



culture tips for



Duchess Torenia

By James McLaughlin

Goldsmith Seeds continues its tradition of well-performing, colorful crops with the 'Duchess' Torenia, a flower bred to perform exceptionally well as a pot plant. Duchess has a high germination rate (90-95 percent), and is early to flower, compact and uniform in both flower timing and plant habit. Because of the plant's tight, mounding habit, there is not a strong need for growth regulators, and it is also suitable for pack production. The Duchess Torenia is very effective in mixed color bowls and is great for shady bedding areas.

GERMINATION

Stage zero: The media pH for the crop should be between 5.8 and 6.2.

Stage one: You can expect radicle emergence in 7-14 days. The media should have a medium moisture content and should not be saturated. Media temperature should be between 70 and 75° F, while its EC should be between .5 and



.75. Light is required for germination. Provide 10-100 foot candles, or 100-1,000 lux, in the chamber. The seed should not be covered. At the end of stage one, the radicle should emerge, and the cotyledons should begin to show.

Stage two: Media should be moist to the touch but not saturated to prevent a reduced number of transplantable seedlings. The media temperature should drop slightly to anywhere between 65 and 68° F. The media EC should remain between .5 and .75. After cotyledons emerge, fertilize weekly at 50-75 ppm with a calcium-based fertilizer such as 14-0-14. You should use no greater than 1,500 foot candles (15,000 lux), and at the end of stage two, the roots should be 1/2- to 1-inch long. The cotyledons should be fully extended.

Stage three: The media should be moist but not saturated, and it is important to avoid drying plugs to wilting. The media temperature should stay between 65 and 68° F. Increase the plant's fertilizer to 75-100 ppm nitrogen. The media EC should also increase to .75-1.0. Lighting should increase to a maximum of 3,000 foot candles (30,000 lux), but it is important at this stage to avoid direct sunlight. At the end of stage three, the roots should be 1.5-2 inches in length, and the shoots should have 2-3 sets of true leaves.

Stage four: The media's moisture, temperature, EC, fertilizer and lighting should stay the same as described in stage three. Towards the end of stage four, B-Nine can be applied to tone the seedlings.

GROWING ON

Torenia can be finished as a pot crop in 4-inch containers or as a bedding plant in packs and 3- to 4-inch pots. Five- to 6-inch production will require 3 plants per pot. You should select a porous media that drains well; this is particularly important during the cool season when temperatures

and light levels are low and media is slow to dry. The media pH should be between 5.8 and 6.2. Media should be moist to the touch, but not saturated.

TRANSPLANTING


Torenia can be companion-planted with other cool-season crops. Grow on at 60-65° F nights, with 65-70° F days. Night temperatures below 60° F may cause leaf curl and leaf discoloration ranging from yellow to red. Begin feeding immediately after transplant at 150-200 ppm with a calcium-based fertilizer. The media EC should be between 1.0 and 1.5.

To avoid heat stress, provide light shade during the summer months. Low light conditions may cause stretching of stems and delay flowering. If finishing as a midwinter pot crop, supplemental light will be necessary.

As mentioned before, because of Torenia's compact nature, growth regulators should not be necessary. However, the crop does respond to B-Nine, Cycocel or Bonzi. No pinching is necessary due to the natural branching habit of Duchess. Torenia's common threats are aphids and thrips, and its common diseases are Botrytis and Pythium root rot.

Spring pack production can be finished in 12-13 weeks. Duchess Torenia can be scheduled as a midwinter pot crop — allow 13-15 weeks for a 4-inch crop.

GARDEN PERFORMANCE

In the garden, space Duchess on 10-inch centers. The crop will perform best in a cool, moist, lightly shaded area in the garden. For full-sun plantings, keep well-watered and cool the roots with a thick mulch layer. Expect plants to mature at 6-8 inches in the garden. It is also important that you protect the plant from frost. 

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