

The UF Double Joy Cultivar Series

When we started a lisianthus breeding program in 1985 at the University of Florida's GCREC, the emphasis was on development of single flowering, pot or bedding plant types with heat-tolerance. In 1996, 'Maurine Blue' and 'Florida Blue' were released from our program and to our knowledge were the first heat-tolerant lisianthus whose seedlings could be grown at 28-31 °C (82-88 °F) without rosetting.

Since double flowering types later became popular in the United States, we started a program in 1995 to breed our heat-tolerance into double flowering pot types. To our knowledge, the **UF Double Joy** cultivars are the first double flowering and heat-tolerant cultivar series and have five colors including blue, pink, white, blue rim, and pink rim.

The most important and distinguishing attribute of the UF Double Joy series was their heat tolerance when compared with other commercial lines in a study in 2005 at GCREC (see Table 1). 'Florida Silver' was an exception but it was released from our program as a semi-dwarf and heat-tolerant line and is now commercialized. None of the heat stressed UF Double Joy cultivars rosetted while 70% 'Forever White', 97% 'Lisa Lavender', 100% 'Lizzy Pink', 97% 'Mermaid Lilac Rose', 86% 'Sapphire Blue Chip', and 53% 'Tiramisu Double Violet' seedlings rosetted.

UF Double Joy cultivars are intended to be used as flowering potted plants in containers \geq 15-cm (6-inch) diameter pots. Plant height for Maurine cultivars average 75-102 cm (30-40 inches) and Florida cultivars 28-35 cm (11-14 inches) when flowered under our conditions in May. Thus the UF Double Joy cultivars were intermediate in height averaging 38- 48 cm (15-19 inches). A single treatment of B-Nine or Bonzi growth retardant may be necessary for production of UF Double Joy cultivars in \leq 15-cm-diameter (6-inch) pots. Three to four plugs per 15-cm (6-inch) pot are recommended for optimal marketing display.

Table 1. Percentage rosetted plants and growth and flowering characteristics^y of twelve cultivars of lisianthus grown in 11.5-cm (4.5-inch) square pots at Bradenton, Florida.

Cultivar	Rosetted ^z (%)	Plant ^y		Branches (no.)	Flowers and buds (no.)	Petal length (cm)	Days to flower (no.)
		ht (cm)	width (cm)				
Florida Silver	0	37	23	11	80	6.2	114
Forever White	70	31	20	12	56	5.9	112
Lisa Lavender	97	29	20	7	49	5.9	108
Lizzy Pink	100	31	20	8	54	5.6	116
Mermaid Lilac Rose	97	28	18	8	55	5.8	112
Sapphire Blue Chip	83	28	19	11	66	5.5	107
Tiramisu Double Violet	53	39	21	7	43	5.4	119
UF Double Joy Blue	0	40	21	9	44	5.8	116
UF Double Joy Blue Rim	0	38	20	11	59	5.6	116
UF Double Joy Pink	0	55	16	8	38	5.9	116
UF Double Joy Pink Rim	0	44	23	8	49	5.9	119
UF Double Joy White	0	39	23	10	67	5.6	115
LSD (α = 0.05)	11	3.5	4.7	2.1	9.2	0.4	3.0

^zSeventeen-d-old seedlings were exposed to 31 °C (88 °F) for 5 weeks in a growth chamber and then grown in a greenhouse for 4 weeks. Percentages of rosetted plants are means of three replications of eight plants.

^yVegetative and flowering characteristics were for plants grown in a greenhouse at 33-35 °C (91-95 °F) day and 13-15 °C (55-60 °F) night. Values are means of five replications of single-plant experimental units arranged in a completely randomized design.