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2003 Survey of the Florida Caladium Tuber Production Industry¹

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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 (they are often called bulbs). Most of the tubers (over 90%) used in the world are produced by Florida caladium growers in Lake Placid and Sebring, Highlands County. These growers and their tuber production industry have been an important component of the state's environmental horticulture industry and have a worldwide impact.

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 varieties, 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.

Survey forms were mailed to 20 business operations, of which 14 are currently growing caladiums for tuber production. A total of 13 growers returned their surveys. The responses represented at

least 95% of the total acreage currently in caladium tuber production.

Industry-Wide General Information

Respondents reported 1258 acres and 1330 acres in caladium tuber production in 2002 and 2003, respectively. These acreages are close to the 1311 acres reported in the 1997 survey. The average number of years in business was 23 years. Growers employed an average of 7 full-time employees plus 11 seasonal part-time workers. Multiple marketing channels are being used by all the responding growers.

Industry Perceptions of the Need for Improved Caladium Cultivars

Thirteen new cultivars have been released from the University of Florida /IFAS's caladium breeding program at the Gulf Coast Research and Education Center. They were grown on over 130 acres in 2002-2003. 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

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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 the 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 website that is developed at the Gulf Coast Research and Education Center. They encouraged researchers to use the Internet and websites to deliver information related to tuber quality, container forcing, greenhouse production of pot plants, and correct landscape use to brokers, greenhouse growers, wholesale customers, homeowners, and other end users. 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 as presently being grown (Table 1). Seventy-six and 16 of the currently grown cultivars were fancy and lance-leaved, respectively. The majority of growers each grew 20-30 cultivars while 35 of the 92 cultivars were exclusively grown by a single grower. Over 99% of the acreage currently utilized by the industry was used to propagate 53 cultivars. The top 10 fancy-leaved cultivars were 'White Christmas' (11.6% of the total fancy acreage), 'Candidum' (11.0%), 'Carolyn Whorton' (7.1%), 'Pink Beauty' (6.6%), 'Frieda Hemple' (6.4%), 'Fannie Munson' (5.7%), 'White Queen' (5.1%), 'Candidum Jr.' (4.6%), 'Red Flash' (4.2%), and 'Postman Joyner' (3.8%) (Figure 1). The top 10

lance-leaved cultivars were 'Florida Sweetheart' (26.8% of the total lance acreage), 'White Wing' (15.4%), 'Red Frill' (15.4%), 'Florida Red Ruffles' (9.4%), 'Pink Gem' (9.2%), 'Lance Whorton' (6.3%), 'Rosalie' (6.3%), 'Pink Symphony' (5.9%), 'Jackie Suthers' (2.6%), and 'White Knight' (1.3%) (Figure 2).

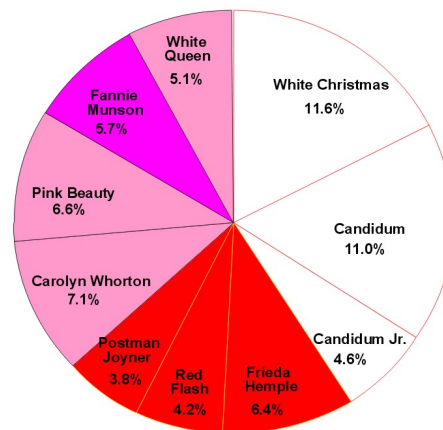


Figure 1. Top 10 fancy cultivars as a percentage of total fancy cultivar acreage. Credits: UF/GCREC

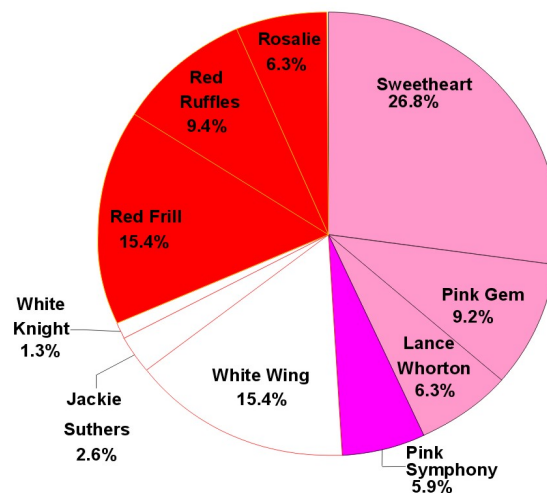


Figure 2. Top 10 lance-leaved cultivars as a percentage of the total lance acreage. Credits: UF/GCREC

Literature cited

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Table 1. Acreage and overall rank of caladium cultivars grown in Florida.

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

Table 1. Acreage and overall rank of caladium cultivars grown in Florida.

Cultivar	Leaf shape	Leaf color	Acreage	Overall rank
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	Fancy	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
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	Fancy	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
Poecile Anglais	Fancy	Red	11.8	26

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Cultivar	Leaf shape	Leaf color	Acreage	Overall rank
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	Fancy	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	-