

crop cultivation

Fall Pansy and Viola Performance

Results from the 2002-2003 field trials at The Ohio State University.

By Monica Kmetz-González and Claudio Pasian



Top: 'Skyline Blue with Face'; Bottom: 'Panola Purple with Face'. (Photos courtesy of The Ohio State University)

Top 15 Pansies

(starting with the highest score):

'Ultima Baron Merlot' with a perfect score in every category (Sakata Seed America)

'Panola Purple with Face' (PanAmerican Seed)

'Panola Blue with Blotch Improved' (PanAmerican Seed)

'Ultima Baron Purple (Perfection)' (Sakata Seed America)

'Skyline Blue with Face' (S&G Flowers)

'Panola White with Blotch' (PanAmerican Seed)

'Panola Beaconsfield' (PanAmerican Seed)

'Ultima Impressions Blue Shades' (Sakata Seed America)

'Fama Silver Blue' (Ernst Benary of America)

'Ultima Beacon Blue' (Sakata Seed America)

'Panola Golden Yellow' (PanAmerican Seed)

'Clear Sky Purple' (S&G Flowers)

'Ultima Beacon Yellow' (Sakata Seed America)

'Delta Violet with Face' (S&G Flowers)

'Karma White Blotch' (Goldsmith Seeds)

When we started our fall pansy and viola trials three years ago, our objective was twofold: 1) to provide information to growers, breeders and consumers about the performance of different cultivars and 2) to use the trials as a vehicle for consumer education. The more the public is aware of the gardening potential of this crop, the greater the chances they will buy the product.

Since we started trialing and due to publicity of the results, landscapers in our area have started realizing the potential of the crop and are planting fall pansies. We have seen a small increase of fall pansy beds in public areas like shopping centers and city plantings. This past trial was good for testing winter survivability due to lower than average temperatures.

TRIAL SITE AND PROCEDURE

This trial, part of The Ohio State University Learning Gardens, located just northwest of our departmental buildings on the Columbus campus, marked the third year for our fall pansy and viola trials and the first year it was conducted in-ground. Our previous trials had been conducted in raised beds. Our new, in-ground site mimics more directly the "real world" growing areas of homeowners, cities and commercial sites. The trial site is in shade most of the morning, followed by approximately 6-8 hours of full sun. The area, formerly in grass, was amended with Kurtz Brothers Professional Blend. Pre-plant fertilization with 20-10-20 at 300 ppm nitrogen was performed via liquid feed on Aug. 27 and Sept. 9, 2002.

A total of 83 cultivars were evaluated. Of this, 63 were pansy (including six panola) and 20 were viola. Seed from the participating breeders and distributors was grown on for us by Bob's Market & Greenhouse, Mason, W.Va.

Plants in 2½-inch-cell packs were received in our greenhouses on Sept. 11, 2002. On September 12, a Rootshield drench was applied to the plants, and transplanting to the in-ground site occurred on September 17. Nine plants per cultivar were planted on 1-foot centers, and no mulch was used. Post-planting fer-

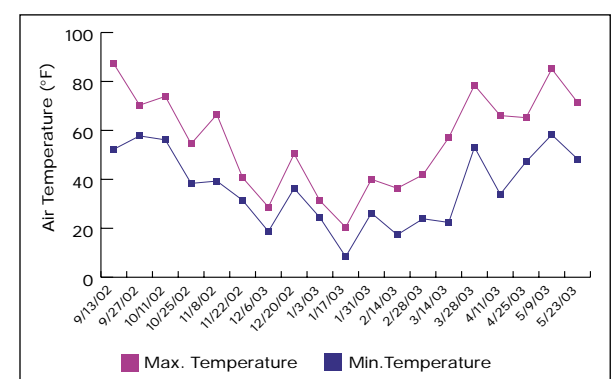
tilization with 20-10-20 at 200 ppm nitrogen occurred on September 25 and October 9 and 21. There were no pest or disease problems.

Ratings are based on a 1-5 scale (1 = not acceptable, 5 = exceptional). Plants were evaluated for the following characteristics: lower quality (aesthetics, color, health and appearance), flower number (1 = low, 5 = very floriferous), foliage (vegetative vigor, aesthetics/color, health and appearance), uniformity (1 = quality is variable from plant to plant, 5 = similar quality between all plants) and overall (rating for all plants in the cultivar grouping), taking all the above criteria into consideration.

WEATHER CONDITIONS

The temperatures during the course of this trial allowed testing for overwintering. Minimum and maximum temperatures from mid-September through mid-May were recorded by a departmental weather station located in close proximity to the trial plot (see Figure 1, below). Plants got off to a good growing start with favorable climatic conditions in September and October. The first night of freezing temperatures occurred on November 1, and overall, the plants looked good until the first very hard freeze occurred at the end of November. The winter was punctuated by cold temperatures and some snowfall throughout. The season low of -2° F occurred on February 1, a major snowstorm on February 16 covered the area with 18 inches of snow, and snow cover remained on the trial plants for the next three weeks before

Figure 1. Minimum and maximum temperatures.



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any melting occurred. This snow cover was somewhat helpful in insulating plants from the continuing freezing temperatures over the next month. The first warming trend took place in mid-March, and favorable spring weather conditions followed.

TRIAL RESULTS

The fall evaluation for pansies and violas (see Figures 2 and 3, below) was performed six weeks after transplant by the trials coordinator. Overwintering evaluations were done March 17 and 24 and April 14. A final winter survival

Figure 2. Pansy evaluations during fall 2002 (October 22). Rating: 1 = poor, 5 = excellent.

Series	Cultivar	Seed Company	Flower Appearance	Flower Number	Vegetative Growth/Foliage	Overall*
Delta	PRM Deep Blue w/ Blotch	S&G Flowers	4.75	4.0	3.0	4.25
Panola	Blue w/ Blotch Improved	PanAmerican	4.75	4.0	3.75	4.0
Panola	Purple w/ Face	PanAmerican	4.5	3.75	3.5	4.0
Ultima Beacon	Blue	Sakata	4.5	3.5	3.0	4.0
Fama	Spanish Eyes	Benary	4.25	3.0	4.0	4.0
Ultima Baron	Merlot	Sakata	3.75	3.75	4.0	3.75
Panola	Beaconsfield	PanAmerican	5.0	2.5	3.5	3.5
Ultima Impressions	Rose Shades	Sakata	3.75	3.0	3.25	3.5
Panola	Yellow w/ Blotch	PanAmerican	3.25	3.75	3.25	3.5

*table ranked in descending order of overall rating

Figure 3. Viola evaluations during fall 2002 (October 22). Rating: 1 = poor, 5 = excellent.

Series	Cultivar	Seed Company	Flower Appearance	Flower Number	Vegetative Growth/Foliage	Overall*
Penny	Yellow Jump-Up	Goldsmith	4.75	3.5	4.5	4.0
Sorbet	Orange Duet	PanAmerican	4.0	3.25	4.0	3.75
Starlet	Pink Shades	Takii	3.75	4.0	3.75	3.75
Penny	Violet Flare	Goldsmith	4.5	3.0	3.25	3.5
Sorbet	Coconut Swirl	PanAmerican	4.25	4.0	3.5	3.5

*table ranked in descending order of overall rating

count was performed on April 23. Seventy percent of the pansies trialed had 100-percent survival rate. All violas, except 'Penny Yellow Jump-Up' (both 89 percent) and 'Sorbet Orange Duet' (89 percent), had 100-percent survival rate. Overall survival rate for the trial



'Penny Violet Flare'

was 94.4 percent. The

final spring evaluation for pansies and violas (see Figure 4, below, and 5, page 50) was done by our core team of evaluators on May 1. Plants were pulled on May 12 to make way for our summer annuals trial.

In addition to the top 15 pansies and seven violas (see sidebars, page 46 and 50), many other cultivars performed very well. Violas, by nature, perform more vigorously in this area. Of particular note in this trial were the panolas, which combined the flower number, plant

Figure 4. Pansy evaluations during spring 2003 (May 1). Rating: 1 = poor, 5 = excellent.

Series	Cultivar	Seed Company	Flower Appearance	Flower Number	Vegetative Growth/Foliage	Uniformity	Overall*
Penny	Yellow Jump-Up	Goldsmith	5.0	5.0	5.0	5.0	5.0
Penny	Violet Flare	Goldsmith	5.0	5.0	5.0	5.0	5.0
Sorbet	Yellow Frost	PanAmerican	5.0	5.0	5.0	4.75	5.0
Sorbet	Sunny Royale	PanAmerican	5.0	5.0	5.0	4.75	5.0
Sorbet	Coconut Swirl	PanAmerican	5.0	5.0	5.0	4.5	4.75
Sorbet	Blueberry Cream	PanAmerican	5.0	4.5	4.75	4.75	4.75
Sorbet	Orange Duet	PanAmerican	5.0	4.0	5.0	4.75	4.75
Sorbet	Yellow Delight	PanAmerican	5.0	5.0	4.25	4.0	4.5
BabyFace	Ruby Gold	PanAmerican	5.0	4.0	5.0	4.25	4.5
Penny	Deep Blue	Goldsmith	4.5	3.75	5.0	4.5	4.5

*table ranked in descending order of overall rating

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vigor and cold hardiness of the violas with the larger flower size of the pansy. Of the six-panola cultivars tested, five placed in our top 15 pansy list for the spring evaluation.

Figure 5. Viola evaluations during spring 2003 (May 1). Rating: 1 = poor, 5 = excellent.

Series	Cultivar	Seed Company	Flower Appearance	Flower Number	Vegetative Growth/ Foliage	Uniformity	Overall*
Ultima Baron	Merlot	Sakata	5.0	5.0	5.0	5.0	5.0
Panola	Purple w/ Face	PanAmerican	5.0	5.0	4.25	5.0	5.0
Panola	Blue w/ Blotch Improved	PanAmerican	5.0	5.0	4.0	4.75	5.0
Ultima Baron	Purple (Perfection)	Sakata	5.0	4.75	4.75	5.0	5.0
Skyline	Blue w/ Face	S&G Flowers	4.75	5.0	5.0	5.0	5.0
Panola	White w/ Blotch	PanAmerican	5.0	4.5	4.0	4.5	4.75
Panola	Beaconsfield	PanAmerican	5.0	4.75	4.5	4.5	4.5
Ultima Impressions	Blue Shades	Sakata	5.0	4.75	4.25	4.5	4.5
Fama	Silver Blue	Benary	5.0	4.75	4.25	4.0	4.5
Ultima Beacon	Blue	Sakata	4.5	4.5	4.5	4.5	4.5
Panola	Golden Yellow	PanAmerican	4.0	4.75	4.5	4.75	4.5
Clear Sky	Sky Purple	S&G Flowers	3.5	4.5	4.5	4.75	4.5

*table ranked in descending order of overall rating

Top 7 Violas

(starting with the highest score):

- 'Penny Yellow Jump-Up' (Goldsmith Seeds)
- 'Penny Violet Flare' (Goldsmith Seeds)
- 'Sorbet Yellow Frost' (PanAmerican Seed)
- 'Sorbet Sunny Royale' (PanAmerican Seed)
- 'Sorbet Coconut Swirl' (PanAmerican Seed)
- 'Sorbet Blueberry Cream' (PanAmerican Seed)
- 'Sorbet Orange Duet' (PanAmerican Seed)



'Ultima Baron Merlot'

It is clear that most pansies and virtually all violas can survive a tough Midwest winter and thrive the following spring. Some cultivars flower very early, even before daffodils and tulips. One possible reason why fall pansies have not become a popular crop among customers may be the fact that, in our geographical area, they have to be planted in mid to late September. Later plantings do not allow enough time for good establishment, possibly making plants more cold susceptible. In addition, at this time of the year, most spring/summer annuals are still in good shape, and homeowners may be reluctant to remove them to make room for pansies or violas. **GPN**



'Sorbet Yellow Frost'

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