg)
1951	5	914	117.1
1953	7	796	90.4
1954	8	2992	374.3
1955	9	1652	234.7
1957	11	1227	213.4
1958	12	1013	162.5
1959	13	2723	402.7

population from which the 'Homestead' was selected produced an average of 100 kg of fruit per tree in the 5th year after planting, and some trees ultimately produced more than 450 kg per year in favorable years. Table 2 presents data on fruit production of the original 'Homestead' tree from the 5th through 13th years after planting. These trees were planted at a wide spacing (7.6×7.5 m or 170 trees/ha) to prevent competition between trees and facilitate taking individual yield records. Most commercial plantings have a tree spacing of 7.6×4.6 m or ca 286 trees/ha. It is reasonable to expect mature trees at that spacing to produce average yields of 180-200 kg of fruit per tree annually, or 21-23 T/ha. A substantial amount of fruit would be culled out prior to packing for sale on the fresh market, so yields for that purpose would be lower than yields of fruit intended for processing.

Harvesting and Utilization

The 'Homestead' is an excellent guava for fresh consumption. Fruit for the fresh market should be picked by hand from the tree, handled carefully, kept cool and taken to the packinghouse as quickly as possible. If the fruit is to be shipped to distant markets it should be mature, full-sized and of firm texture, but without an obvious color break on the surface. Fruit for local use can be harvested in a more advanced stage of maturity.

Fruit for processing can be picked by hand or shaken from the tree. Fallen fruit can be picked up from the ground, but it would be better to use some sort of catching frame, to prevent the fruit from being contaminated with soil, debris and microorganisms.

The 'Homestead' fruit has a thick pulp and good color and is excellent for the processing of guava shells, which are canned in heavy syrup. This cultivar can be used for

puree and for juice as well, but processors usually prefer more acid selections for these products.

Propagation

The 'Homestead' guava does not come true from seed, so vegetative propagation is necessary to reproduce the cultivar. The favored method for propagation of trees for field planting in Florida is air layering (4, 7). Various forms of graftage can be used also. Veneer grafting of green, quadrangular scions with well-developed buds has given the best success in Florida. Trees can be propagated from greenwood cuttings, but the method is not used much in Florida (4, 7).

The 'Homestead' guava is sold at times in plant nurseries in southern Florida, usually under the name 'Ruby \times Supreme.' Nurserymen or growers who wish to start stock plants can obtain a small amount of propagating material from the University of Florida, Tropical Research and Education Center, 18905 S.W. 280 Street, Homestead, Florida 33031.

Literature Cited

1. Campbell, C. W. 1963. Promising new guava varieties. Proc. Fla. State Hort. Soc. 76:363-365.
2. Campbell, C. W., and S. E. Malo. 1965. A review of guava research in Florida. Proc. Amer. Soc. Hort. Sci., Tropical Region 9:9-14.
3. Ledin, R. B. 1955. A report on improvement of subtropical fruits at the Sub-Tropical Experiment Station, Homestead, Florida. Ceiba 4:275-285.
4. Malo, S. E., and C. W. Campbell. 1968. The guava. Fla. Coop. Ext. Serv., Fruits Crops Fact Sheet No. 4.
5. Popenoe, W. 1939. Manual of tropical and subtropical fruits. The MacMillan Co., New York:272-279.
6. Ruehle, G. D. 1946. Promising new guava varieties. Proc. Fla. State Hort. Soc. 59:127-131.
7. Ruehle, G. D. 1948. A rapid method of propagating the guava. Proc. Fla. State Hort. Soc. 61:256-260.
8. Ruehle, G. D. 1948. The common guava-a neglected fruit with a promising future. Econ. Bot. 2:306-325.
9. Ruehle, G. D. 1959. Growing guavas in Florida. Fla. Agr. Ext. Serv. Bul. 170.
10. Shigeura, G. T., and R. M. Bullock. 1983. Guava (*Psidium guajava* L.) in Hawaii-History and Production. Univ. of Hawaii, Research Extension Series 035.
11. Sturrock, D. 1959. Fruits for southern Florida. Southeastern Printing Co., Stuart, FL:132-133.
12. Wilson, C. W., P. E. Shaw, and C. W. Campbell. 1982. Determination of organic acids and sugars in guava (*Psidium guajava*) cultivars by high-performance liquid chromatography. J. Sci. Food Agric. 33:777-780.

Proc. Fla. State Hort. Soc. 102:204-206. 1989.

SURVEY OF SOUTHERN Highbush AND Rabbiteye Blueberries in Florida

T. E. CROCKER AND L. WILLIS
Fruit Crops Department, IFAS
University of Florida, Gainesville, FL 32611

Additional index words. *Vaccinium ashei*, *Vaccinium corymbosum*, Southern Highbush.

Abstract. The acreage of blueberries (*Vaccinium spp.*) has continued to increase in Florida. This increase was determined by

a survey in the Spring of 1989 of the commercial blueberries grown in each county of Florida. The results showed that the acreage increased from 1057.7 in 1985 to 2106.5 in 1989. Total acreage was 1434 for rabbiteye blueberry and 672.5 for Southern Highbush. The area west of the Apalachicola River had 461 acres or a 62% increase from 1985, the north-central area had 1363 acres or 99% increase from 1985 and the area south of Marion County had 282.5 acres or 225% increase from 1985.

Proc. Fla. State Hort. Soc. 102: 1989.

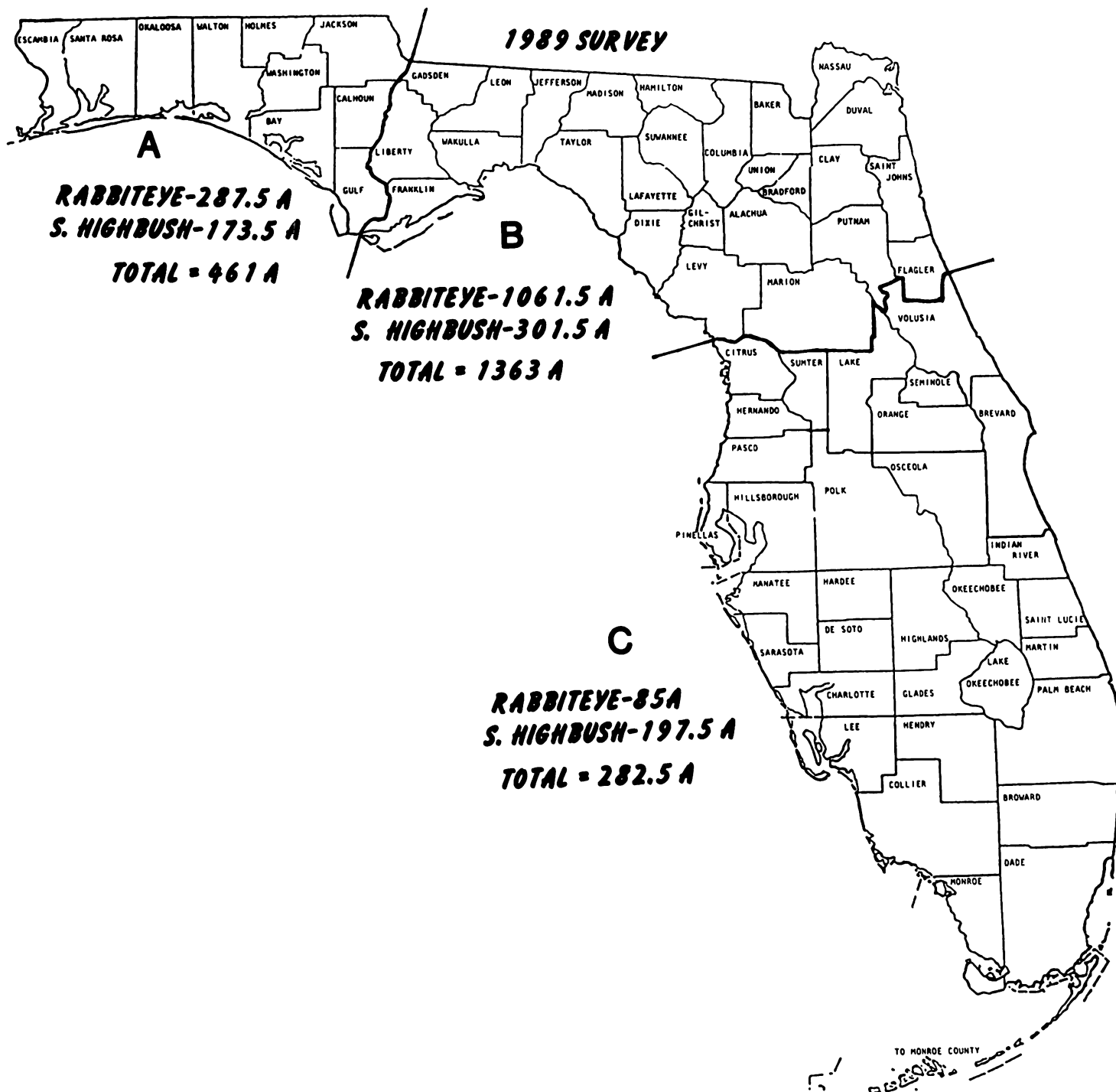


Fig. 1. Acres of southern highbush, rabbiteye and total blueberries by region in Florida.

The last survey of blueberry acreage in Florida, which was done in 1985, gave the acreage for blueberries, both rabbiteye and Southern Highbush (SHB) as 1,057.7 (1). Since 1985 there has been an increased interest in blueberry production in the state, primarily because of the shipment of early blueberries as fresh fruit to world markets (2,4). Florida is the only supplier of fresh blueberries in commercial quantities from mid April to mid May.

The authors had observed increased plantings of blueberries, especially the Southern Highbush (SHB). Many of these plantings were in the southern range for blueberries (below Marion County) because the berries

ripen earlier in that region and higher prices were being received for the fruit (2, 4).

Materials and Methods

Early in 1989, a survey form which asked for the number of acres of blueberries grown in the county was sent to the county extension agent or horticultural agent in each county where blueberries are cultivated in Florida. The response rate was very good, and a reminder mailed to those counties that had not responded further increased the response rate. Counties that did not return the survey

form were contacted by telephone. Therefore, every county had a response. The agents were asked for a breakdown by type of blueberry (rabbiteye or SHB) and by variety. The response was excellent for type of blueberry but there was not sufficient information by varieties to report.

Results and Discussion

Figure 1 shows the number of commercial blueberry acres by type in the State and by 3 regions: (A) the area west of the Apalachicola River, (B) the north-central Florida area and (C) the area south of an east-west line drawn at the south end of Marion County. As was true in the 1985 survey (1), the 1989 survey showed the largest concentration of blueberries in north-central Florida, which had 1,363.0 acres. The area west of the Apalachicola River had 461 total acres, while the area south of Marion County had 282.5 total acres.

The total planted blueberry acreage for the state as of August, 1989 was 2,106.5 of which 1,434 acres were rabbiteye and 672.5 were SHB. The percentage of SHB varied greatly by region (Table 1). Region A had 38% SHB, Region B had 22% and Region C had 70%. This shows that, as was expected (2, 4), there was great interest in planting early-maturing blueberries in the southern area for the fresh fruit market. Increased interest in highbush blueberries in the southern region was further shown by Highlands County, which reported 2 acres in 1985 and 125 acres of SHB in 1989.

The percent increase in blueberry acreage is quite striking (Table 1). The total increase for the state from 1985 to 1989 was 99%, but the largest increase was in Region C with a 225% increase. In this region, 70% of the acreage was SHB. Region B still had the largest blueberry acreage in Florida with 1,363 acres, which was a 99% increase over 1985.

Alachua County still had the largest number of acres (727) of which 529 were rabbiteye and 198 were SHB. Gulf County was in second place, 310 acres, of which 150 were rabbiteye and 160 were SHB.

Table 1. Comparison of blueberry acreage by type and by region from 1985-1989.

Region	1989	AC	% SHB	1985 AC	% increase 1985-1989
A	SHB*	173.5	38	285	62
	R	287.5			
	Total	461.0			
B	SHB	301.5	22	685.7	99
	R	1061.5			
	Total	1363.0			
C	SHB	197.5	70	87	225
	R	85.0			
	Total	282.5			
A + B + C	SHB	672.5	32	1057.7	99
	R	1434.0			
	Total	2106.5			

*SHB = Southern Highbush, R = Rabbiteye

All counties in Region A had commercial blueberry production, and in Region B, only 2 counties, Dixie and Lafayette, did not report commercial blueberries. In region C, 17 counties did not report commercial production.

Blueberry acreage has continued to expand from less than 100 commercial acres in 1973 (3) to 1,058 in 1985 (1) to over 2,000 in Florida in 1989. The acreage in the state should continue to increase because of the early shipping season and the excellent market window that Florida has for fresh market blueberries.

Literature Cited

1. Crocker, T. E. and P. M. Lyrene. 1985. Survey of blueberry acreage in Florida. *Proc. Fla. State Hort. Soc.* 98:162-164.
2. Crocker, T. E. 1989. The Blueberry Beat. *Fruit South.* 10(3):7,12.
3. Edmond, C. D., J. L. App, and V. G. Perry (Compilers). 1978. Update of "Agricultural growth in urban age." Univ. of Fla., Gainesville.
4. Lyrene, P. M. 1989. Florida blueberries, the boom, the bust, the bounce back. *Fruit South.* 10(3):5-6.

Proc. Fla. State Hort. Soc. 102:206-208. 1989.

COMPARISON OF PINE BARK MULCH AND POLYPROPYLENE FABRIC GROUND COVER IN BLUEBERRIES

DAVID E. NORDEN
Fruit Crops Dept., Univ. of FL
Gainesville, FL 32611

Abstract. Sixteen advanced selection blueberry clones [8 highbush (*Vaccinium corymbosum*) and 8 rabbiteye (*V. ashei*) were planted in 14-plant plots at the Horticultural Unit in Gainesville, FL during January, 1987. Plants were spaced 1.5 m × 3.5 m. Half of each 14-plant plot was mulched with pine bark in a band 1 m wide × 5 cm deep, and the other half was planted into a .91 m wide band of polyfabric synthetic ground cover. Soil type of the site is Kanapaha fine sand, and 10 l of Florida peat was added to each hole at

planting. The plants were fertilized 4 times per year with 12-4-8 plus 2% Mg blueberry mix and overhead irrigation was provided. After 2½ years, vegetative growth of most clones was better with the pine bark mulch, but some showed only slight differences between the treatments. Plant mortality was nearly equal in each treatment. Both the bark and the ground cover fabric held up well throughout the experiment and provided excellent in-row weed protection.

Polyfabric ground cover can help provide weed control during the difficult early years of a blueberry planting. Recent reports from both Australia and Texas favorably compare polyfabric to other forms of mulch, or lack of it, currently being used in those areas (1,2). This experiment was planted in January, 1987, at the Horticultural Unit

Florida Agricultural Experiment Station Journal Series No. N-00073.