

# Judging the Seed Varieties

*From breeding breakthroughs to new colors, find out the best of the seed varieties from the 2005 California Pack Trials.*

By Carrie Burns, Catherine Evans and Bridget White

**A**lthough we didn't devote as much space to the seed varieties as last month's vegetative ones (only because there aren't as many to cover), don't assume that means there wasn't excitement on the seed front at this year's Pack Trials. We saw everything from improvements on standards to first-ever introductions. The following 15 introductions represent what we think were the real standouts from one of the best years for seed in a long time. We couldn't, however, hope to cover all the worthy introductions, so if you are looking for anything in particular, chances are it's out there, just contact your favorite broker or breeder.

## Breeding Breakthroughs

The following four varieties, mostly from one company, were not only show stoppers they promise significant improvements in their species. Having so many genuine novelties just illustrates what a great year it was for seed.

### ANGELONIA

One of three first-ever introductions this year from PanAmerican Seeds, the Serena series is the first angelonia from seed to come to market. We've seen angelonia increase in popularity over the past few years, and a seed variety will be a welcome addition that can turn this expensive crop into a garden staple. Serena is a compact angelonia, much like its AngelMist cousin, reaching a full garden height of 10-12 inches. It branches well to fill out 4-inch pots with only one plant or larger pots with multiple plants. Like other angelonias, the Serena series loves heat and takes humidity well. It is available in Lavender, Lavender Pink, Purple, White and Mix.

Serena needs a well-drained soilless medium with a pH of 5.5-6.2 and a medium initial nutrient charge. Night temperatures should be maintained at 64-66° F and days at 66-75° F. Temperatures below 64° F will slow down the crop growth. Serena requires very high light and needs to be fed weekly with 200-ppm nitrogen in a complete fertilizer. Do not pinch Serena. It has good natural basal branching. Pinching will delay flowering and make the plant habit unattractive, but a tank mix of B-Nine and Cycocel is effective. Growth regulators can be started two weeks after transplanting.

### AQUILEGIA

*Aquilegia vulgaris* Clementine from Kieft Seeds is not your typical columbine. Sure it is a hardy perennial with delicate, colorful flowers and clover-shaped foliage, but that's where the similarities stop. Clementine is a new generation of columbine that is not afraid to turn its face to the sun. Unlike other aquilegia, whose flowers seem to droop or face downward, Clementine's spurless, double flowers actually face upwards and bear a strong resemblance to clematis flowers, hence the name. Because it has so many flowers, Clementine makes a great container plant, or you can simply market it with the other

perennials. This is a refined plant that works best in 5- to 6-inch pots. Available in White, Rose, Red, Blue, Dark Purple and Formula Mix.

Clementine requires a well-drained and lightly fertilized media with a pH of 6.0-6.5. Be aware that Clementine does need vernalization; plants are ready to receive vernalization at 12-14 true leaves. Cycocel in weekly treatments, depending on climate, is recommended. Watch for leafburn in high sunlight. Forcing Clementine is possible only after visible new growth following over-wintering. Clementine needs a cold period (+50° F) of at least 12 weeks for flower induction. Part of Kieft's Prime Perennial Collection Group II, Clementine is supplied as TunedSeeds, which provide easy germination and emergence in the plug tray.

### DIASCIA

The second of PanAmerican's first-ever introductions for 2005, Diamonte is the first seed diascia on the market. Diamonte has a nice, mounded habit and is covered with small flowers when in bloom. It works well in a premium pack or small pot and sells well alongside pansies. Final garden height is 12-14 inches. Premium packs at one plant per pot will take a total of 10-12 weeks from sowing to finish, and 4-inch to 1-gal. will take 11-13 weeks. Available in Coral Rose, Apricot and Lavender Pink.

Night temperatures should be maintained at 50-60° F and days at 60-66° F; Diamonte will not tolerate warm temperatures. Maintain light levels as high as possible, and avoid excessive watering, without allowing plants to wilt. Fertilize with 200 ppm nitrogen once a week, alternating between 15-5-15 and 20-10-20 type fertilizers. Supplement with iron if needed. Do not withhold nitrogen as the crop comes into flower; plants quickly become pale at a low EC. Pinching is not needed, and Diamonte is generally disease free; however, watch for INSV and thrips.

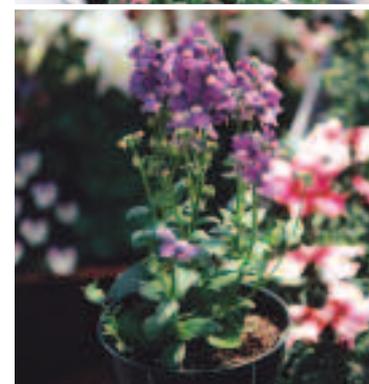
### NEMESIA

The last of PanAmerican's 2005 first-ever introductions, Poetry is the first seed-produced *Nemesia foetans* series on the market. It is another cool-season crop that will work well with pansies or in mixed containers. It has all the same benefits as PanAmerican's other new seed offerings — affordability, more format options and wider marketability. Poetry is available in the standard nemesia colors of pink, blue and white and should perform in much the same way as vegetative nemesias. Premium packs at one plant per cell will take a total of 9-11 weeks from sowing to finish, and 4-inch to 1-gal. will take 10-12 weeks.

A well-drained media with a pH of 5.5-6.2 is recommended. Night temperatures should be maintained at 55-62° F and days at 62-68° F. Maintain light levels as high as possible while maintaining moderate temperatures. The higher the light, the faster the flowering and stronger the stem. Avoid excessive watering, but do not allow plants to wilt. Fertilize with 150-200 ppm nitrogen once a week, alternating between



Top: angelonia 'Serena White'. Bottom: aquilegia 'Clementine Rose'.



Top: diascia 'Diamonte Coral Rose'. Bottom: nemesia 'Poetry Blue'.

15-5-15 and 20-10-20 type fertilizers. Supplement with iron if needed. Maintain the media EC at 1.0-1.5. Poetry, when grown under cool temperatures with high light conditions, may not require any growth regulator and should not need to be pinched. While Poetry is generally disease free, it is susceptible to INSV and thrips.

## Best of the Trials

Even though they are not breeding breakthroughs, the following introductions were enough to attract a lot of attention at this year's Pack Trials and easily made our Best of the Trials list.

### CALLA LILY

We always look forward to the Golden State Bulb Growers (GSBG) visit during Pack Trials; since this company is focused on one particular crop, we are confident we will see the hottest new thing in calla lilies here, and this year didn't disappoint.

Out of GSBG's three Callaifornia Callas introductions this year, one really caught our eye. The mid-purple-colored 'Regal' is recommended for 6-inch production and as a cut flower but can work in 4-inch with enough growth regulator. Its foliage is solid medium-green and finishes best in cool weather. In its trials 'Regal' withstood 17-18 days in 48° F with no damage. Trials also showed that two applications of Bonzi will be needed in 4-inch production.

Culture requirements are similar to the rest of the Callaifornia Callas collection. As a potted crop, the medium should be well drained with a pH of 6.0-6.5 and have good air porosity. Optimal environment involves good air circulation, moderately high relative humidities and the highest possible light.

### CALENDULA

The calendula Zen series from American Takii is

not new for Takii, but it is new this year to the American market, having already been introduced in Europe and Asia. This exciting variety has extra-large, 3-inch, very-double flowers. These dwarf plants are compact, reaching only about 6-8 inches tall. They are leafy and work best in 1-gal. containers.

There are two colors in the series, Golden and Orange, and both are great for winter bedding in warmer climates. However, the plants do tend to stretch as temperatures warm into spring. Germination temperature is about 70-75° F with 8-10 days to emergence.

### CELOSIA

Celosia is making a comeback, and Kieft Seeds is leading the way with a complete new series. Icecream has a very compact habit that works great in premium packs or 3- to 4-inch production. The big attraction for this celosia, though, is that it is very basal branching, creating multiple large flower heads and lots of color. Icecream is early flowering and made up of seven colors: Strawberry, Mango, Orange, Peach, Cherry, Banana and a mix. Finishing time is 8-12 weeks.

Icecream is heat tolerant, thriving under temperatures of 68-71° F. Well-drained soil is recommended, with a pH of 5.5-6.0. After potting, grow on in short days — 12 hours for five weeks — to initiate flowering. The crop will be more compact uniform and finish approximately 1-2 weeks earlier than with long days.

### DIANTHUS

The dianthus Barbarini series from S&G Flowers was a nice new introduction for the 2005 Pack Trial list. One of two dianthus series introduced this year, Barbarini is a larger, perennial dianthus. The exciting part about this series is that it is first year flowering with no vernalization, so it really mixes the best of both annual and perennial varieties.

Because Barbarini is a compact series it does ▶



*Top: calla lily 'Regal'.  
Bottom: calendula 'Zen Golden'.*



*Top: celosia Ice Cream series. Bottom: dianthus 'Barbarini Rose'.*

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best in 4½-inch pots. This series should be programmed to flower from April to October, but like all perennial dianthus it does not have much heat tolerance. The one drawback of this series is that it does require long days to flower. There are six colors in the series, including Red, Purple, Rose, Lilac, Purple Picotee and Purple Bicolor.

### ECHINACEA

Echinacea 'Primadonna White' from Ernst Benary of America is a great new echinacea that has pure white petals around a dark eye and is slightly more compact than its cousin 'Primadonna Deep Rose'. This is an unusual look for echinaceas and makes a great presentation.

According to Benary, 'Primadonna White' has very good heat and drought tolerance. White has the same strong stems that make both the Primadonna varieties a versatile combination in the garden or a vase. This long-lived and durable perennial forms dense clumps that work best in a perennial garden or combination pots. Primadonna's daisy like flowers attract butterflies with blooms from mid summer until frost.

Germination is about 10-14 days at 68-72° F. The crop time for White is about 16-20 weeks from plugs and 18-24 weeks from sowing to flowering. If you plan to use it as a cut flower, vase life is about 7-12 days and stems can be stored up to one week at 36-45° F.

### PLATYCONDON

Sakata Seed America is adding platycondon 'Astra Semi-Double White' to the existing five colors in this series. This new variety is a continuous bloomer, and the semi-double flowers give a true balloon look. Semi-Double White works well in a pot or in the garden and requires no vernalization. Like the other colors in the series, it has a great habit that is compact, branches freely and remains uniform. The color is a nice clear white that really pops in the garden.

The Astra series is a consistent garden performer that thrives in full sun to part shade and is

a perennial in most areas. Astra is suitable for single-plant 4-inch production or 2-3 plants in 6-inch pots.

### PORTULACA

Bodger Seeds is introducing a new F1 portulaca series this year called Stopwatch, and it looks like quite an interesting series. Stopwatch was bred for pack performance and according to Bodger, is virtually day-length neutral. Stopwatch is early flowering, making it good for spring sales, even in the South. The difference between Sundial and Stopwatch, is that Stopwatch has a much more controlled habit, making it a nice and easier pack to grow.

This series is very heat tolerant and will grow about ½-½ the size of the Sundial series in the garden. According to Bodger, Stopwatch will remain open longer into the evening than most portulaca varieties, though the flowers will close when the light is low enough. This series comes in Cream, Orange, Rose, White, Yellow and Mix with more colors coming

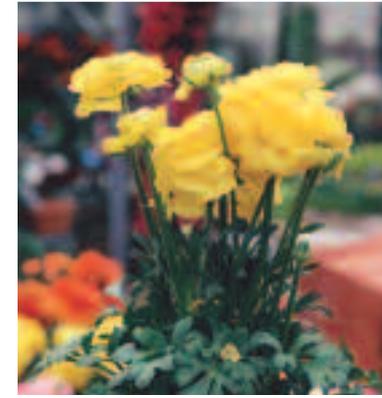
### RANUNCULUS

If you're not selling ranunculus, you're missing out. Even though this spring-flowering annual has a short bloom window it makes a spectacular display, with large, densely-petaled, brightly-colored flowers. The new Maché series from Goldsmith Seeds (shown during the Trials as Wizard) represents the first significant breeding work on this crop in years and should help it get some of the attention it deserves. Maché works best as a flowering potted crop sold early in the season and will be a great draw for winter-weary customers looking for color. It is available as a color mix and as pure yellow, the only true solid color on the market.

Temperatures below 60° F are recommended, because at temperatures above 70° F photosynthesis is disrupted, and the crop will stop actively growing. Irrigating with a constant liquid feed of calcium, potassium and phosphorus-based fertilizers is important. The critical day length to initiate



**Top:** echinacea 'Primadonna White'. **Bottom:** platycondon 'Astra White'.



**Top:** portulaca 'Stopwatch Yellow' **Bottom:** ranunculus 'Maché Yellow'.



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flowering is 13 hours. It is important to keep the young plants under short-day conditions to avoid premature flowering and tuber formation. Sowing no later than October will ensure that plants will bulk up under naturally short days. (See page 118 for more information.)

### VINCA

This year at Pack Trials, vinca was definitely the hot crop at Floranova, with two new series introduced: Sun Devil Extreme and Viper. The difference between the series is that the Viper series was bred as a landscape performer, and the Sun Devil Extreme series was bred for smaller containers and packs.

Viper is a F1 hybrid. It is a very vigorous grower that works best in 4½-inch or larger containers. The series has large, fully overlapping flowers that are early to flower, according to Floranova. It has good performance in sub-optimal conditions and can cope with hot and humid or cool night conditions with excellent disease tolerance, according to Floranova. Currently there are seven colors on the market: Apricot, Red with Eye, Pink, Purple, Red, Rose and Watermelon with more colors on the way.

Available exclusively from Michells in the United States is the Sun Devil Extreme series. It is compact with good basal branching for pack and 4-inch production. The plants have very large flowers, up to 150 percent the size of open pollinated varieties, according to Floranova. This series has great performance in very hot and humid conditions with good branching without stretching even when grown pack tight, according to Floranova. The Sun Devil Extreme series has 13 colors: Blush, Fuchsia, Lavender, Orchid, Peppermint, Purple, Red with Eye, Rose, Pink, Strawberry Red, Strawberry Twist, White and Mixed.



### ZINNA

Zowie, another new series from Goldsmith Seeds, is a great fully double, bicolor zinnia. It works well for consumers as a cut flower but can also be used as a season extender for a large-container summer program. It grows to 24-30 inches tall and has good branching that produces lots of flowers. It's color jumped out at us at the Trials, and we hope to see more colors soon.

Just like other zinnias, Zowie requires good air circulation and water management. Goldsmith advises watering early in the day to allow foliage to dry before nightfall. Media pH should be 5.5-5.8. Night temperatures should be maintained at 60-65° F and day temperatures at 70-85° F. High light is needed, as low light conditions will promote stretching. Crops finished under short days tend to exhibit a great number of single blooms. Long days will correct this situation. 



*Top to bottom: : vinca Sun Devil Extreme series; vinca Viper series; zinnia 'Zowie Yellow Flame'.*

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