

Elite Performer Trial for 2003

Jim Barrett, Erika Berghauer and Phillip Hamilton
Environmental Horticulture Department
University of Florida

FloraStar, in cooperation with the University of Florida, has selected the winners of the first FloraStar Elite Performer trials that are designed to evaluate how well a variety performs for the grower. The program will focus on vegetative annuals, spring crops and specialty seed items. This year's trial included calibrachoa and double impatiens. In the future, 4-6 crops will be evaluated each year. The production trials are conducted at the University of Florida, and the entries are also included in the landscape trials at North Carolina State University, Pennsylvania State University and Colorado State University.

The objective of the program is to identify varieties that perform best in production and to communicate pertinent production information about these varieties to growers. Plant breeders are making rapid improvements in varieties, and there are many new varieties and crops being introduced. This is the first independent program to compare and evaluate varieties in a production format.

Each crop is grown according to general production guidelines for the crop. Judging is based on specific characteristics important to that particular crop, such as time to flower, growth habit, number and/or size of flowers and marketability.

The best varieties are designated FloraStar Elite Performers. This award level is reserved for only those varieties that are the easiest to grow, have excellent marketability and perform well in different situations and container sizes. Merit Awards are given to a second group of varieties that also have many good characteristics and are good choices for growers.

The trials are not designed to test all varieties of a crop, but to determine the best ones of those varieties submitted by the breeder for independent evaluations. Growers can use this information in selecting varieties to try in their own operations with confidence that they have been subjected to stringent evaluation.

The double impatiens and calibrachoa in the 2003 trial were grown at two separate times (winter and spring) and in both 4 1/2- and 10-inch baskets each time. Additionally, double impatiens were grown in a 14-inch color bowl. Both the 4 1/2-inch containers and baskets were grown with two different plant growth regulator (PGR) regimes to produce a smaller finished plant similar to mass market production and a larger plant more typical of a product going to an independent retailer. This resulted in each variety being grown eight or nine different ways.

We are very grateful to the FloraStar Board of Directors for their cooperation and support in conducting these trials and for selecting winners based on our evaluations. It is also important to recognize the breeder companies who took the risk of entering their varieties in the first year of this new and very different production trial. These companies were Bodger Botanicals, Paul Ecke Ranch, Goldsmith Plants, Oglevee Ltd., Selecta First Class and Suntory.

Double Impatiens

Current commercial varieties have a wide range of vigor. The more vigorous varieties can be difficult and require significant amounts of growth regulators. Important variables affecting marketability of double impatiens are the number of flowers and position of the flowers with respect to being above or below the foliage.

The double impatiens in these trials were planted one cutting per 4 1/2-inch and four per basket. Fertilizer was at 200 ppm of 20-10-20 at each irrigation. PGRs were used based on plant vigor; combinations of a Bonzi spray at 10 ppm applied week 2 and/or a Bonzi drench at 1 ppm applied between weeks 3 and 5 were used. Plants in the accompanying pictures are shown six weeks after planting.

Elite Award Winners:

'Cameo Coral' from Oglevee has early flowering, attractive flower color, larger-than-average flower size and many flowers held above the foliage. Cameo Coral has a good growth habit for baskets and 4 1/2-inch container production. The medium plant vigor is easily controllable with PGRs.

'Double Up Red' from Bodger Botanicals has very nice red flower color and early flowering. The flowers are held above the foliage better than most commercial varieties. It has medium vigor and is easy to control in 4 1/2-inch containers and in baskets.

Merit Award Winners:

'Cameo Scarlet Surprise' from Oglevee is early flowering, has a large number of medium-sized flowers held above the foliage and has an attractive bicolor pattern with white on scarlet. Cameo Scarlet Surprise is slightly more vigorous than the above varieties but can be controlled well with PGRs in baskets and 4 1/2-inch containers. In older plants at higher production temperatures, it tends to have less white coloration in the flowers.

'Double Up Passion' from Bodger Botanicals has very good flower quality. The flowers are larger and open up more than other double impatiens varieties. The vigorous growth habit makes it difficult to produce this variety in a 4 1/2-inch container. It is better suited for basket production or other larger forms.

Table 1. Double Impatiens ratings.

Double Impatiens Variety	Flower Size	Flowers Above Foliage	Overall Appearance
Cameo Coral	4	5	5
Cameo Pink Surprise	3	3	3
Cameo Scarlet Surprise	3	4	4
Double Diamond Appleblossom	3	4	3
Double Up Red	3	5	4
Double Up Passion	5	3	4
Double Up White	2	2	3
Double Up Salmon	5	3	3

1-poor, 2-below average, 3-average, 4-above average, 5-excellent.

Calibrachoa

There are several different growth habits in calibrachoa, but the crop is not mature enough to break out different series based on growth habit, as is done for some other vegetative crops. Calibrachoa are long-day plants, and selecting for varieties that are less sensitive to day length is important in production for early markets. The varieties that require longer days can produce long stems before flowering in baskets, which is a less marketable appearance. Some of the trailing types may have very little flowering on top of the basket and can be difficult in small containers. Additionally, calibrachoa are subject to microelement deficiencies (yellow leaves) if media pH is not low enough. This undesirable characteristic varies with varieties and makes pH control more important for those varieties. Generally, pH should be below 6.0 for calibrachoa to prevent this problem. The observations of leaf yellowing included here are based on media pH of 6.0-6.2. Varieties that displayed leaf yellow at high pH did fine when pH was below 6.0.

Calibrachoa fertilization was at 200-300 ppm with 20-10-20. One cutting per 4 1/2-inch and four cuttings per 10-inch basket were used. Cuttings were pinched at planting or after one week. PGR use depended on vigor of the individual variety. Some received a 2,500-ppm B-Nine spray week 2 or 3 to reduce early elongation and a Sumagic drench at 1 ppm was applied between weeks 3 and 5. The plants pictured are large baskets at 9-10 weeks after planting.

Elite Award Winners:

'Spring Fling Yellow' from Bodger Botanicals has many, smaller-than-average flowers over the entire plant. The flower color is less stable as the plant ages and some flowers change to terra cotta-like. The growth habit is an even mound that is very well branched, and it is easy to grow in both baskets and 4 1/2-inch containers. This variety is slightly vigorous yet more sensitive to PGRs than most, so it is easy to control. Overall, this is an attractive plant with excellent form

and lots of color due to the number of flowers. Changes in flower color do not reduce its market appeal. Spring Fling Yellow received the highest ratings by our judges.

'Spring Fling Salmon' is another entry from Bodger Botanicals. It flowers early and produces a number of flowers that are larger than normal. The flower color is nice but is more pink than salmon. The growth habit is slightly vigorous and mounding with good branching. Plant size is easily controlled with PGRs for production in baskets and 4 1/2-inch containers.

Merit Award Winners:

'Million Bells Trailing Magenta' from Suntory has very large magenta flowers complemented by a distinct yellow throat. While there are fewer flowers than other calibrachoa varieties, these large flowers stand out from the foliage. It has a very good plant form that is moderately trailing but is more intermediate, between a fully trailing and a mounding growth habit. If early growth is controlled and it is not allowed to be too vigorous, baskets will keep flowers on top. Million Bells Trailing Magenta can work in a basket or 4 1/2-inch container.

'MiniFamous Peach' from Selecta First Class has a nice, unique flower color with average-sized flowers. It has good branching and a moderate trailing habit that can be done in both a basket and 4 1/2-inch container. The problem with this variety was that it was the last to flower in the winter trial but flowered quickly in the May trial, which means it probably will not do well in Southern markets. However, in later markets, it is very good and easy to produce.

'MiniFamous Cherry Pink' from Selecta First Class has large flowers with an intense cherry red color, which makes a very attractive basket. It has a uniform, moderately trailing growth habit. It is slightly vigorous but is easily controlled with PGRs. It will keep flowers on top of a basket if early growth is controlled and it is not allowed to be too vigorous. Leaf yellowing can be a problem if media pH is not controlled.

'Sweetheart Lavender' from Selecta First Class has nice lavender flowers, which are very attractive against the green foliage. It has a moderately mounding habit that keeps flowers on top of the basket. Vigor is medium and is easily controlled with PGRs. It is slightly more prone to microelement deficiency at higher pH.

Table 2. Calibrachoa ratings.

Calibrachoa Variety	Flower Size	Uniformity of Color on Top	Sensitive to Microelement Deficiency	Overall Appearance
KO-213	2	3	Yes	2
KO-221	3	5	Yes	3
KO-225	2	3	Yes	3
Million Bells Cosmos Pink	3	5	No	4
Million Bells Red	2	4	No	2
Million Bells Trailing Magenta	5	3	No	4
Million Bells Hot Pink	3	5	Yes	2
MiniFamous Peach	3	3	Yes	4
MiniFamous Lavender	3	4	Yes	4
MiniFamous Cherry Pink	4	3	Yes	4

Spring Fling Salmon	4	4	Yes	4
Spring Fling Yellow	2	5	No	5

1-poor, 2-below average, 3-average, 4-above average, 5-excellent.