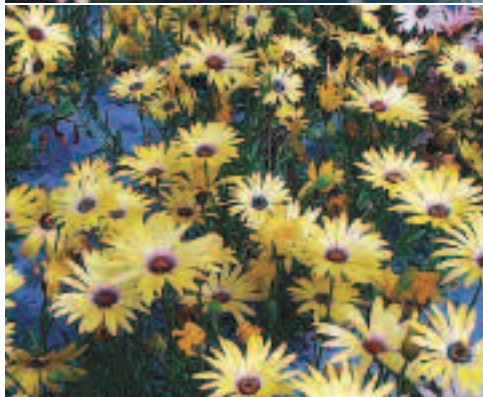


Osteospermum Cultivar Trial 2004

The Ohio State University Learning Garden evaluated 26 entries during its greenhouse trial to find the top performing osteospermums.

**By Monica Kmetz-González
and Claudio Pasion**



Top: Experimental V77-9B-3C. Middle: 'Pinwheel White Eye'. Bottom: Trial material IN47. (Photos courtesy of Claudio Pasion)

In 2004, we conducted osteospermum/African daisy trials in our departmental greenhouses on the Columbus campus for the seventh consecutive year. We evaluated 26 entries from four source companies in the trial period from January through early May. Rooted

cuttings were received from participating companies between January 2 and 16.

CULTURAL SCHEDULE

During the week of January 8-16, we rooted cuttings of 20 plants per cultivar, with the exception of two experimentals from Proven

Figure 1. Cultivar evaluation ranked according to overall rating.

Series	Cultivar	Source	Flower #	Flower Quality	Vegetative Vigor & Habit	Overall
Pinwheel	Purple	Bodger	5.0	4.5	4.5	4.5
Symphony	Lemon	PW	5.0	5.0	3.0	4.3
Symphony	Vanilla	PW	4.5	4.0	3.5	4.3
Symphony	Orange	PW	4.3	5.0	3.5	4.3
Trial Material	IN47	PW	5.0	5.0	3.0	4.0
Pinwheel	White Eye	Bodger	5.0	4.3	5.0	4.0
Side Series	Seaside	Ecke	5.0	3.8	5.0	4.0
Experimental	V77-9B-3C	Ecke	4.5	4.5	3.8	4.0
Symphony	Cream	PW	4.3	4.9	3.0	4.0
N/A	'Iringa'	Ecke	3.8	4.5	3.0	4.0
Margarita	Maria	Fides	3.8	4.0	5.0	4.0
Trial Material	IN46	PW	4.5	4.0	2.5	3.9
Cape Daisy	Malindi	Ecke	4.0	3.5	4.3	3.8
N/A	'Kalanga'	Ecke	3.8	3.8	3.8	3.8
Margarita	Carmen	Fides	3.5	3.5	4.5	3.8
N/A	'Volta Impr.'	Ecke	3.3	5.0	2.8	3.8
N/A	'Nairobi Impr.'	Ecke	3.8	5.0	2.8	3.5
Margarita	Rosita	Fides	2.5	3.5	3.5	3.5
Soprano	Light Purple	PW	3.3	3.0	3.5	3.4
Cape Daisy	Nasinga Cream	Ecke	3.8	3.3	4.0	3.3
Experimental	201089	Ecke	3.8	4.0	2.8	3.0
Soprano	Purple	PW	2.9	2.9	3.3	2.9
Soprano	White	PW	2.8	2.8	3.5	2.9
Symphony	Peach	PW	3.5	2.5	2.5	2.8
N/A	'Bamba'	Ecke	2.8	2.5	2.3	2.8
Side Series	Riverside	Ecke	3.0	3.8	2.0	2.5

Rating scale 1-5 (1 = poor, 5 = excellent). The ratings were performed on 4/29/04, and the photos were taken on 5/3/04. Proven Winners material was supplied by Four Star Greenhouses.

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Figure 2. Consumer evaluations.

Series	Cultivar	Source	Overall Average
Soprano	Purple	PW	4.3
N/A	'Nairobi Impr.'	Ecke	4.3
Symphony	Orange	PW	4.1
Symphony	Lemon	PW	4.1
N/A	'Iringa'	Ecke	4.1
Side Series	Seaside	Ecke	4.0
Experimental	V77-9B-3C	Ecke	4.0
Side Series	Riverside	Ecke	4.0
N/A	'Volta Impr.'	Ecke	4.0
N/A	'Kalanga'	Ecke	3.9
Margarita	Carmen	Fides	3.9
Trial Material	IN47	PW	3.9
Pinwheel	Purple	Bodger	3.8
Trial Material	IN46	PW	3.8
Cape Daisy	Malindi	Ecke	3.8
Pinwheel	White Eye	Bodger	3.8
Soprano	White	PW	3.7
Symphony	Cream	PW	3.7
Symphony	Peach	PW	3.5
Soprano	Light Purple	PW	3.4
Margarita	Rosita	Fides	3.4
Experimental	201089	Ecke	3.4
Margarita	Maria	Fides	3.4
Symphony	Vanilla	PW	3.1
N/A	'Bamba'	Ecke	2.9
Cape Daisy	Nasinga Cream	Ecke	2.1

Rating Scale 1-5 (1 = poor, 5 = excellent). Ratings are based on evaluations performed by Master Gardeners on 4/22/04 - 4/27/04. Proven Winners material was supplied by Four Star Greenhouses.

Winners. Liners were then transplanted into 4½-inch pots. Our potting media was MetroMix 360, and the greenhouse temperature remained at 72° F day/night. On February 12, we pinched plants to 5-6 nodes. Cold vernalization initiated on February 26 with day/night temperatures of 46° F. On April 8, cold temperatures ended, and warm temperatures of 65° F days and 55° F nights were maintained through the end of the trial. On April 19 cultivars with no vernalization requirement (or minimal vernalization needs)

Figure 3. Average plant height.

Series	Cultivar	Source	Average Height (in)
Cape Daisy	Nasinga Cream	Ecke	7.5
Pinwheel	White Eye	Bodger	7.6
Pinwheel	Purple	Bodge	7.7
Margarita	Maria	Fides	7.8
Side Series	Seaside	Ecke	8.2
N/A	'Nairobi Impr.'	Ecke	8.3
Margarita	Carmen	Fides	8.6
Cape Daisy	Malindi	Ecke	8.7
Trial Material	IN47	PW	9.0
Soprano	Light Purple	PW	9.0
Side Series	Riverside	Ecke	9.6
N/A	'Volta Impr.'	Ecke	9.7
N/A	'Iringa'	Ecke	9.7
Trial Material	IN46	PW	9.8
N/A	'Kalanga'	Ecke	9.9
Soprano	White	PW	10.0
Symphony	Vanilla	PW	10.4
Symphony	Lemon	PW	10.5
Symphony	Orange	PW	10.8
Symphony	Cream	PW	10.9
Symphony	Peach	PW	11.2
Soprano	Purple	PW	11.6
Experimental	V77-9B-3C	Ecke	11.6
Experimental	201089	Ecke	13.0
N/A	'Bamba'	Ecke	13.2
Margarita	Rosita	Fides	14.0

Height was measured on greenhouse grown plants from the top of flowers on 5/3/04 at peak flowering. Proven Winners material was supplied by Four Star Greenhouses.

were at peak flower. During the weeks of April 27 through May 2, a majority of cultivars were at peak flower (vernalization-requiring cultivars).

For fertilization, we used Greencare 17-5-17 at 200 ppm nitrogen, three times per week. Two disease problems arose during the trial. Pythium root rot was detected on some plants in late January. Plants were then drenched with Plant Shield (BioWorks) at the maximum rate on January 28 as a preventative measure for further problems. In

mid-April, Botrytis was detected, and treatment with Heritage (Syngenta) took place on April 23. For this cultivar evaluation, no growth regulators were used. This provided a good indicator of the natural growth habit of each cultivar.

EVALUATIONS

Four evaluations, using specific criteria, were made to judge the performance of each plant. The first was plant height to top of flowers (see Figure 3, left), which was measured on May 3.

During the second evaluation, the main cultivar evaluation (see Figure 1, page 66) was performed by the trials leader and trials coordinator. This evaluation was taken on April 29, when the majority of cultivars were at peak flowering.

Evaluation criteria ratings were based on a scale of 1-5: 1 = poor/not acceptable, 2 = fair, 3 = good, 4 = very good and 5 = excellent. Plants were evaluated for the following characteristics:

- flower number;
- flower quality: flower aesthetics, color, health and appearance;
- vegetative/foilage quality: plant habit, plant vigor, leaf color, health and appearance of vegetative portion of plants; and
- overall: overall rating for all plants in the grouping, taking the above aspects into consideration.

The consumer preference evaluation (see Figure 2, left) was the third evaluation. It was performed by our annuals team of Master Gardeners on April 22-27. Plants were given an overall rating of 1-5 based on personal preference.

In the fourth evaluation — flowering before cold vernalization, seen in Figure 4, right — we recorded the number of plants with flower buds and open flowers on February 2, just two weeks after transplant. The open flowers were subsequently removed. All plants in the trial were pinched



Left: 'Seaside'. Middle: Trial beds. Right: 'Symphony Cream'.

10 days later on February 12 according to the cultural schedule guidelines. The data presented in Figure 4 reflects those entries that require minimal or no vernalization treatment; however, all entries did receive the six-week prescribed vernalization period.

RESULTS

The top entries, those with an overall ranking of above 4.0, in the cultivar evaluation as rated by the trials leader and trials coordinator at the time of peak flower were: 'Pinwheel Purple', 'Symphony Lemon', 'Symphony Vanilla' and 'Symphony Orange'. Also performing well, and all tied with a ranking of 4.0, were IN47, 'Pinwheel White Eye', 'Seaside', Exp. V77-9B-3C, 'Symphony Cream', 'Iringa' and 'Margarita Maria'.

The top five entries (with an overall ranking of above 4.0) in the consumer evaluation were 'Soprano Purple', 'Nairobi Improved', 'Symphony Orange', 'Symphony Lemon' and 'Iringa'. Also performing well, with a rating of 4.0, was 'Seaside' and Exp. V77-9B-3C. Note that both 'Symphony Lemon' and 'Symphony Orange' were top finishers in both evaluations.

Figure 4. Flowering before cold vernalization.

Series	Cultivar	Source	Total no. of plants	No. of plants w/ flower buds (no open flowers)	No. of plants w/ open flowers	Percent plants with buds and/or open flowers
Margarita	Carmen	Fides	20	1	0	5
Margarita	Maria	Fides	20	0	0	0
Margarita	Rosita	Fides	20	0	0	0
Trial Material	IN46	PW	12	2	4	50
Trial Material	IN47	PW	6	0	5	83
Soprano	White	PW	20	8	12	100
Soprano	Purple	PW	20	3	17	100
Soprano	Light Purple	PW	20	14	6	100
Symphony	Cream	PW	20	5	9	70
Symphony	Lemon	PW	20	3	9	60
Symphony	Orange	PW	20	5	7	60
Symphony	Peach	PW	20	1	12	65
Symphony	Vanilla	PW	20	2	9	55

Data was recorded on 2/2/04, two weeks after transplant and 10 days before pinch. Proven Winners material was supplied by Four Star Greenhouses.

COMMENTS

Each year, we receive an increasing number of entries with little or no cold vernalization requirement. This year, the following entries had plants in bud and/or with open flower on February 2, just two weeks after transplant and 10 days before plants were pinched. At

the end of the trial, these entries were all at peak bloom two weeks sooner than vernalization-requiring cultivars. Soprano series (three cultivars — White, Light Purple and Purple), Symphony series (five cultivars — Cream, Lemon, Orange, Peach and Vanilla) and experimentals IN46 and IN47. ♦

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Figure 4. continued.

Series	Cultivar	Source	Total no. of plants	No. of plants w/ flower buds (no open flowers)	No. of plants w/ open flowers	Percent plants with buds and/or open flowers
Experimental	V77-9B-3C	Ecke	20	0	0	0
Experimental	201089	Ecke	20	0	0	0
N/A	'Bamba'	Ecke	20	0	0	0
N/A	'Iringa'	Ecke	20	0	0	0
N/A	'Kalanga'	Ecke	20	0	0	0
Cape Daisy	Malindi	Ecke	20	0	0	0
N/A	'Nairobi Impr.'	Ecke	20	0	0	0
Cape Daisy	Nasinga Cream	Ecke	20	0	0	0
N/A	'Volta Impr.'	Ecke	20	0	0	0
Side Series	Riverside	Ecke	20	0	0	0
Side Series	Seaside	Ecke	20	0	0	0
Pinwheel	Purple	Bodger	20	0	0	0
Pinwheel	White Eye	Bodger	20	0	0	0

Data was recorded on 2/2/04, two weeks after transplant and 10 days before pinch. Proven Winners material was supplied by Four Star Greenhouses.

Since no growth regulators are used in this trial, it is always interesting to observe natural plant heights. Final plant heights almost doubled from the shortest entry, 'Cape Daisy Nasinga Cream' (7½ inches) to 'Margarita

Rosita' (14 inches). Entries all finishing off below 8 inches were 'Cape Daisy Nasinga Cream', 'Pinwheel White Eye', 'Pinwheel Purple' and 'Margarita Maria'. 

Monica Kmetz-González is research associate/trials coordinator and Claudio Pasian is associate professor in the Department of Horticulture and Crop Science at The Ohio State University, Columbus, Ohio. They can be reached by E-mail at pasian.1@osu.edu.

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