

## INTRODUCTION

UF/IFAS has the largest university-based, ornamental plant breeding program in the nation. Recent emphasis has been on developing new varieties of caladium, gerbera, coleus, lantana, and ruellia. UF/IFAS ornamental plant breeders use an array of genetic approaches to improve plant performance, keep Florida's ornamental plant industry competitive, and enhance profitability in domestic and global markets. For example, the annual sales value of lantana produced in Florida is approximately \$40 million, and the Florida caladium tuber-production industry supplies more than 95 percent of the world's caladium tubers.

## FROM THE BEGINNING

The following highlights when each ornamental breeding program was begun and its purpose:

**Caladium breeding program, 1976:** To develop new cultivars with bright foliage colors, multiple leaves, good viability in container production, robust performance in the landscape, and quality tubers.

**Gerbera breeding program, 2000:** To combat powdery mildew and improve plant vigor, continuous flowering, and flower size and color.

**Coleus breeding program, 2003:** To produce colorful new annuals that thrive under Florida's environmental conditions. Breeders selected coleus for late flowering, plant form, easy propagation, improved vigor, and foliage in a variety of colors, shapes, and sizes.

**Lantana breeding program, 2004:** To produce non-invasive cultivars with reduced male and female fertility, improved growth habits, strong flowering potential, and plant performance for use in nursery production and in the landscape.

**Ruellia breeding program, 2007:** To develop new cultivars with different flower colors and with growth habits that have reduced fertility and reduced invasive potential by seed dispersal.

## TODAY AND TOMORROW

The ornamental plant industry benefited greatly when UF/IFAS ornamental plant breeders developed varieties with decreased fertility in species that are popular but often invasive. Controlled hybridization between tetraploids and diploids, progeny ploidy analysis, and multiple rounds of screening led to the release of two new lantana varieties and four ruellia varieties.

Many of the plants in the ornamental plant breeding program are introduced from other parts of the world with traits that are still poorly understood. UF/IFAS ornamental plant breeders plan to expand their germplasm collection to better understand important horticultural traits using somaclonal variation, artificial mutagenesis, somatic hybridization, and molecular markers to complement the technical approaches used for developing new varieties.

*The future of the UF/IFAS ornamental plant breeding program lies with expanded production of its varieties outside of the U.S.*

Plant breeders are working with Florida Foundation Seed Producers, Inc. and licensees to expand commercial production of these cultivars in Canada, Europe, and Asia.



## ORNAMENTAL VARIETIES RELEASED SINCE 2014

Release Date	Cultivars
<b>Caladium</b>	
07/17/15	'Sizzle' (USPP26,591), 'Passionista' (USPP26,592)
03/09/16	'Cosmic Delight' (USPP27,154), 'Hearts Desire' (USPP27,155), 'Fiesta' (USPP26,833)
11/08/16	'Icicle' (USPP29,249)
<b>Coleus</b>	
01/30/14	Marquee™ Blonde Bombshell (USPP27,076), FlameThrower™ Chili Pepper (USPP27,078), FlameThrower™ Habanero (USPP27,077), Coleosaurus™ 'UF10-45-12' (USPP27,126), Lime Time™ 'UF12-30-6' (USPP27,140)
08/01/14	FlameThrower™ Chipotle (USPP27,288), Campfire 'UF12-22-1' (USPP27,269)
01/30/14	Mainstreet™ Abbey Road, Mainstreet™ Broadway, Mainstreet™ Fifth Avenue
01/07/15	FlameThrower™ Spiced Curry (USPP27,499), Marquee™ Special Effects (USPP27,500), Velveteen® 'UF13-6-11'
10/27/15	Apple Brandy® 'UF12-70-7'
04/22/16	Inferno (USPP28,591), Ruby Slipper (USPP28,566), French Quarter (USPP28,517)
10/10/17	Mainstreet™ Chartres Street 'UF16-27-1' (USPPAF), Mainstreet Ruby Road 'UF16-64-1' (USPPAF), Mainstreet Ocean Drive 'UF16-5-6' (USPPAF), Mainstreet La Rambla 'UF16-72-8' (USPPAF), Stained Glassworks™ Royalty 'UF16-88-9' (USPPAF), Sedona Sunset® 'UF16-1-20' (USPPAF), Stained Glassworks™ Crown Jewel 'UF16-45-18', Cherry Brandy® 'UF16-14-3', Torchlight® 'UF16-14-5', Flame Thrower™ Salsa Verde 'UF14-24-1' (USPPAF)
09/20/2018	Rediculous™ 'UF16-90-3', FlameThrower™ Salsa Roja 'UF15-97-9' (USPPAF), Pinkplosion 'UF15-20-6' (USPPAF), FlameThrower™ Serrano 'UF15-6-28' (USPPAF)
04/17/19	Stained Glassworks™ Eruption 'UF17-128-7', Wicked Witch™ 'UF17-128-7', Mainstreet™ Beale Street 'UF17-64-1', Wicked Hot™ 'UF17-52-2', Mainstreet™ Alligator Alley 'UF17-50-5', Stained Glassworks™ Cooper 'UF17-43-3', Heartbreaker™ 'UF16-91-25', Borderlime™ 'UF16-31-15'
<b>Ruellia</b>	
04/22/16	Mayan™ Compact Purple (USPP28,449)
01/31/18	Aztec™ Purple 'R13-5-3' (USPPAF), Aztec™ White/Pink 'R15-24-17' (USPPAF), Aztec™ Pink 'R16-1-1' (USPPAF)
<b>Lantana</b>	
11/18/16	Bloomify™ Red 'UF-1013A-2A' (USPP29,292), Bloomify™ Rose 'UF-1011-2' (USPP29,267)

## HIGH IMPACT RELEASES

- Florida Sweetheart (1993):** First caladium released and patented by the University of Florida and still popular.
- Red Ruffles, USPP13,136 (2000):** Strap-leafed caladium well-suited for mass planting.
- Florida Moonlight, USPP14,565 (2002):** Fancy-leafed caladium produced extensively for the bulb trade.
- Royal Glissade® 'UF03-8-10' (2006):** Coleus with excellent vigor and jagged, red-and-moss-green leaves.
- Electric Lime® 'UF04-33-5' (2006):** Coleus with lemon-lime leaves, grown in shade or full sun without fading.
- Redhead 'UF06-4-6', USPP21,585 (2008):** Most popular red-leafed coleus due to its deep-colored red leaves.
- Royal Flush™ 'UF-18-49', USPP24,431 (2010):** Fancy-leafed caladium well-suited for sun and shade and awarded one of the 'Best of the Best' at the Ohio State University Annual Cultivar Trial in 2013.
- Tapestry™ 'UF-172', USPP24,432 (2010):** Fancy-leafed caladium intended for use in large containers and awarded one of the 'Best of the Best' at the Ohio State University Annual Cultivar Trial in 2013.
- Wasabi 'UF-08-4-3', USPP23,585 (2011):** Coleus widely used in landscape due to bright leaves that don't fade.
- Mayan™ Purple, Mayan™ White (2012):** Non-invasive ruellia that do not set seed, are season-long, prolific bloomers, and were top performers in the Louisiana State AgCenter's 2014 trials.
- Campfire 'UF12-22-1' (2015):** Copper-colored coleus, exceptional branching and growth habit, and one of the top 20 new plants at the 2016 RHS Chelsea Flower Show.

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