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By Paul Pilon

# *Dianthus barbatus* Barbarini Series

With its compact habit and consistency, this popular series of Sweet William always delivers.

**D**ianthus barbatus Barbarini is a popular series of Sweet William that delivers consistent and uniform perfor-

mance for commercial growers. Barbarini is a first-year-flowering perennial/biennial that can easily be produced and sold in bloom throughout the entire growing season from April through September. Additionally, it makes a great fall flowering plant that can be overwintered and will bloom again the following spring.

With its compact habit (6-8 inches tall) and uniform flowering, the Barbarini series is ideal for production in small container sizes (4- to 6-inch pots) and can be easily scheduled for specific ship dates. There is a wide variety of cultivars available including Lilac, Purple, Purple Picotee, Red, Red Picotee, Red Rose Bicolor, Rose, Salmon, White and a mixture of these color cultivars called the Formula Mixture. There is great consistency between these cultivars in regard to plant habit and uniformity of bloom.

They perform well throughout USDA Hardiness Zones 3 to 8, where they reach 8-10 inches tall in the landscape. With its attractive, full size Sweet William-type flower heads and extended bloom time, Barbarini is well suited for perennial borders, mass plantings, patio planters and mixed containers.

### Propagation

Dianthus Barbarini can easily be started from seed, available from Syngenta Horticultural Services. Propagators commonly start them in small, 288- or 220-cell plug trays and sow three seeds per cell. Light is not required for germination; covering the seed lightly with germination mix or vermiculite will help retain adequate moisture around the seed during germination. Moisten the seed flats and

place them in a warm environment where temperatures can be maintained at 62-68° F for germination. Starting dianthus inside of a germination chamber will increase both the germination rate and percent germination, while decreasing the time necessary for all of the seeds to sprout. It is beneficial to maintain high humidity (90 percent) until the cotyledons have emerged.

The seeds germinate in five to eight days. Following germination, gradually reduce the humidity. Seed should be grown from 62-64° F. Reduce the moisture levels somewhat, allowing the growing medium to dry out slightly before watering to help promote rooting. Increasing light levels after germination will prevent elongation. Fertilizer can be applied once the true leaves are present, applying 75- to 100-ppm nitrogen every third irrigation or 50 ppm with every irrigation, using a balanced water-soluble source. At these temperatures, Barbarini will finish the plug stage in four to five weeks.

### Production

The Barbarini series is well suited for commercial production in quart and 1-gallon containers. It performs best when grown in a moist, well-drained growing media; most peat-lite or growing mixes containing peat and bark are well suited for Sweet William production. Most growers transplant a single plug in the center of the pot. The growing medium should be even with the top of the plug after transplanting; planting the plugs too deeply may lead to poor establishment and crown rot in some instances. It is best to produce them under high light levels; avoid pro-



Above: 'Barbarini Red Picotee' Below: 'Barbarini Red'



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ducing them under shade.

They are light to moderate feeders. Providing high or luxury fertility levels will cause them to appear lush and may delay flowering. Growers commonly deliver nutrients using a constant liquid fertilization program, feeding at rates of 75- to 100-ppm

nitrate, or as needed using higher rates. Controlled-release fertilizers also can be incorporated using a low rate. Maintain pH levels at 5.5-6.2. It is best to grow them on the slightly dry side, which helps prevent undesirable elongation. When irrigation is necessary, water them thoroughly,

then allow the soil to dry slightly between irrigations.

Under certain circumstances, such as high plant densities and humidity levels, it may be necessary to implement strategies to control plant height. As mentioned above, avoid providing excessive fertilizers

and keep them slightly dry during production. If additional height control is necessary, they are responsive to paclobutrazol (Bonzi, Paczol and Piccolo) using foliar sprays at 45 ppm or the tank mixture of daminozide (B-Nine or Dazide) at 2,500 ppm plus uniconazole (Concise or Sumagic) at 5 ppm. Applying one or two spray applications at seven-day intervals should provide adequate height control.

## Insects and Diseases

There are only a few problems with insects or diseases that growers are likely to experience. Aphids, leafminers, thrips and whiteflies may appear, causing only a minimal amount of injury to dianthus. Of these insect pests, aphids are usually the most prevalent. The primary diseases growers should watch for are leaf spots caused by the fungal pathogen (*Mycosphaerella dianthi*) and rust (*Puccinia arenariae*). *Mycosphaerella* leaf spots appear as yellow to almost white leaf spots with purple edges.

None of these insects or diseases require preventive control strategies. Growers should have routine scouting programs to detect their presence early and to determine if and when control strategies are necessary. Cultural methods such as providing good air circulation and keeping the foliage dry by not watering late in the day will greatly reduce the occurrence of fungal diseases.

## Forcing

*Dianthus barbatus* Barbarini cultivars can easily be grown and sold in bloom and most commonly are produced for retail sales in the late spring and early summer months. This is a first-year-flowering peren-



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Barbarini Mix

nial and can be grown without providing a cold treatment. However, it is a cold-beneficial plant and flowers faster in the spring when vernalization is provided. For early spring sales, it is beneficial to provide vernalization to large plugs (72-cell or larger) or containers, which reduces the production time by a couple of weeks. Providing vernalization also reduces the need to produce them under long days. Flowering plants of Barbarini can be produced with or without vernalization throughout the entire growing season (typically April through September). It flowers most rapidly when grown with long days and high light levels. As mentioned above, providing a cold treatment will allow them to flower under shorter photoperiods.

There are three approaches to producing flowering containers of Barbarini cultivars. The first entails planting unvernallized plugs into the final container during early to mid-fall, allow them to bulk up slightly, vernalize them, and force them to bloom in the early spring. The second strategy involves transplanting vernalized plugs into the final containers during the late winter and forcing them into flower. The last method entails planting unvernallized materials planted in the early spring through summer months and producing them for same-year sales.

Methods using vernalized materials require slightly less production time than when unvernallized starting materials are used. For example, vernalized plants can be forced into bloom in six to seven weeks at 65° F, whereas unvernallized plants would take eight to nine weeks at the same growing temperatures. The best quality is achieved

when they are grown at cool temperatures with high light levels.

**Availability**

Seed of *Dianthus barbatus* Barbarini series is available to growers through Syngenta Flowers ([www.syngentaflowersinc.com](http://www.syngentaflowersinc.com)). Seed and

plugs can also be acquired from many reputable perennial plug producers or plant brokers. **GPN**

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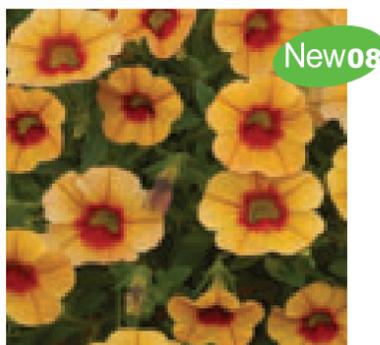
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