

GROWERTALKS

Cover Story

8/1/2023

Nursery Breeding Breakthroughs

Matthew Chappell

Innovation is critical to our industry and in the last 10 years the speed of innovation in ornamental plant breeding has been quite astonishing. Both public (university), private (business) and citizen breeders continue to churn out fantastic new cultivars. COVID seriously shifted what we market/sell, but as the pandemic era winds down, the result is that plant breeders and branding programs can get back into the swing of a more traditional course of introductions into the marketplace.

In speaking to many of the people making decisions on what new genetics to bring to the market, it's apparent that there's a real backlog of impressive new cultivars out there. It's also apparent that we've entered a period of rapid advancement due to a nerdy genetic term: gene stacking. You see, breeders and branding companies seek out innovation constantly in the form of new traits controlled by the cultivar's genetics.

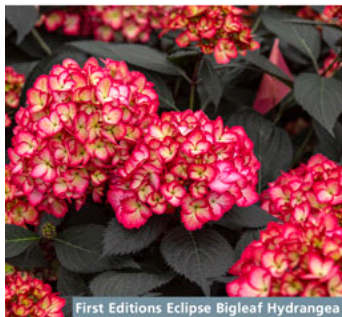
For example, remontant (reblooming hydrangea) was one of the bigger innovations, in terms of increasing profitability, across our industry over the last 25 years. Others in hydrangea included the introduction of *Hydrangea serrata* x *H. macrophylla* hybrids that led to reduced flagging. Then there was the introduction of purple foliage. Stacking these genes and refining the details (selecting for other minor, yet important, traits) has led us to the point where breeders are altering phenotypes (how a cultivar looks) tremendously in very short time periods. You'll notice this in these new woody/subshrub introductions that should be available at retail between this fall and mid-2024.



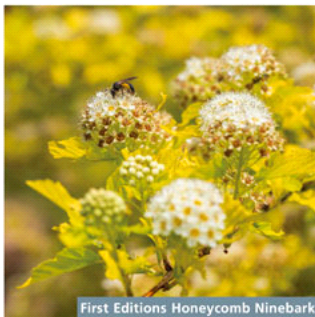
Garden Gems Amethyst Redbud Tree



Easy Bee-zy Knock Out Rose



First Editions Eclipse Bigleaf Hydrangea



First Editions Honeycomb Ninebark

First Editions Eclipse Bigleaf Hydrangea (Bailey Nurseries)

This ranks as my top hydrangea that's due to hit the retail market in 2024. Eclipse is the darkest purple foliage bigleaf hydrangea I've seen. Its intense, dark purple foliage holds its color, even in warm climates (a lot of purple-foliage hydrangeas fade down south).

The striking foliage, paired with gorgeous dark purple or cranberry-colored blooms, will make a big impact at retail, in the garden and in a decorative container. Eclipse is a grower-friendly plant that offers excellent mildew and Cercospora resistance, holds up well in a garden center, and is a standout in the landscape with a max size of 3 to 5 ft. (rounded).

First Editions Honeycomb Ninebark (Bailey Nurseries)

Here's another new cultivar for '24 that's a tried-and-true species (*Physocarpus opulifolius*) for more northern areas (Zones 3 to 7), but with large, vibrant, chartreuse leaves that don't scald or fade, even in full sun. Honeycomb-shaped white flowers (loved by many pollinator species) appear in spring and contrast nicely with the foliage, which turns shades of gold in the fall. Honeycomb can be easily shaped with pruning or left to grow naturally. This ninebark grows nicely in containers and is just as attractive in the landscape. The medium size makes for a beautiful hedge or color block along a fence line.

Red Sentinel Maple (J. Frank Schmidt)

This is a cultivar I've been waiting for, as I've seen it several times at J. Frank Schmidt in recent years and it's consistently impressive. True to its name, Red Sentinel maple (*Acer rubrum*) presents the best and brightest combination of columnar form and fiery red fall color I've seen. New for 2024, the JFS folks have been watching this beauty grow and mature since the day it caught their eye in a seed bed more than 15 years ago.

Though similar in shape to the very popular Armstrong Gold Maple, it offers bright red fall color rather than the golden-orange autumn tones of its near-twin. Medium green, Anthracnose-resistant leaves are tri-lobed and cast dense shade. A dominant central leader and dense branching form a narrow, tightly fastigate canopy. Perfectly suited for street tree plantings, parks and tight urban spaces, Red Sentinel reaches a height and spread of approximately 40 ft. x 10 ft. and is hardy to Zone 5.

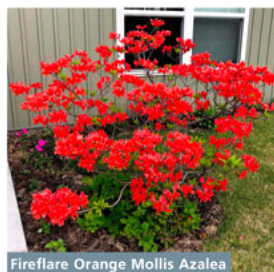
Red Sky Holly (PDSI/Sothorn Living Plant Collection)

Breeders have worked diligently to add some spice to the good-ol' "green meatball" foundation/structural taxa that our industry relies on, but quite frankly, are about as sexy as I am in a Speedo (there's a scary thought). In the case of holly, and specifically columnar hollies, Sky Pencil was the standard for a couple of decades, but it was simply a green machine for our industry that didn't hold up too well to snow/ice loads or even torrential rains.

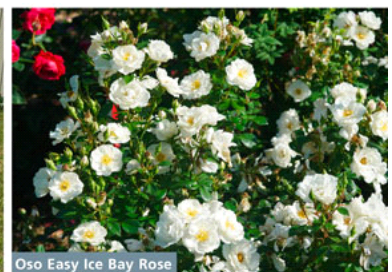
Red Sky Holly aims to change that by: first, being more resilient to weather, and second, by adding vibrant color to the home landscape with its reddish-bronze new growth and black berries. Red Sky thrives in Zones 6 to 9 in full sun to partial shade, maturing to 8 ft. in height with a 3 ft. spread.

Pinky Winky Prime Hydrangea (Spring Meadow/Proven Winners)

Here's another example of large strides made on a really good cultivar (being the original Pinky Winky) of *Hydrangea paniculata*. Improving on the original Pinky Winky, Pinky Winky Prime boasts noticeably larger and fuller blooms that age to a much richer (dare I say hot) pink. The large, pointed panicles emerge pure white and then gradually transform to a saturated pink starting from the bottom and moving to the tip. This gives a really impressive bicolor appearance that looks pretty snazzy, especially in mass plantings. Hardy across Zones 3 to 8, this is a 6- to 9-ft. rounded shrub with sturdy stems that hold up well to weather (when in bloom).



Fireflare Orange Mollis Azalea



Oso Easy Ice Bay Rose



Red Sky Holly



Double take Eternal White Chaenomeles

Oso Easy Ice Bay Rose (Spring Meadow/Proven Winners)

I've gotta admit, the Oso Easy series of roses is growing on me and Oso Easy Ice Bay pulls together a few really good traits. Foliage is a nice dark green and seems tolerant of black spot and other foliar pathogens, which really allows the white blooms to pop. It blooms all summer, despite having the biggest push of blooms in cooler spring and fall periods. Hardy across Zones 3 to 9, it's a nice tidy size of about 3 ft. (rounded habit) that lends well to mass plantings or as a border in a perennial bed. Overall, a great little new cultivar.

Double Take Eternal White Chaenomeles (Spring Meadow/Proven Winners)

Chaenomeles speciosa, in the late 1800s into the early 1900s, was one of the more popular shrubs in the southern U.S. and could also be found less frequently across New England (although it suffered bud damage due to late cold snaps). As the popularity of other taxa increased, it dropped off the radar. But more recent breeding efforts have reduced plant size and eliminated thorns, creating a resurgence in the popularity of the species.

New cultivars such as Double Take Eternal White have added much longer bloom periods (from early spring on and off, all summer into fall). In the case of Double Take Eternal White, it has the longest bloom period on the market currently. Large, white doubled flower clusters on a lower, wider growing habit create an excellent spring presentation that carries forward throughout the summer. Hardy from Zones 5 to 9, it has a mature size of 4 ft. in height with a 5-ft. spread.

Garden Gems Amethyst Redbud Tree (Star Roses & Plants)

The epicenter of the redbud breeding world has (as of late) been North Carolina State University and Garden Gems Amethyst Redbud improves quite a bit on the purple-foliage redbud front. Garden Gems Amethyst holds a dark purple foliage very well without fading or scorching in full sun, even in Zones 8 to 9.

Additionally, shorter internode spacing leads to a more compact appearance (without sacrificing on growth rate to a mature height of 10 ft.), and it's easy to maintain a central leader on this tree in production and in the landscape. Overall, this is what many folks have been looking for when it comes to purple foliage redbud cultivars and represents an exciting advancement.



Easy Bee-zy Knock Out Rose (Star Roses & Plants)

Many reblooming yellow rose cultivars have come and gone over the years, and none have really knocked my socks off. But the newest addition to the Knock Out family of roses has me very excited. Easy Bee-zy Knock Out seems to solve an issue with yellow-flowering reblooming roses—poor vigor (particularly in production). When it comes to yellow rebloomers, it's got flower power like no other with fragrant yellow

flowers that bloom repeatedly from spring to frost. For those who got to Cultivate this year, you hopefully got to see this up close and it's sure to make a splash in the market next year.

Fireflare Orange Mollis Azalea (North Dakota State Univ. & Mountain Shadow Nursery)

Fireflare (*Rhododendron xkosteranum* 'FireDak') is an NDSU selection that has proven to be one of the most adaptable deciduous azalea with tolerance to high pH, clay soils and hardy to Zone 3b to 8B. (WOW! Everything an azalea shouldn't be!)

The shrub is a dense, compact semi-dwarf with height of 4 ft. and width of 5 ft. after 40 years of trials. Fireflare Orange is smaller in size than any of the Lights cultivar series with very showy, brilliant fire-orange flowers. Plants in

bloom are truly an eye-stopper. Plants grow well under part shade (25% to 50%). This selection is pH-tolerant with no exhibition of chlorosis symptoms. Fall leaf coloration is usually quite good, typically occurring in October (Zone 4), including yellow orange to reddish-purple fall foliage color. This one is a hidden gem, but if you're a grower looking for material, microcuttings are available from Mountain Shadow Nursery in Washington. **GT**

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