

Today's Euphorbia:

A New Breed



The latest introductions in this family take euphorbia from a holiday crop to a year-round moneymaker.

By Rick Schoellhorn

By consistently improving varieties, plant breeders have been able to refine and reinvent some species. These old standbys have been transformed from troublemakers to industry sweethearts, from plants no one wanted to grow to ones they can't keep in stock. To show the potential of these emerging crops, *GPN* is running a 6-part series detailing each crop's transformation and some tips for success.

January: Lobelia
February: Penstemon
March: Euphorbia
April: Salvia
May: Hellebores
June: Phlox hybrids

Growers are always looking for the next breakthrough in crops, something that brings a new look, and a new price point, to their businesses. Once you have been in the industry long enough, you begin to see that certain breakthroughs are simply the recycling of crops that were once popular and then faded from the consumer's eye. Of course, some breakthroughs are just that — a true exploration of new crops. Recycling crops is easier because the information is already out there on how to grow these plants. Breaking new ground in crop diversity is a bit more complicated because there are a lot of unknowns, and let's face it, unknowns scare people; they wait to try the truly new plants until the kinks are worked out of production. Sadly, those who wait also miss the chance to make the higher price points that a truly new crop offers.

The discovery and marketing of new species in the genus euphorbia include a bit of both plant-introduction models: recycling the old and inventing the new. Basic production information for euphorbia is available in the form of poinsettia production guidelines, but the new species and hybrids making their way into the market are much simpler to produce than our traditional holiday crop. Better yet, they have a wider market season and should offer wholesalers and retailers a chance to make money on the crop rather than just maintaining cash flow. So, as we look at some of the



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promising new euphorbs (slang for euphorbia) remember the basics are the same, the uses and markets are a lot less limited.

Varieties To Watch

The family euphorbiaceae is a huge family and awesomely diverse; there is so much out there to work with, and we are seeing just the tip of the iceberg on the market so far. The family is tough, with great performance under hot and dry conditions, and some species do quite well under cooler conditions. Experiment with what you can find, and you'll see the potential for market expansion.

Euphorbia amygdaloides (and its hybrids) also are growing in popularity, despite their name. They are easy crops for the grower and homeowner to succeed with. The highlight here is the foliage and texture of the plant. Depending on the hybrid, leaves may be gray, deep purple, or tricolor white, green and pink.

Cooler production temperatures enhance foliage color and high temperatures reduce the impact of the foliage tone. This group is quite cold tolerant and usually rosettes from fall to winter, emerging in spring with luxurious foliage followed in late summer by distinctive "flowers" that are actually cup-shaped bracts with rather insignificant cyathia (true flowers). All in all, the flowering is spectacular for texture and adds a bit of otherworldly sci-fi to any garden.

My personal favorite is *Euphorbia cotinifolia* (cotinifolia refers to the plant's resemblance to *Cotinus sp.* or smoke bush). This plant is still a bit of a rarity on the market but really amazing for use in hot, dry climates where the burgundy foliage intensifies with heat rather than fades as it does with so many woody crops. It is not frost hardy but has excellent growth

'Diamond Frost' (top left) and 'Dolce Rosa' (top right) have redefined what euphorbias can look like, but even the more common spruce-types (bottom) are great, unexpected additions to mixed containers. (Photos courtesy of Proven Winners, Rick Schoellhorn and Skagit Gardens, respectively)

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and performance in hot, humid and hot, dry locations. Inner foliage may turn bronze to gold as the plant grows, giving a luminescent quality you won't find elsewhere.

Euphorbia fulgens, the plume euphorbia, is an old standard in the cut flower industry and is now rarely seen in the United States. The arching stems literally are covered with small, intense, red, orange, yellow or white blooms. This plant deserves some more attention and would be a great drought-hardy addition to mixed containers.

Don't forget crown of thorns (*E. milii*) and giant crown of thorns (*Euphorbia x lomi*); both are outstanding architecturally and for flower color. Slow, they are easily grown and spectacular when in flower. Best flowering is under short-day conditions, but they often continue well into summer with bicolor, salmon, red, pink and yellow bracts.

Pushing The Definition

Of all the great new euphorbia on the market, two really stand out as completely different from anything else currently available.

'**Diamond Frost**'. The release of euphorbia 'Diamond Frost' (*Euphorbia hypericifolia*, recently reclassified as *Chamaesyce hypericifolia*) from Proven Winners opens a new market on the use of euphorbia as a bedding plant. This hybrid is ever-blooming and requires no photoperiodic manipulation. In form and texture, it resembles baby's breath (*Gypsophila*) and works equally well in mixed containers or monoculture 4-inch pots or hanging baskets. As with all euphorbia, it is drought and heat tolerant, but it also is tolerant of cool early season conditions. For best performance, 'Diamond Frost' requires high light levels, so it should be kept in the warmer, brighter portions of the greenhouse. Gauging by the responses

Crops To Watch

Proven Winners

www.provenwinners.com
'Diamond Frost'

Ecke Ranch through the Ball Centennial Collection

www.ecke.com
'Dolce Rosa'

Skagit Gardens

www.skagitgardens.com
'First Blush'

Terra Nova

www.terranovanurseries.com
'Golden Glory'



Top: 'Kalipso'. Bottom: 'First Blush'. (Photos courtesy of Proven Winners and Skagit Gardens, respectively)

from trial gardens around the United States, 'Diamond Frost' has a continental appeal and uniformly strong performance from Canada to the Southern U.S.

To date 'Diamond Frost' is the only euphorbia of its type on the market in the United States. In Europe, the genus has a longer history, and though this crop does not offer a lot of color variation, a pink form is floating out there somewhere as a diamond in the rough; perhaps in the future we'll see more from this genus.

'Dulce Rosa'. Part of the Ball Centennial collection, this intergeneric hybrid with poinsettia is barely recognizable as the standard holiday plant. It has long, thin bracts of shocking pink and a very un-poinsettia-like presentation. This kind of breeding innovation (Ecke Ranch) could possibly be the bridge many of us have been looking for that will expand the poinsettia into spring markets. 'Dulce Rosa' is a beautiful addition to spring offerings but easily lost in holiday poinsettia production. The plant will make a big impact in Mother's Day and Easter sales, if we can convince growers to be brave and produce it at those times.

'Dulce Rosa' is photoperiodic, forming bracts under short day conditions, which makes it a great early season crop. It looks weird as a poinsettia but great as a bedding plant grouped together in masses. It is sure to make a unique statement in spring sales, very popular in consumer trials and definitely worth trying.

Culture Tips

With the exception of day length, culture is similar for most euphorbias. Specific culture follows, but the main items to watch are light and watering. If you give plants bright light and low water, you shouldn't have any problems.

Light: High light is a requirement. These are usually desert-type plants, so the brighter the light the better

Temperature: Give warm production temperatures and avoid chilling except where noted in text. Typical guidelines are 65° F nights and 75-80° F days.

Watering: In all cases, the quickest way to kill this crop is to overwater, especially under cool conditions. Always use low moisture levels and allow to dry between waterings.

Fertility: Like poinsettias, a higher fertility range of balanced fertilizer will work best. A good starting point is moderate to high fertility levels.

Humidity: Remember, these are typically desert plants; they like moderate to low humidity levels.

Soil: Always use a well-drained media to prevent overwatering and make sure there is plenty of air around the roots.

Pests and problems: Most varieties do not have lots of pest problems. The most common are root rots from overwatering, aphids and mealybugs.

Growth regulators: In most cases, no growth regulators are required.

Uses: Since there is such a wide range of plant material, euphorbias can be used in most container formats: mixed containers, 4- and 6-inch containers, and hanging baskets.

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Bonzi® tip of the month

Bonzi On Petunias

Petunias are a very important crop grown in packs, 4-inch, 6-inch, gallons and basket production. Also, petunias have a very wide range of growth habits, from very trailing to upright and from low vigor to very fast growing. So, the use of Bonzi on petunias will vary considerably depending on the variety and container size.

All petunias have the potential of stretching and growing together if grown close together or with higher irrigation and fertilization. Petunias also may be the best example of a crop where flower size and time of flowering can be affected by growth regulators. To protect against both of these situations it is important to use Bonzi early in the crop to prevent plants from growing too much before flowering. Then, if late applications are needed, Bonzi should be applied as a drench to containers 6 inches and larger.

Except possibly with the lowest vigor varieties, Bonzi use on petunias should start with the plugs and liners to produce a compact, strong plant prior to transplanting. Different style plugs can be produced for different containers. Plugs of low vigor varieties to be used in baskets require less Bonzi so they will fill out quicker, but plugs going into packs or 4-inch containers benefit from more Bonzi to slow growth after transplanting. This strategy makes it easier to produce the desired finished plant with less Bonzi and less risk of affecting flowering.

The most difficult petunias are the trailing vigorous seed and vegetative varieties like the popular 'Wave' varieties. Even in baskets, gallons and 6-inch, these varieties benefit from Bonzi prior to transplanting, and the last applications can be made 1-5 days prior to transplanting. These varieties often benefit from an application either as a spray or a drench 1-3 weeks after transplanting. As the crop develops and reaches final desired size, a Bonzi drench will keep the plants tighter and hold them at a marketable size longer. This approach with vigorous petunias reduces the need for cutting plants back and results in a shorter crop time. Additionally it can help maintain plant quality while holding in a retail environment.

Users should trial Bonzi to determine the optimum use rates and frequency of application in their own situation. For plugs and liners, start trials of Bonzi sprays at 5-10 ppm. In final containers start with rates of 15-45 ppm for sprays and 1 ppm for drench applications. The optimum amount of Bonzi will vary considerably with production temperatures and may be twice as high in May and June compared to in January and February.



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