

2003 Survey of the Florida Caladium Tuber Production Industry¹

Z. Deng, B.K. Harbaugh, R.K. Schoellhorn, and R.C. Andrews²

Caladiums are popular tropical plants because of their bright, colorful leaves and tolerance to both heat and shade. Potted and landscape caladium plants are grown from tubers (often called bulbs). Most of the caladium tubers (more than 90 percent) used throughout the world are produced by caladium growers in Lake Placid and Sebring, Highlands County, Fla. These caladium growers and their tuber-production industry are an important component of Florida's environmental horticulture industry. Additionally, these growers have a worldwide impact in the global caladium market, routinely supplying more than 95 percent of all caladium tubers worldwide.

A survey of the Florida caladium growers and industry was conducted from June to August 2003. Objectives of the survey were 1) to gather basic demographic information about the Florida caladium tuber production industry, 2) to understand the industry's needs for new cultivars, research and informational resources, and 3) to determine caladium cultivars that are currently grown

commercially and to identify the leading cultivars. Similar surveys were conducted in 1979 and 1997.

In June 2003, survey forms were mailed to 20 business operations, of which 14 were at that time growing caladiums for tuber production. A total of 13 growers returned their surveys. The responses represented at least 95 percent of the total acreage in caladium-tuber production in the 2002 -2003 season.

Industry-wide General Information

Respondents reported 1,258 acres in caladium-tuber production in 2002 and 1,330 acres in caladium-tuber production 2003. These acreages are close to the 1,311 acres reported in the 1997 survey. The average number of years the respondents reported being in business was 23. Growers also reported employing an average of seven full-time employees plus 11 seasonal, part-time workers. All the responding growers reported using multiple marketing channels.

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2. Z. Deng, assistant professor, and B.K. Harbaugh, professor, Environmental Horticulture Department, Gulf Coast Research and Education Center; R.K. Schoellhorn, formerly an associate professor of the Environmental Horticulture Department, University of Florida; and R.C. Andrews, formerly a horticultural extension agent in Highlands County, FL, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL.

Industry Perceptions of the Need for Improved Caladium Cultivars

From 1988 - 2002, 13 new cultivars were released from the University of Florida /IFAS's caladium breeding program at the Gulf Coast Research and Education Center. These new cultivars were grown on more than 130 acres in the 2002-2003 season. The industry indicated a high demand for new cultivars with improved resistance or tolerance to major diseases, especially *Fusarium* tuber rot and *Pythium* root rot, and root-knot nematodes. In addition, improved tuber yield and quality were considered as priority breeding objectives.

Industry Perceptions of Needs in Other Research Areas

Several areas have been identified as research needs. These areas include: 1) fertilization recommendation as related to fertilizer analysis, rate, frequency and timing of application; 2) disease management for grassy tubers and leaf blight; 3) new herbicides for weed control in production fields; 4) tuber curing, storage, and postharvest physiology; and 5) application of plant-growth regulators to replace the costly, manual de-eyeing process.

Industry Perceptions of Needs for Information on the Internet

The majority of respondent growers expressed their interest in being listed on the Web pages in the Web site developed at the Gulf Coast Research and Education Center. The growers encouraged researchers to use the Internet and Web sites to deliver to brokers, greenhouse growers, wholesale customers, homeowners, and other end users information related to tuber quality, container forcing, greenhouse production of pot plants, and correct landscape use. Promoting the use of caladiums in the landscape is viewed as a high priority.

Caladium Cultivars Grown in Florida

A total of 108 distinct cultivars were listed in the survey form. Respondent growers identified 92 cultivars being grown in Florida in the 2002-2003 season (Table 1). Seventy-five of the cultivars they reported growing in the 2002 - 2003 season were fancy-leaved, and 17 were lance-leaved. The majority of growers each grew 20-30 cultivars that season while 35 of the 92 cultivars were exclusively grown by a single grower that season.

The survey results indicated that more than 99 percent of the acreage utilized by the industry that growing season was used to propagate 53 cultivars. The top 10 fancy-leaved cultivars grown that season were as follows: 'White Christmas' (11.8% of the total fancy acreage), 'Candidum' (11.3%), 'Carolyn Whorton' (7.2%), 'Pink Beauty' (6.7%), 'Frieda Hemple' (6.5%), 'Fannie Munson' (5.8%), 'White Queen' (5.2%), 'Candidum Jr.' (4.7%), 'Red Flash' (4.3%), and 'Postman Joyner' (3.9%) (Figure 1). The top 10 lance-leaved cultivars grown that season were 'Florida Sweetheart' (23.8% of the total lance acreage), 'White Wing' (13.6%), 'Gingerland' (11.3%), 'Red Frill' (13.6%), 'Florida Red Ruffles' (8.3%), 'Pink Gem' (8.2%), 'Lance Whorton' (5.6%), 'Rosalie' (5.6%), 'Pink Symphony' (5.3%), and 'Jackie Suthers' (2.3%). (Figure 2)

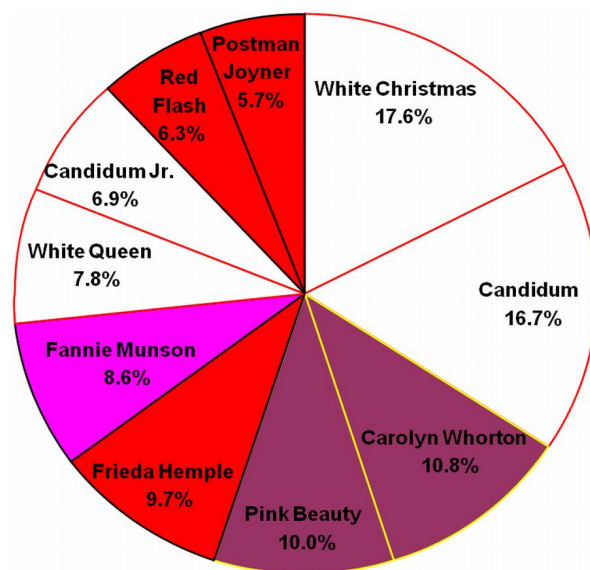


Figure 1. Top 10 fancy-leaved cultivars as a percentage of total fancy-leaved cultivar acreage grown in the 2002 - 2003 season. Credits: Zhanao Deng

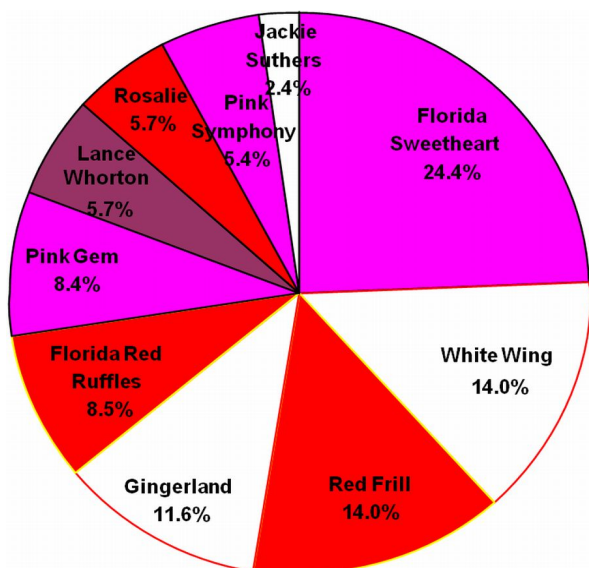


Figure 2. Top 10 lance-leaved cultivars as a percentage of the total lance acreage in the 2002 - 2003 season. Credits: Zhanao Deng

Literature Cited

Bell M.L., G.J. Wilfret, and D.A. DeVoll. 1998. Survey of caladium tuber producers for acreage of cultivars grown. Proceedings of the Florida State Horticultural Society 111:32-34.

Wilfret, G.J. and G.T. Hurner Jr. 1982. A survey of caladium cultivars grown in Florida and their characteristics as potted plants. Proceedings of the Florida State Horticultural Society 95:190-194.

Table 1. Acreage and overall rank of caladium cultivars grown in Florida in the 2002 - 2003 season.

Cultivar	Leaf shape	Leaf color	Acreage	Overall rank
Aaron	Fancy	White	40.8	12
Ace of Hearts	Fancy	Pink	<0.1	-
Apple Blossom	Fancy	Pink	<0.1	-
Attala	Fancy	Pink	<0.1	-
Autumn Beauty	Fancy	Novelty	<0.1	-
Big Red	Fancy	Red	0.2	-
Blaze (= Dr. T.L. Meade)	Fancy	Red	9.6	34
Brandywine (=Irene Dank)	Fancy	Red	13.0	24
Buck	Fancy	Red	10.9	28
Candidum	Fancy	White	120.6	2
Candidum Jr.	Fancy	White	50.0	8
Carolyn Jane	Fancy	Pink	<0.1	-
Carolyn Whorton	Fancy	Pink	77.7	3
Crescent Queen	Fancy	Novelty	<0.1	-
Crimson Wave	Fancy	Pink	0.1	-
Dawn (=Day Break)	Fancy	Pink	0.1	-
Dr. Groover	Fancy	Pink	1.0	53
Edith Meade	Fancy	Pink	<0.1	-
Elizabeth Lou	Lance	Pink	<0.1	-
Etta Moore	Lance	Novelty	<0.1	-
Fannie Munson	Fancy	Pink	61.8	6
Festivia	Fancy	Red	2.7	44
Fire Chief	Fancy	Pink	24.3	17
Fire Nymph	Fancy	Red	<0.1	-
Florida Beauty	Fancy	Pink	0.6	-
Florida Blizzard	Fancy	White	0.5	-
Florida Calypso	Fancy	Novelty	2.5	46
Florida Cardinal	Fancy	Red	37.5	13
Florida Elise	Fancy	Pink	11.6	27
Florida Fantasy	Fancy	Novelty	9.7	33
Florida Irish Lace	Lance	Novelty	<0.1	-
Florida Moonlight	Fancy	White	0.2	-
Florida Red Ruffles	Lance	Red	15.0	21
Florida Roselight	Fancy	Pink	6.5	38
Florida Sunrise	Fancy	Novelty	9.7	33
Florida Sweetheart	Lance	Pink	42.7	10
Florida White Ruffles	Lance	White	0.4	-
Florida Whitewater	Lance	White	1.9	48
Fred Bause	Fancy	Red	<0.1	-
Frieda Hemple	Fancy	Red	69.8	5
Galaxy	Fancy	White	1.2	51
Gingerland	Lance	Novelty	20.2	20
Grey Ghost	Fancy	White	7.1	37
Gypsy Rose	Fancy	Pink	4.1	40
Ivory	Fancy	White	<0.1	-
Jackie Suthers	Lance	White	4.1	41

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Cultivar	Leaf shape	Leaf color	Acreage	Overall rank
Jesse Thayer	Fancy	-	<0.1	-
John Peed	Fancy	Red	22.6	18
Jubilee	Fancy	Novelty	0.1	30
June Bride	Fancy	White	9.8	32
Kathleen	Fancy	Pink	10.5	29
Lance Whorton	Lance	Novelty	10.1	30
Lee Stokes	Fancy	Pink	<0.1	-
Lord Derby	Fancy	Pink	1.7	50
Madam Truall	Fancy	Pink	<0.1	-
Marie Moir	Fancy	Novelty	1.2	52
Miss Chicago	Fancy	Pink	0.1	-
Miss Louisiana	Fancy	Pink	0.1	-
Miss Muffet	Fancy	Novelty	22.2	19
Mrs. Arno Nehrling	Fancy	Novelty	14.0	23
Mrs. F. Sanders	Fancy	Pink	<0.1	-
Mrs. F.M. Joyner	Fanc	Pink	3.8	42
Mrs. W.B. Halderman	Fancy	Pink	1.7	49
New John Peed	Fancy	Red	<0.1	-
Pink Beauty	Fancy	Pink	72.0	4
Pink Cloud	Fancy	Pink	11.9	25
Pink Gem	Lance	Pink	14.6	22
Pink Glow	Fancy	Pink	<0.1	-
Pink Symphony	Lance	Pink	9.4	35
Pocile Anglais	Fancy	Red	11.8	26
Postman Joyner	Fancy	Red	41.4	11
Pothos	Fancy	Novelty	<0.1	-
Red Flare	Fancy	Novelty	<0.1	-
Red Flash	Fancy	Red	45.6	9
Red Frill	Francy	Red	24.5	16
Rosalie	Lance	Red	10.0	31
Rosebud	Fancy	Pink	33.8	14
Royal White Robe	Fancy	White	<0.1	-
Ruby Smith	Fancy	Red	<0.1	-
Scarlet Beauty	Fancy	Red	9.0	36
Scarlet Pimpernell	Fancy	Red	2.8	43
Sea Gull	Fancy	White	<0.1	-
Texas Beauty	Fancy	Red	0.1	-
Tom Tomlinson	Fancy	Pink	5.9	39
Torchy	Fancy	Red	0.5	-
Triumph de L' Exposition	Fancy	Novelty	<0.1	-
White Christmas	Fancy	White	126.6	1
White Knight (=Lady of Fatima)	Lance	White	2.0	47
White Princess	Lance	White	<0.1	1
White Queen	Fancy	Novelty	56.0	7
White Wing	Lance	White	24.5	15
Zo Munson	Fancy	Pink	<0.1	-