

Contents

DIGGER

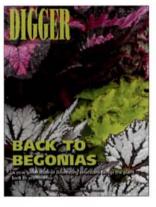
April 2012 Vol. 56 No. 4

COLUMNS

- 7 President's Message
- 15 What I'm Hearing
- 41 Growing Knowledge
- 46 Director's Desk

DEPARTMENTS

- 8 Calendar
- 10 Northwest News
- 17 Member Profile
- 37 Classifieds
- 39 Subscription Info
- 45 Digger Marketplace



Cover: Some begonias are known more for flowering and others, more for foliage. The Shadow King™ line belongs in the latter category, including (top to bottom) Rothko, Green Envy and Moonlight. All three are new introductions for 2012 by PlantSmith in Scotts Mills, Ore. For more on begonias, see the article starting on Page 24. Photo by Curt Kipp. This Page: Another Shadow King™ selection grown at PlantSmith is Strawberry Lime. Photo by Curt Kipp.



Printed in Oregon on domestic recycled paper when available.



23 BACK TO BEGONIAS

A new generation of interesting selections brings the plant back to prominence.

17 TRULY CONNECTED

McKenzie River Nursery, east of Springfield, thrives based on strong relationships with its customers.

21 DRAWING ON INGENUITY

Bizon Nursery creates an innovative, scalable water recapture and storage system.

33 PIPED-IN NUTRITION

Greenhouse growers can use fertigation to apply water and fertilizers to their crops at the same time.

Other Features

15 VERTICAL GARDENING IS LOOKING UP

The vertical gardening trend is still strong, and there certainly were some good examples at two recent garden shows.

41 THE DOWNSIDE OF COMBINATION FUNGICIDES

Pre-packaged fungicide mixes can elevate the risk of developing pathogens that are resistant to treatment.





'Golden Picotee' is a tuberous, trailing begonia with gorgeous blooms that radiate from a golden center to hot pink edges.

By Elizabeth Petersen

By the time Dan Heims left college in the 1970s, he had collected almost 300 begonias. Begonias were favored as houseplants then, and many "flower children" nurtured rex and angel-wing begonias on windowsills.

Times changed, and the botanical clock swung away from begonias for a while. But now, begonias are back.

Heims and other breeders have selected and rolled out a new generation of begonias with exotic, almost psychedelic foliage or bushels of brilliant flowers for shade gardens, patio containers and hanging baskets. Many perform as windowsill plants, and some take sun, too.

"Begonias are back in the mainstream as garden, container and houseplants," Heims said.

Wide world of begonias

It is easy to be confused about begonias, since the diverse genus *Begonia* includes some 1,500 species — and loads of crosses — worldwide.

Grown from tubers, rhizomes or seeds, the looks are as varied as the native reaches, and breeders have been mixing and matching in efforts to improve the habits and ease of care for both grower and gardener.

Heims' breeding program at Terra Nova Nurseries in Canby, Ore. has produced tropical begonias that have flashy foliage, tougher constitutions



Bonfire begonias are bred by Tesselaar Plants and sold in several colors, including the original orange. Yoshitomi Bros. Inc., a nursery in West Linn, Ore. is among the growers selling this trailing variety.

and wider uses.

Ball Horticultural has been instrumental in bringing out new begonia varieties. Retail Business Manager Bill Calkins said, "The demand for colorful options for less sunny locations is definitely on the rise. Begonias offer an impact of color and texture for landscapes."

Ball breeds for plants with unique flowers, striking foliage, low maintenance needs and versatility, Calkins said. "New introductions fit the ways gardeners are designing now. You can find begonias for baskets, specimens, large landscape fillers, containers or standard bedding."

For fabulous foliage

Foliage begonias are back. Ball views the trend as "begoniamania," said Katie Rotella of Ball



Marketing Communications. Ball believes that the new varieties will "wow" gardeners and designers.

Gryphon (Begonia × hybrida), a Fantastic Foliage™ selection from Ball breeding company PanAmerican Seed, "helped begonias get back into the mainstream," Heims said. "It is a gateway plant that opened consumers' eyes to the benefits of begonias."

Suggested as a "thriller" to create a bold accent in a mixed container, Gryphon provides both color and texture, Rotella said. It also boasts drought tolerance, vigor and size.

"We've had great feedback. Gryphon is very low-maintenance and economical. Just a small input can grow very large in one season," Rotella said. Gryphon is also appropriate for indoor applications, including malls and lobbies.

In Oregon, Tanasacres Nursery is growing Gryphon this year.

The new introductions from Terra Nova Nursery resemble rex begonias, but are stronger and more versatile, Heims said. They fit right into a current gardening trend that blurs the line between indoors and outdoors.

There have also been inroads in hardiness. Both 'Metallic Mist' and 'Silver Splendor' from TNN are hardy in the Pacific Northwest, and more new varieties are coming.

Rex begonia breeder Gary Crook of PlantSmith in Scotts Mills, Ore. focuses on getting begonias to finish quickly, grow easily and perform well in the Pacific Northwest. Selections must be "stronger, prettier, and easier to grow."

Older rex begonias need rather

warm greenhouse conditions and low light, but Crook's varieties grow at 62 F day and night. "You can save 30 percent on the heating bill," he said.

Crook starts plants from leaf wedges, which produce roots in four weeks, shoots in six weeks and are ready to transplant from 72-cell size in fourteen weeks.

Although rex begonias make great houseplants, "the biggest market is outdoors," Crook said. "There aren't a lot of plants that will flourish in full shade."

Demand for Crook's liners is good, 50 percent higher than last year.

PlantSmith offers several crosses named for Oregon cities, and others have been launched by GreenFuse Botanicals, including the Shadow King™ series.

27 ▶

At your service: Over twenty North American production facilities Meet your production team

It's not just our great products that help ensure your success; it's what goes along with them. At Sun Gro, we believe that consistently delivering a quality growing mix is a given. But our production team takes it a step further. These dedicated professionals employ sophisticated monitoring systems and perform more

than 100 quality checks to ensure your mix meets exacting standards. You don't just get a mix from us, you get an ingredient for success that you can rely on. Sun Gro Horticulture – Solutions

for Growers.



- Committed Employees
- Proven Science





Hubbard, OR 800-842-3256

Seba Beach, AB 888-797-7328

Sacramento, CA 800-222-2551 Santa Maria, CA 805-348-1923



It isn't hard to get growers to talk about plants. The tough part is getting them to narrow down their list of favorites to just a handful. Here are some of the varieties our sources recommended:

Ann Detweiler Fry Road Nursery Albany, Ore.



Barkos hiemalis begonia (Begonia 'Barkos') — This flowering begonia has such deep, dark red blooms that they practically glow. A picture can't do it justice. The growth habit is compact,

but vigorous, making it ideal for a 6-inch pot or a basket. It can be used as a summer annual or as a floral house plant.



Heart-of-Jesus fuchsoides begonia (Begonia fuchsioides 'Red' or 'Pink') — This shrubby begonia comes in pink or red, flowers year round, and can be used indoors or out. It is quick to finish and bloom.

Growing to about 1–2 feet high, it easily can be shaped to keep it bushy.



Begonia × tuberhybrida 'Illumination® Golden Picotee' — 'Golden Picotee' marks the return of the earlier B. × t. 'Show Angels' bicolor-type trailing tuberous begonias. It is much, much brighter than its predecessor, B. ×

t. 'Illumination® Peaches 'n Cream'. It's easy to care for, with season-long, self-cleaning blooms. It looks arresting when paired in a basket with B. \times t. 'Nonstop® Fire'.



Iron cross rex begonia (Begonia masoniana)

— This begonia boasts surreally puckered, variegated leaves that beg to be touched even though they look almost thorny. The plant looks better and better over

time, producing lots of leaves from the crown without becoming rangy and heading off in one direction. It is a striking accent for a dish garden or tropical container garden, and can be used as a house plant or a summer annual. Reaches 1 foot tall.

Dan Heims Terra Nova Nurseries Canby, Ore.



Begonia 'Benitochiba'
—Self-branching and
shrubby, this plant defies
classification, having the
appeal of a Rex, but the
shape and toughness of
a shrub-type begonia.
This begonia has very

cool, rose-metallic leaves

in a palmate arrangement. It blooms with pink flowers in the fall and winter. 'Benitochiba' works well as a houseplant and as a patio plant. It tolerates cooler temperatures than rex begonias. When used outside, it needs shade and good drainage. Reaches 24 inches tall and 18 inches wide.



Begonia 'Curly
Fireflush' — Dramatic
spiraled leaves highlight
this hybrid begonia.
Accenting the spiral is
a red-haired edge and
center contrasting nicely
with the deep green

leaves. 'Curly Fireflush' keeps its foliage all winter and blooms with pearl white flowers, which turn pink in the fall and winter. It enjoys humidity. This begonia is ideal for use as a houseplant, in mixed containers, or in summer borders in east exposure part sun. It reaches 18 inches tall and 24 inches wide.



Begonia 'Fireworks'

 Deep metallic, paisley purple bands encircle an iridescent silver-white center that is undeniably striking. Great pink flowers add to the appeal. This plant did especially well in our display

gardens in amended garden soil. It is not as picky as a rex, and shows great vigor. Upright habit. Reaches 18 inches tall.



Begonia 'Metallic Mist'

— 'Metallic Mist' displays heavily silvered, maple-like leaves on a Zone 7 hardy begonia. It vigorously grows to form a striking 16-inch tall specimen. Pink flowers in late summer extend the show.

It won an American Begonia Society Distinctive Hybrid Award in 2008.

Jon Venzke F & B Farms and Nursery Woodburn, Ore.



Rieger begonia (Begonia × hiemalis)

— Rieger Begonias are a great plant for potted indoor sales. The fully double flowers bloom a long time providing good shelf life and hold up well in the home. They prefer

a warm shaded area for production. They are long day or stress responsive to set blooms. There is one series that is sun tolerant, Solenia. The Solenia have gained popularity in the home landscape or container gardens.



Panorama begonias (Begonia × tuberhybrida) —

Panorama begonias are a tuberous begonia suitable for hanging baskets and containers. Panoramas have a cascading habit and are easier to ship then

the pendulous type. With 3-inch blooms and uniform habit, they make quite a show. They reach 9–10 inches in height.



Begonia × benariensis
'Big Begonia' — This
is a large landscape
begonia. With a height of
24 inches or better and
2–3-inch blooms, these
are truly big begonias.
They are quick to grow for
the grower and provide

summer long beauty in the landscape. These are sun loving beauties. The only downside is there are only three colors: red with green leaves, red with bronze leaves and rose with bronze leaves.

New Shadow King additions for 2012 include 'Rothko,' the most striking of the series with rich, red and black rounded leaves; 'Moonlight,' with silver/ white foliage that shines brightly in shaded areas; and, 'Green Envy,' with unique leaf shape and bright chartreuse color. All are PPAF.

Ann Detweiler of Fry Road Nursery in Albany, Ore. said sales of rex-type begonias have been steady. "I often incorporate rex in mixed dish gardens or shady patio containers as a way to get customers hooked on the benefits of color from foliage instead of color from flowers."

She likes the Great American Cities™ series and the "eternally intriguing" Iron Cross (*B. masoniana*, native to China).

Flower power

Flowering begonias are back too.
Jon Venzke, grower for F&B
Farms and Nursery in Woodburn,
Ore. has worked with begonias for
decades. Tuberous begonias, long
popular for hanging baskets, are longday plants. This can create problems
for growers, he said.

To minimize the risk of plants shutting down and trying to produce tubers, Venzke recommended starting from larger cells and planting later in the season.

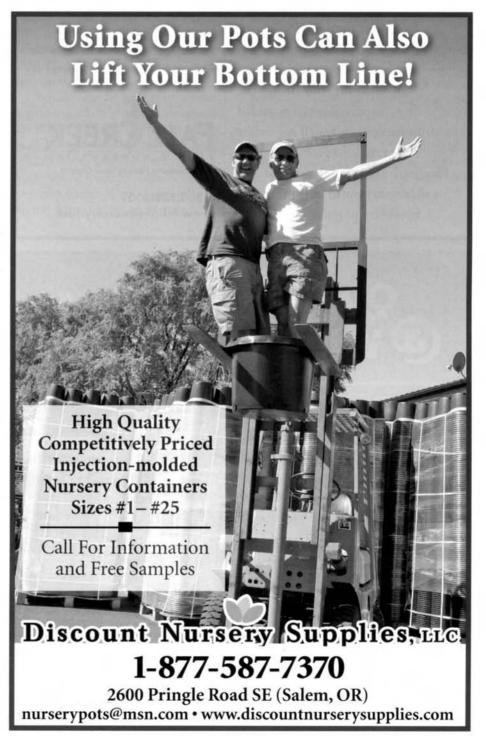
F&B currently produces Nonstop® and Nonstop Mocca® for larger plants; Venzke purchases them in 72-cell size.

Both series boast fully double, fourinch flowers and Mocca selections have rich, chocolate-colored foliage.

F&B is adding the tuberous
Panorama™ from Benary to its basket
program this year. Plants have a somewhat pendulous habit and loads of
3-inch blooms, so they make a nice full
basket, Venzke said.

At Fry Road Nursery, tuberous begonias have always sold well, Detweiler said. "They have good impulse appeal throughout the summer and good staying power for custom-







Extend Their Season. Extend Your Profits.

Blueberry varieties come in early, mid and late fruiting seasons from June through September.

Make sure your nursery carries selections for a full season of ripening for your customers.

They'll appreciate the extended fruit harvest and you'll appreciate the extended profit potential.

Blueberries are in high demand. Let us show you how to maximize your blueberry program and profits.

50 Varieties

Includes some just-released varieties!

Liners ® 31/2" Pots ® Liter Pots Advantage™ Cell Grown Transplants #1 Containers ® Grower Support



1.800.538.3001 www.fallcreeknursery.com

Quality Bark Dust @ Wholesale Prices

Fir Bark Dust • Hemlock • Sawdust Compost • Hog Fuel • Fines

Marr Bros. Bark Dust has been serving the area with quality products and competitive pricing for over 30 years. And we deliver anywhere in the Willamette Valley!

When you want the best ... Marr Bros. is your only choice!

Call 503-838-1830 to schedule a delivery





ers over the entire season. They make a more indestructible hanging basket since they just keep pumping out blooms. They don't collapse immediately if allowed to dry out and are largely self-cleaning," she said.

Detweiler also likes the Mocca series, "The dark foliage makes the flower color pop. Plants are a little tighter in habit than Nonstop," she said.

Trailing begonias

Some exciting begonia options come in the form of trailing *B. boliviensis*. The sun-tolerant, tuberous species has angelwing foliage and exotic, bright, fuchsia-like flowers on arching stems. Plants can weather some drought.

Yoshitomi Brothers, a wholesale grower in West Linn, Ore. is promoting the Bonfire® series, introduced by Tesselaar Plants and available from Selecta, and the Million Kisses® series from Ball Horticultural.

"There has been a tremendous amount of breeding with the *boliviensis* types," said Yoshitomi production manager Dan Bamberger. "We have increased production greatly, since there is much bigger demand for premium begonias and they make great baskets."

"The Bonfire series has been a shot in the arm for the industry over the last ten years," Heims said. Plants root well, come into bloom quickly and boast masses of flowers for large pots and baskets from late spring to late fall. Neat, spreading plants are undemanding and produce drama in full sun or part shade.

"B. boliviensis has been a growing market for breeders and liner producers," Venzke said. Several Bonfire selections are available, including the original Orange and Scarlet, both with semi-trailing habits and green foliage, and Choc Pink and Choc Red, both with more mounding habits and luscious chocolate foliage.

Million Kisses begonias boast good branching and many early, large flowers. Plants flower ten to fourteen days faster than the competition, so growers can start later and reduce bench time.

Coming this spring are 'Amour,' said to be the most vigorous variety yet, with deep red flowers and dark foliage and 'Santa Cruz sunset,' an adaptable selection that can take heat, humidity and direct sun. Both are Ball Seed exclusive selections, available as unrooted cuttings or rooted liners.

The new Sherbet Bon Bon from Ball is more upright than Million Kisses and produces double yellow flowers. Bamberger predicts it will be popular.

Options for large-scale landscapes

Wax or fibrous begonias (B. semperflorens), grown from seed, provide commercial landscapers "a lot of bang for the buck," Bamberger said. They take full sun to part shade and hold up well in the landscape. The downside for growers is that they are slow.

"It's a shame wax begonias are considered a cheap annual, because growing them is a lengthy process, up to six months from seed to finished plants. They should be worth more," Bamberger said.

Jon Venzke of F&B Farms concurs. "Wax begonias are tough and resilient, handling most any thing the summer brings, but they are slower to size up for a grower than most annuals."

Venzke said he has "played with purchasing a larger plug tray such as a 128 or 144 cell, and the timing works much better. However, for most plug producers this would be a custom order. We now simply acknowledge that they take longer to produce and commit the space for the extra time."

Demand has been on the rise in recent years, Venzke said, probably due to increased variety and "great improvements in fibrous begonia breeding in the last ten years." Plants are larger and quicker. Varieties like the BIG® series from Benary® come in both bronze and green leaf.

"They will not hold in a smaller 4-inch pot and have a shorter sales window, but they do make nice gallon pots," Venzke said. New intermediate size varieties such as Benary's 'Party Scarlet' may help growers time the crop with other annuals.

 $Big^{\text{\tiny{IM}}}$ begonias (B. × benariensis) claim the best vigor and branching of the landscape begonias. Large, threeinch flowers produce a show from early spring to late fall. Plants, which adapt

30 ▶





If you have a greenhouse, look no further than T&R!

- · Ground covers · Shade cloths
- Weed barriers
 Plastic films
- Fans
- · Frost cloths

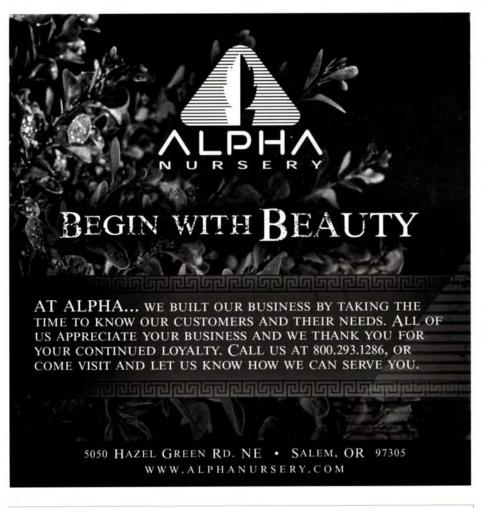
· Hanging baskets

Let our knowledgeable staff help you find just the right solution for your greenhouse requirements. Count on T&R for quality products, timely

deliveries and expert assistance.

Call our greenhouse specialist Alan White at 503-758-8535 www.trlcompany.com

Northwest Facility - Toll Free: 888-981-1727 2830 Progress Way, Woodburn, Oregon 97071





Continued excellence from our family owned company for over 30 years

WOOD'S ROOTING COMPOUND

Our unique formula uses only the highest quality ingredients which results in instant absorption of both IBA & NAA to your cuttings.

3 Convenient Sizes:

4 oz. / Pint / Gallon

Call Today For A Distributor Near You 503-678-1216



P.O. Box 327 Wilsonville, OR 97070 www.earthscienceproducts.com



to many climates and soils, can take sun or shade and are two weeks earlier than competing varieties.

Ball Horticultural contributed the Whopper series, big, vigorous landscape plants with excellent heat tolerance. Whopper Red with bronze leaf is a new variety with a lower, rounded habit.

Dragon Wing[™], a new full, arching angelwing begonia from PanAmerican/Ball, produces big blooms and tolerates heat, humidity and cool conditions in baskets, containers and landscapes. Easy to grow from pelleted seed, crop time from seeding to sale is 16 weeks for a 10-in basket.

Improved selections

Rieger or Hiemalis begonias have been used as houseplants since the '80s, but newer, improved varieties have spurred increased use in the landscape, Venzke said.

Although most are shade-loving basket types, some, such as Solenia from Oglevee, finish faster, resist mildew, take full sun and produce a long season of bloom in a range of colors.

Detweiler likes Solenia begonias, too. "They provide much more concentrated flower power over the top of the plant like a fibrous but with the big, double form of a tuberous," she said. "The Solenias we've tried have performed really well: nice, even habit and blooms that don't go brown over the top when spent."

Elizabeth Petersen writes for gardeners and garden businesses, coaches students and writers, and tends a one-acre garden in West Linn, Ore. She can be reached at gardenwrite@comcast.net.

Notes: The largest collection of begonias in the U.S. is the Begonia Species Bank at the Fort Worth Botanic Garden.

Terra Nova begonias are not currently available from the nursery, but the patented selections are available from other labs and growers.