

Warm Climate Production Guidelines for Hardy Hibiscus¹

Dr. Rick Schoellhorn and Alexis A. Richardson²

Hardy Hibiscus – *H. moscheutos*



Figure 1. *Hibiscus* x Blue River is an older cultivar noted for its 10-inch white flowers. Credits: Photo by Dr. Rick Schoellhorn.

Having had a big interest in these plants for many years, I'm pleased 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. Connoisseurs of the hibiscus will know about some of the great species forms floating around in the

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...

Arguably the best 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 gardener's attention in the same way the aliens did; with big (12-inch) blooms, flashy colors, and their capacity to amply reward small effort. 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 Florists' Association conference this summer, and there is some great new genetics here. The Vintage line is composed of the 'Carafe' and 'Splash' series from Yoder/Green Leaf Perennials, bred by Mark Smith. All these plants are

1. This document is ENH 994, one of a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date November 11, 2004. Please visit the EDIS web site at <http://edis.ifas.ufl.edu>.
2. Rick Shoellhorn, associate professor, commercial floriculture specialist; Alexis A. Richardson, contributing writer; Environmental Horticulture Department, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.

compact compared to species with compact growth habit and greatly improved branching. The 'Carafe' series is about 3 feet tall with three colors -- 'Bordeaux' (Deep pink-red), 'Chablis' (Pure white), and 'Grenache' (Pure pink). The 'Splash' series, with two colors -- 'Pinot Noir' (Red) and 'Pinot Grigio' (Light Blush) -- is the most compact release. It is 2 to 3 feet tall at maturity, and it has 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 uniform and extremely compact (2- to 3-foot mature height) with foliage of slightly lighter green 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 there 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 feet in height. Salt tolerant, this species also grows in brackish water directly in the tidal zones. Flowers of *H. grandiflora* are about 8-10 inches 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 crossover to water gardening, the 'Marsh Mallows' 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- to 8-inch double blooms that open white and fade to pink. A woody perennial in the south, this species also makes a very striking annual for northern gardens. A sub-form of this species, *H. mutabilis* 'Rubra,' is a smaller stature plant (usually 4- to 6-feet) with single, intense, deep-pink to carmine blooms.



Figure 2. *Hibiscus coccineus* - a native Florida plant, is commonly referred to as Marsh Mallow. Credits: 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 and by using plant growth regulators. You can sell every one 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 they 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 they make 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 when grown under lower light levels.

Commercial Production Guidelines for Hardy Hibiscus

Fertilization – You may want to pay special attention to fertilization of this crop. 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 that will reduce their overall quality.

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

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

Light level – Grow hardy hibiscus at a 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' practice of starting plants in shaded locations, then moving them to areas that get full sun will scorch the leaves. 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 55°F at night and 65°F during the day to increase the coloration of the flowers. In general, first color is about 2-3 weeks before sale.

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 it is *very* sensitive to drenches with this product, so use care when drenching.

The safest bet is to drench late, 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.



Figure 3. 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. Credits: Photo courtesy of PanAmerican Seed.

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 has a great photo section and a website with great information on 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>



Figure 4. *Hibiscus* x Lady Baltimore reaches 3 to 4 feet in height, and pink blooms are seen in spring to early summer. Credits: Photo by Dr. Rick Schoellhorn.