

Warm Climate Production Guidelines for *Hardy Hibiscus*

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Hardy Hibiscus – *H. moscheutos*



***Hibiscus x 'Blue River'* – Is an older cultivar noted for its 10" white flowers. Photo by Dr. Rick Schoellhorn.**

Having had a big interest in these plants for many years, it is great to see so much activity in both seed and vegetative improvements to the "Hardy" Hibiscus. Most growers will identify with the Disco Belle series that basically took over the market about 20 years ago and has had little competition since. Connoisseur's of the Hibiscus will know about some of the great species forms floating around in industry, and for those of you who have no idea what I am talking about we'll do a little history and get you caught up...

The only good thing to come out of the "disco" movement was the release of the Disco Belle Series of seed produced hybrids of *Hibiscus moscheutos*. Disco Belles grabbed the American gardeners attention in the same way the aliens did; with big (12" blooms) flashy colors, and a feeling of success for doing very little. In garden plants these qualities are good, and the Disco Belle series of Hibiscus was a great series.

In the history of this crop we can't forget the Fleming Brothers in Nebraska who did much of the regional breeding for this crop. Their contributions include Fleming Hybrids™ such as Kopper King, Plum Crazy, Old Yella, Fireball, Crown Jewels, Robert Fleming and Torchy.

What's New in the industry?

The Vintage lines of Hardy hibiscus were unveiled at the Ohio Florist's Association conference this summer, and there is some great new genetics here. The Vintage line is composed of the Carafe & Splash series from Yoder/Green Leaf Perennials, bred by Mark Smith. All these plants are compact compared to species with compact growth habit and greatly improved branching. The Carafe Series is about 3' tall with three colors Bordeaux (Deep pink-red), Chablis (Pure white), and Grenache (Pure pink). The Splash series, with two colors Pinot Noir (Red), Pinot Grigio (Light Blush) is the most compact release at 2-3' mature height and, again, great branching. The plants are supplied only a rooted liner and are not dormant but vigorously growing materials so the bench time for the crop is significantly reduced. Major improvements in vegetative crop growth habit and flowering!

The Luna series from PanAmerican is a great 2003 seed grown release with two colors, red and a blush (white with pale pink edges and overlay). The Luna series is extremely compact (2-3' mature height), uniform and has a slightly lighter green foliage than some of the old fashioned types. For seed production this is a big improvement over the Disco Belles.

Don't forget the species of Hibiscus that are less common, but no less impressive. Recently *H. acetosella* has become popular as a foliage color annual in plantings around the U.S., but here are plenty of great perennials as well. *H. grandiflora* is a native species of the southeastern United States and has rich fuzzy gray green leaves on a plant that reaches up to 15' in height. Salt tolerant, this species also grows in brackish water directly in the

tidal zones. Flowers of *H. grandiflora* are about 8-10" across and a clear soft pink. *H. coccineus*, the Swamp or Marsh Mallow, is most commonly a clear red color with petals that don't overlap, but the range of forms and closely related species will vary a lot. If you are looking for native plant species to grow and plants with a cross over to water gardening the Marshmallows are a great crop. *H. mutabilis* is an old fashioned garden plant of the southern US that goes by the name of Confederate Rose. This very upright, tree-like species produces 6-8" double blooms that open white and fade to pink. While a woody perennial in the south this species still makes a very striking annual for northern gardens. A sub-form of this species *H. mutabilis* 'Rubra' is a smaller stature plant (usually 4-6') with single intense deep pink to carmine blooms.



Hibiscus coccineus - a native Florida plant, is commonly referred to as Marsh Mallow. Photo by Dr. Rick Schoellhorn.

Whether you are looking at new hybrids, old hybrids, or species the main thing to remember with the hardy hibiscus is high light and generous spacing. Control stretch and growth by reducing fertility and watering as well as using plant growth regulators. You can sell everyone of these plants that has a flower on it, but customer satisfaction depends on how good a job you did producing a strong plant during the container phases of production. These plants are tough, dramatic, and hardy over most of the United States, but rarely are grown at high quality due to their speed of growth and vigor. Most people discover their first hardy Hibiscus in someone

else's yard because the plant has enough room to reach its full potential. Containers in retail nurseries are often small and stashed away in the shrub section rather than out where their color can really help to move the material. It is a market that good growers can make a lot of money at and average growers can usually sell everything they grow. Hardy Hibiscus are the perfect centerpiece plants in large mixed containers, and makes awesome specimen containers as well. The bigger the container the bigger the impact they make. The biggest problem with these plants is their vigor and tendency to stretch (in a big way!) when crowded or grown under lower light levels.

Commercial Production guidelines for Hardy Hibiscus

Fertilization – This is a crop where you may want to pay special attention to fertility. Too much and you'll be overgrown, too little and you'll have yellow foliage, but in general 150 ppm Nitrogen is usually sufficient.

Watering – Normal production irrigation is fine, again the finer your control of watering the better your control of height. Never let plants wilt as they will lose lower leaves and reduce overall quality.

Media – All commercial peat lite media work fine, pH optimum 5.5 to 6.3 for most cultivars.

Production Temperatures – Temperatures of 65-68F night and 75-85F daytime temperatures are adequate. Cooler temperatures as flowers color up will also give deeper color to the blooms.

Light level – High light (5,000+) foot candles or over 1000 $\mu\text{mol m}^{-2} \text{ s}^{-1}$, low light levels result in weaker, stretched stems. Try to establish plants at higher light levels as well as many growers start plants in shaded location then move them to the full sun and leaves scorch. The tougher the plants you are selling are the better they will hold up in retail.

Propagation – Patented varieties aside, these hibiscus root like weeds, but it takes some time to develop a strong liner for pre-finished use. Semi-hardwood to softwood cuttings are used for developing liners. Many set copious amounts of seed that is easily germinated.

Crop timing – Generally, forced hibiscus as a pre-finished crop takes 11 to 14 weeks. There is a lot of variability between the different cultivars.

Growth regulators – PGRs should be applied when there are 3-5 sets of unfolding leaves. Daminozide has been the traditional PGR of choice and rates range between 2500-5000 ppm. If you are familiar with tank mixes with chlormequat chloride try adding 500 ppm to strengthen the effect. Daminozide may delay flowering from 7-10 days depending on conditions.

Flowering – When plants reach flowering size and buds first begin to show color, drop temperatures to 55N/65F day to increase the coloration of the flowers. In general, first color is about 2-3 weeks before sale.



The Luna Series from PanAmerican Seed is a popular seed produced line of hybrids seen in this image at Van Wingerden Nursery in North Carolina. Photo courtesy of PanAmerican Seed.

Stem elongation can become a problem later in the crop. Paclobutrazol can also be used as a spray or drench but there isn't a lot of information out on rates. For sprays look at 45-60 ppm and for drenches start at < 1 ppm and repeat as needed. Hardy Hibiscus is not particularly sensitive to sprays

of paclobutrazol but VERY sensitive to drenches with this product. So use care when drenching.

The safest bet is a late drench as plants reach salable size. Sprays with any PGR late in production can cause flowers not to elongate, so in most cases weak drenches will provide more control without affecting flowering. Extremely vigorous cultivars may need repeated applications, and, in most cases, repeated "toning applications" will give the best looking plants.



Hibiscus x 'Lady Baltimore' reaches 3-4' in height and pink blooms are seen in spring to early summer. Photo by Dr. Rick Schoellhorn.

Commercial Sources for Hardy Hibiscus:

Yoder Brothers <http://www.yoder.com>
 PanAmerican <http://www.panamseed.com>
 RobRick Nursery <http://www.robrick.com>

Species listing hosted by Hibiscus enthusiasts:
<http://home.att.net/~SHA-IV/>

Hibiscus Hut - great photo section and website with great info. Some different hybrids but this specialty hardy hibiscus supplier, due to the death of one of the owners, is no longer selling plants:

<http://www.hibiscus-hut.com>

Fleming Brothers Website:
<http://www.flemingsflowerfields.com>

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Table 1: Hardy Hibiscus Cultivars

Cultivar	Color	Habit	Vigor	Primary Prop	Supplier
Disco Belle Series	Single - Cerise red, Blush, Pink (a sport of the blush), White.	Upright	med	Seed	Various
H. grandiflora	Single - Light Pink	Very Upright	high	Cutting	
H. mutabilis	Double white, fading to pink	Very Upright	High	Cutting	
H. mutabilis 'Rubra'	Single - Deep pink - cerise	Upright	Med	Cutting	RobRick
Lord Baltimore	Single - Deep cerise - red	Upright	High	Cutting	RobRick
Lady Baltimore	Single – Bright Pink, deep pink center	Mounding upright	Med	Cutting	many
Old Yella	Single – Cream, red center	Upright	Med	Cutting	many
Blue River II	Single – pure White	Mounding upright	Med	Cutting	many
H. coccineus	Single – Red	Upright	High	Seed/Cutting	many
Vintage/ Carafe Series ^{PPAF}	Single – Bordeaux (Deep pink-red), Chablis (Pure white), Grenache (Pure pink).	Compact	Med	Cutting	Yoder Brothers /Greenleaf
Vintage/ Splash Series ^{PPAF}	Single – Pinot Noir (Red), Pinot Grigio (Light Blush)	Compact	Med	Cutting	Yoder Brothers /Greenleaf
Luna Series ^{PPAF}	Single – Red, Blush	Compact	Med	Seed	PanAmerican
Anne Arundel	Single – rosy pink	Upright	Med	Cutting	many
Southern Belle Series	Red, Blush, White, Pink	Upright	Med	Seed	many
Fantasia	Single – deep ruffled pink	Mounding upright	Med	Cutting	many
Giant Maroon	Single – Deep lavender	Mounding upright	Med	Cutting	Many
Kopper King	Single – pale pink with darker veins, red center	Upright	Med	Cutting	Many
Rio Grande	Single- Solid Red	Upright	High	Cutting	Many
Moi Grande	Single - Pink	Upright	High	Cutting	Many