'Florida Roselight' Caladium

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Additional index words. *Caladium* × *hortulanum*, tubers, production yields

Caladiums (*Caladium* × *hortulanum* L.), grown primarily in containers for their colorful foliage, are becoming more popular as landscape plants because of their adaptability to various light conditions, their variability in leaf shapes and colors, and their low maintenance requirements. Caladiums are available in leaf colors from white to dark red, leaf accents with spots and blotches, and foliage shapes of strap, lance, and fancy (heart-shaped). Although caladiums are native to the dense forests of Brazil and other South American countries, their use is not limited to heavily shaded locations in the landscape. Many of the more than 100 cultivars available commercially do well when grown without any shade as long as sufficient water is available. Some of these sun-tolerant cultivars are: 'Candidum Junior',

'Carolyn Whorton', 'Fire Chief', 'Miss Muffet', and 'Red Frill'. Most of the pink and light-rose cultivars, such as 'Kathleen', 'Fannie Munson', 'Miss Louisiana', and 'Pink Beauty', do not tolerate high light, exhibiting loss of color ('Kathleen') or large necrotic lesions ('Miss Louisiana'). Hybridization among commercial caladium cultivars and their subsequent culture on sandy and muck soils culminated in the selection of progeny and release of the cultivar Florida Roselight in 1988 from the Univ. of Florida (Fig. 1). This cultivar is primarily for use in the landscape in either shady or sunny locations but can be used for forcing in containers if the dominant buds are excised before the tubers are planted.

Table 1. Plant characteristics of caladium cultivars when forced in containers (Summer 1984).

Cultivar ^a	Plant ht (cm)	No. leaves
Florida Roselight	59.2 ab ^c	30.5 bc
Candidum	58.3 ab	32.0 b
Candidum Junior	54.5 b	44.2 a
Carolyn Whorton	61.7 a	23.7 cd
Fannie Munson	62.0 a	24.7 cd
Frieda Hemple	53.8 b	31.8 b

^aGrown in a glass greenhouse with 40% shade and three no. 1 tubers per 1.47-liter pot; evaluated 8 weeks after planting.

^bMean separation within columns by Duncan's multiple range test, $P = 0.05$.

Received for publication 27 Jan. 1992. Accepted for publication 11 May 1992. Florida Agricultural Experiment Station Journal Series no. R-8718. Special appreciation is acknowledged to the Fred C. Gloeckner Foundation for partial support of this research and to the caladium growers of Highlands County, Fla., for providing initial genetic material. The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked *advertisement* solely to indicate this fact.

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Fig. 1. Containerized plant of 'Florida Roselight' caladium.

Table 2. Effect of de-eying tubers on plant development of caladium cultivars when forced in containers (Summer 1984).

Cultivar ^a	Plant ht (cm)		No. leaves	
	Intact	De-eyed	Intact	De-eyed
Florida Roselight	56.8 a ^b	40.8 b	23.2 abc	41.7 a
Itacarpus	48.2 bc	42.3 ab	18.7 c	27.4 c
Texas Beauty	33.2 d	28.9 c	24.0 ab	34.4 b
Frieda Hemple	43.7 c	34.0 c	26.0 ab	41.8 a
Carolyn Whorton	56.8 a	44.5 ab	22.2 bc	30.7 bc
Candidum	51.2 ab	47.7 a	28.0 a	42.5 a

^aThree no. 1 tubers per 1.47-liter pot and grown under 30% shade from 23 Aug. to 17 Oct. 1984.

^bMean separation within columns by Duncan's multiple range test, $P = 0.05$.

Origin

'Florida Roselight', developed and evaluated as S-78-08, was derived from a selection made in 1978 from a 1976 cross between 'Carolyn Whorton' and 'Candidum'. Ancestry of both parents is unknown. The seed parent, 'Carolyn Whorton', was selected because of its upright growth habit, its large rose blotches and red main veins, and its tolerance to cool weather. 'Candidum' was selected because it produces large healthy tubers with many leaves that have wide green veins and white interveinal areas. Tubers were propagated on fumigated EauGallie fine sandy soils at Bradenton, Fla., and increased under aseptic conditions in our tissue culture laboratory during 1980 and 1981.

Description

Large tubers (≥ 5 cm in diameter) of 'Florida Roselight' planted in full sun and in sandy soil produce 25 to 30 leaves up to 33 cm long and 23 cm wide with a maximum height of 84 cm after 2 months. Leaves in full sun have medium-green margins [RHS Green 137B (Royal Horticulture Soc., 1986)] up to 3 cm wide with large green veins of a slightly darker shade (RHS Green 137A). The central surface of the leaf is comprised of large (2 to 3 cm in diameter) rose blotches (RHS Red 52B) and a few small (1 to 1.5 cm in diameter) green blotches (RHS Green 137D). The petioles are medium brown (RHS Greyed Orange 177B) with a darker brown base (RHS Greyed Orange 177A). Petioles

are strong and hold the foliage upright. When grown under 40% to 50% shade, the rose blotches are enlarged to 4 to 5 cm in diameter and are a darker rose shade (RHS Red 50B) and often translucent.

Tubers of 'Florida Roselight' have four to five dominant buds that should be excised for optimum performance in containers. The surface of the tubers is a light brown (RHS Brown 200D), and the leaf sheaths surrounding the dominant growths are a light tan (RHS Greyed Orange 165C). The cortical area of the tuber is a light yellow (RHS Yellow 10C). Tubers are firm and comprised of four to five large segments fused together.

Performance

Forcing of 'Florida Roselight' tubers has been compared to some of the commercial caladium cultivars most widely used for this purpose. When grown as three de-eyed no. 1 tubers ($\geq 3.8 < 6.4$ cm in diameter) per 1.47-liter pot in a greenhouse with 40% shade and a night/day temperature range of 21 to 34C, 'Florida Roselight' was of similar height to 'Carolyn Whorton', the major commercial rose or pink cultivar (Table 1). Leaf count was less than for 'Candidum Junior', higher than for 'Carolyn Whorton', and equivalent to that of the other cultivars. De-eying the dominant buds before planting produced more leaves per container but delayed leaf emergence and subsequent leaf development 5 to 7 days (Table 2). Plant height of 'Florida Roselight' was reduced almost 30% by de-eying. The number of leaves developing from de-eyed tubers of 'Florida Roselight' was equivalent to that for 'Candidum' and 'Frieda Hemple' but higher than that for 'Itacarpus' and 'Carolyn Whorton'. Emergence of the leaves from the soil surface was later than for 'Frieda Hemple' or 'Candidum' but earlier than for 'Carolyn Whorton'. Generally, the first leaf of 'Florida Roselight' unfurled 10 to 12 days after intact tubers were planted under optimum growing conditions.

'Florida Roselight' was compared to several commercial virus-free caladium cultivars for tuber production on fumigated EauGallie fine sand at Bradenton in 1982 and 1983 (Table 3). During 1982 the weight of tubers produced by 'Florida Roselight' was higher than that from 'Carolyn Whorton' and equivalent to that of the other cultivars. Tuber grades reflected the differences in tuber weights among the cultivars. While only 37% of the 'Carolyn Whorton' tubers were in the jumbo grade and none were in the mammoth class, 53% of 'Florida Roselight' tubers were in these two grades; only 'White Christmas' and 'Candidum' produced as many large tubers. 'Florida Roselight' also produced more marketable tubers than 'Carolyn Whorton'. In 1983 tuber weight of 'Florida Roselight' was similar to that of 'Candidum' but higher than that of the other cultivars grown. 'Candidum' produced more large tubers than the other cultivars but a smaller number of marketable tubers than 'Florida Roselight' or 'Candidum Junior'. Plot value, determined by number of tubers in each grade, was greater

Table 3. Tuber production of ‘Florida Roselight’ caladium and virus-free commercial cultivars grown on sandy soil at Bradenton, Fla. (1982 and 1983).

		Tubers in grade given (%) ^a					Marketable tubers (no.)	Pot value ^c
Cultivar	Tuber wt (g)	Super mammoth	Mammoth	Jumbo	No. 1	No. 2		
1982 ^a								
Florida Roselight	1357 ab ^{bc}		2.1	51.2	31.7	15.0	14.1 bc	40.6 ab
White Christmas	1735 a	2.3	9.3	46.5	30.2	11.6	14.3 c	52.4 a
Postman Joyner	1382 ab		2.6	41.0	41.0	15.4	13.0 bc	36.2 bc
Candidum	1313 ab	2.7	13.5	24.3	46.0	13.5	12.3 abc	43.5 ab
Frieda Hemple	1240 b		7.0	30.2	51.2	11.6	14.3 c	41.5 ab
Candidum Junior	965 bc		8.6	20.0	48.6	22.9	11.7 ab	31.3 bc
Carolyn Whorton	722 c			36.7	33.3	30.0	10.0 a	24.4 c
1983 ^a								
Florida Roselight	2558 a		0.7	15.8	54.4	29.1	38.3 d	87.5 a
Candidum	2765 a		3.5	42.2	34.2	20.1	28.3 c	81.1 ab
Candidum Junior	1672 b			14.9	45.5	39.6	33.7 d	63.9 bc
Frieda Hemple	830 c			4.5	32.5	63.0	15.3 a	22.5 d
Carolyn Whorton	1338 bc		1.3	10.3	62.8	25.6	22.3 b	45.3 c

^aTubers graded by maximum diameters: super mammoth (≥ 11.4 cm); mammoth (28.9 < 11.4 cm); jumbo (26.4 < 8.9 cm); no. 1 (23.8 < 6.4 cm); and no. 2 (≥ 2.5 < 3.8 cm).

^bValue = N no. 2s + 2N no. 1s + 4N jumbo + 8N mammoths + 12N super mammoths. where N = number of tubers in each grade.

^cTen tuber chips (8 cm³) per plot spaced 35 cm apart.

^dMean separation within columns within years by Duncan’s multiple range test, *P* = 0.05.

^eTwenty tuber chips (8 cm³) per plot spaced 15 cm apart.

for ‘Florida Roselight’ and ‘Candidum’. Observational plots grown on muck soils showed similar trends with tuber quality and grade (data not shown).

Use and availability

‘Florida Roselight’ is intended for use in the landscape in sunny or shady locations or for forcing in containers. Performance of the cultivar in containers is enhanced when the

main buds are de-eyed and three no. 1, two jumbo, or one mammoth tuber is planted per 1.47-liter pot. Although extensive research and evaluation have been performed on small hectarages of this cultivar when grown in muck or sandy soils, growers are encouraged to plant only limited quantities of ‘Florida Roselight’ until they have gained experience in its production. Standard postharvest treatment of tubers is recommended and preplant

hot water treatment of the tubers is encouraged to prolong the life of the stock. Information on the availability of tubers of ‘Florida Roselight’ may be obtained from Florida Foundation Seed Producers, P.O. Box 309, Greenwood, FL 32443.

Literature Cited

Royal Horticulture Society. 1986. RHS colour chart. Royal Horticulture Society, London.