



University of Florida



The Flower Fields' Diascia 'Sun Chimes Peach'

Nemesia and Diascia

Great crops for giving spring a kick.

By Rick Schoellhorn

Getting an early start on spring sales is critical to growers around the United States. The problem is finding plant material that can be grown under cool conditions, will flower under early spring short-day photoperiod, and has some tolerance of early spring outdoor conditions so that homeowners have a success to fuel the rest of their spring purchases. The two crops we are covering this month are perfect for just this portion of the season and also extending into summer for Northern production. Both nemesia and diascia are in the same family as snapdragons. So cool temperatures are fine for production, photoperiod doesn't appear to be an issue, and both groups of plants appear to be fairly frost-tolerant once hardened off. So here are a couple of easy-to-grow crops you may want to fit into your production and early spring retail orders to give spring sales a boost. Like calibrachoa, these crops are changing quickly and have a diverse genetic background, so consider this a primer on succeeding with two strong spring crops.

NEMESIA

Many years ago (dang, but I love being old enough to say that!), I used to grow a lot of nemesia from seed. We grew hybrids of *Nemesia strumosa*, a great cool-season annual with vivid and varied colors. This species was not frost-hardy, so it was used mostly in Southern California, where I grew up, as a winter annual. The color range in *N. strumosa* hybrids was and remains impressive, almost every color in the rainbow and a few bicolor forms only Maxfield Parish might appreciate.

While I definitely encourage you to try *Nemesia strumosa* as a seed annual (Check out Thompson & Morgan's hybrids 'KLM', 'Mello Red / White' and also Pan American's 'Sundrop Mix'), this month, I wanted to talk about some vegetatively produced nemesia species that are a lot more tolerant of temperature extremes. These are the relatively new nemesia cultivars sold as hybrids of *Nemesia foetans*, *N. pallida*, *N. capensis*, *N. fruticans* and *N. caerulea* (even the taxonomists are confused about some of these names so don't feel bad if you are too). The plants are sturdier, frost-tolerant and much more forgiving of warmer temperatures than the old-fashioned *N. strumosa* types.

There are a lot of excellent vegetative nemesia cultivars on the market, and under spring production conditions, they are all superior flowering plants for our spring market. The major differences between cultivars seem to be flower and plant size. I think you will also see a lot more development of these groups as their potential for early sales and their ease of production in minimally heated greenhouses becomes better-known.

Culture Quickie:

Nemesia and Diascia

Fertilization. Constant liquid feed at 100-150 ppm (avoid high ammonium nitrogen formulations) or moderate levels of slow-release are adequate. Both will benefit from additional calcium and magnesium.

Watering. Normal production irrigation is fine; try to keep plants on the dry side for best results.

Media. All commercial peat-lite media work fine; maintain a pH of 5.5-6.2; a high EC will reduce growth and leaf size so monitor throughout the crop.

Production Temperatures. Crops will grow well from 55-75° F. Below 50° F, growth slows, and plants bulk up. Note: plants are only tolerant of 32-34° F with prior hardening off; without hardening off, they will show severe damage.

Light level. Maintain 5,000-plus foot-candles; avoid low light as this will weaken stems, reduce flowering and reduce overall quality.

Propagation. All varieties are propagated by cuttings, which root in 7-14 days. Almost all are patented varieties.

Crop timing. Dependent on production temperature. Under minimal heat conditions (<50° F), crop times go up, but plant quality remains high. A 1-gallon takes 5-7 weeks from rooted liner; hanging baskets (three liners per), 8-10 weeks. Diascia has a slightly shorter crop time.

Flowering. Diascia shows no photoperiodic response in our trials and has flowered continually through the fall and into winter. Nemesia has been less likely to flower, but some cultivars have bloomed; flowering is restricted with cold (frost) nights.

PGRs. Use B-nine at 2,500 ppm. Some growers are using Bonzi at 30 ppm on vigorous cultivars. Also, many growers have luck with a Florel treatment on diascia at planting.

Notes: Avoid over-watering either of these crops; keep crops cool, with bright light, and fertilize with low-ammonium fertilizers to avoid weakened or soft growth.

Common problems: Most problems are from over-fertilizing that results in weakened growth and some bacterial problems, but in general, these are "no-brainer" crops — very easy. Under cold soil conditions, some growers report that nemesia foliage will yellow. Also, the researchers at NC State did work on specific nutrient responses for this crop, so check www.ces.ncsu.edu/floriculture/def/ for more details.



Proven Winners' Nemesia 'Compact Innocence'



Ball Horticulture's
Nemesia 'Aromatica Deep Blue'

Currently, the color range of these plant goes from white to pink, into lavender and deep or sky blue. While that color range is not bad, I'm hoping to see more happening with expanded colors in this great plant (it is all part of a plot to replace pansies as the premier winter annual). Some cultivars are sweetly fragrant, but more on that when our trials are completed.

Nemesia are cool-season crops here in the South, although their season expands into summer in the

Northern states. I was surprised to see 'Blue Bird' flowering in July in North Florida and surviving through an entire year in the Deep South, so there is potential for a longer season here as well. Main requirements for a good crop are: 150-200 ppm (low-ammonium nitrogen) fertilization, high light and some additional calcium and magnesium in early production. A micronutrient application can also improve crop quality. Avoid high temperatures and low light as these problems will reduce quality of the crop quickly. In early production, the plants can grow quite quickly; try B-Nine (2,500 ppm) to control growth.

DIASCIA

Diascia is a close relative of nemesia; both are members of the snapdragon family Scrophulariaceae. Diascia offers larger flowers, larger plants with a more open growth habit and colors ranging from scarlet through salmon and coral into pink.

Producing quality diascia follows the same guidelines as nemesia: Keep light levels high, calcium levels high and ammonium nitrogen levels low and apply micronutrients. Flowering on diascia is continuous, so an application of Florel (500 ppm) at planting can help even out the crop and improve plant size and uniformity before flowering begins. Some growers are still doing manual pinches to get the same results.

With diascia, you may want to bump fertility levels up to between 200-250 ppm to keep foliage color dark and to keep up with a generally faster crop. There is a lot of variability between cultivars on the market, from

very compact "dwarf" forms to some very large and vigorous basket types. Check with your distributor to get the growth habit that matches your production.

TRIALING RESULTS

The University of Florida is currently trialing 26 vegetative nemesia and diascia releases as winter landscape materials in Florida (see Figure 1, below). The trial is conducted in Florida, but you can see pictures and explanatory notes of the different cultivars every two weeks at www.hort.ifas.ufl.edu. So far, the trial has had 12 nights below 32° F, and all entries are still doing well, though some show a bit of frost burn. Flowering is reduced due to the frosts, but there are definite differences in foliage quantity and quality, especially in the diascia.

You may ask what value this has for Northern growers. My answer would be that this type of winter trialing gives growers across the United States the opportunity to learn about low-temperature risks for winter crops and also tells us a lot

Sources for nemesia and diascia cultivars

NEMESIA STRUMOSA:
Thompson & Morgan Seed
www.thompson-morgan.com
PanAmerican Seed
www.panamseed.com

VEGETATIVE NEMESIA CULTIVARS:
Ball FloraPlant
www.ballfloraplant.com
Proven Winners
www.provenwinners.com
The Flower Fields
www.theflowerfields.com

DIASCIA CULTIVARS:
Ball FloraPlant
www.ballfloraplant.com
Proven Winners
www.provenwinners.com
The Flower Fields
www.theflowerfields.com

Figure 1. Cultivars of nemesia and diascia on trial at the University of Florida's 2002 winter trials. Check out the trials on-line at www.hort.ifas.ufl.edu.

Genus	Supplier	Variety
Diascia	Proven Winners	Flying Colors Coral
Diascia	The Flower Fields	Peach Improved
Diascia	The Flower Fields	Coral
Diascia	Ball Floraplant	Whisper Salmon
		Red Improved
Diascia	Proven Winners	Flying Colors Antique Rose
Diascia	The Flower Fields	Blush Improved
Diascia	Ball Floraplant	Whisper Cranberry
Diascia	Ball Floraplant	Wink Pink
Diascia	Ball Floraplant	Wink Lavender
Diascia	Proven Winners	Flying Colors Apricot
Diascia	Ball Floraplant	Whisper Apricot
Diascia	Ball Floraplant	Wink Light Apricot
Nemesia	Proven Winners	Compact Innocence
Nemesia	Ball Floraplant	Aromatica White
Nemesia	Ball Floraplant	Aromatica Deep Blue
Nemesia	Proven Winners	Blue Bird
Nemesia	Proven Winners	Blue Lagoon
Nemesia	The Flower Fields	Blueberry Sachet
Nemesia	The Flower Fields	848/01
Nemesia	The Flower Fields	738/05
Nemesia	Proven Winners	Safari Pink
Nemesia	Ball Floraplant	Aromatica Light Pink
Nemesia	Ball Floraplant	Aromatica Rose Pink
Nemesia	Ball Floraplant	Aromatica Dark Lavender
Nemesia	Ball Floraplant	Aromatica Lavender
Nemesia	Proven Winners	Safari Plum

about photoperiodic responses during the short days of the winter season. As critical as photoperiod is turning out to be for specialty annuals in early-season production, this type of trialing can tell a grower a lot about how the plant will perform in the early spring greenhouse.

FOR THE FUTURE

So in general, these two crops can be grown pretty much the same, they offer an early-season jump-start to your flowering programs, and an extension of fall flowering programs in many areas of the United States. If you aren't growing them, you should be—they are easy, high-dol-

lar alternative to some of the traditional annuals grown in these seasons. Another plus to both nemesia and diascia is that they are also excellent for the mixed container and work well with a variety of component plants.

There are some blue-lavender forms of diascia available in Europe,

SOME DIASCIA TO LOOK FOR:
Wink and Whisper Series from Ball Floraplant. The Wink Series, with a smaller growth habit, includes Pink, Light Apricot and Lavender. Whisper Series is larger in stature and includes Salmon Red Improved, Cranberry and Apricot.
Flying Colors Series from Proven Winners. Coral, Trailing Antique Rose and Apricot. Also 'Little Charmer', 'Red Ace' and 'Coral Belle'.
Sun Chimes Series from the Flower Fields. Series includes Coral, Rose, Blush Pink, Trailing Rose, Trailing Red, Peach Improved and Blush Improved.

SOME NEMESIA TO LOOK FOR:
Sachet Series from The Flower Fields. Available in four colors — 'Vanilla Sachet', 'Blueberry Sachet', 'Peach Sachet' and 'Lavender Sachet'. Fragrant, mid-vigor.
'Innocence', 'Compact Innocence', 'Blue Bird', 'Blue Lagoon' and Safari Series from Proven Winners. Innocence (white) and Blue Bird (intense sky blue). Innocence has high vigor. Also look for Blue Lagoon (deep blue), 'Safari Pink' (bright pink) and 'Safari Plum' (deep lavender).
Aromatica Series from Ball Floraplant. This series pretty much spans the color range with 'Aromatica White', Deep Blue, Light Pink, Rose Pink, Dark Lavender and Lavender. Fragrant, mid- to high-vigor.

so be on the lookout for some new colors in the next few years. Also, a lot of new variegated varieties are showing up in Europe. Variegated nemesia is also out there, so soon we'll be able to combine the cool-season color of these two crops with some foliage interest as well. I think we are only scratching the surface of the genetic potential of these plants and will be seeing a lot of development in the next few years. **GPN**

Rick Schoellhorn is associate professor of floriculture at the University of Florida. He can be reached by phone at (352) 392-1831 or E-mail at rksch@ifas.ufl.edu.



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