

## Digitalis Dalmatian

(*Digitalis purpurea*)

### Germination

#### Key Flowering Facts

- First year-flowering perennial.
- Vernalization: Not required.
- Photoperiod response: Facultative long day crop.

#### Media

Use a well-drained, disease-free media with a pH of 5.5 to 6.5 and a medium initial nutrient charge (EC 0.7–1.0 mmhos/cm).

#### Sowing

**288 cell tray:** 1 seed/cell

**180 cell tray:** 1 seed/cell

**84 cell tray:** 4 seeds/cell

Do not cover the seed.

Spray preventively with fungicide against damping off.

**Stage 1** – Germination takes approximately 5-6 days.

**Soil temperature:** 65 to 68°F (18 to 20°C)

**Light:** Light is necessary for improving germination and reducing early stretch.

**Moisture:** Maintain soil constantly moist (level 4) in Stage 1.

**Humidity:** Maintain 95 to 97% relative humidity (RH) until radicles emerge.

### Plug Production

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**Light:** Light is necessary for improving germination and reducing early stretch.

**Moisture:** Maintain soil constantly moist (level 4) in Stage 1.

**Humidity:** Maintain 95 to 97% relative humidity (RH) until radicles emerge.

#### Stage 2

**Soil temperature:** 65 to 68°F (18 to 20°C)

**Light:** Up to 2,500 f.c. (26,900 Lux)

**Moisture:** Soil moisture can be slightly reduced (level 3-4) to allow the roots to penetrate into the media. Don't let the media dry out.

**Fertilizer:** Apply fertilizer at rate 1 (less than 100 ppm N less than 0.7 mmhos/cm EC) from nitrate-form fertilizers.

#### Stage 3

**Soil temperature:** 65 to 68°F (18 to 20°C)

**Light:** Up to 2,500 f.c. (26,900 Lux)

**Moisture:** Allow media to dry further until the surface becomes brown to dark brown (level 3) before watering. Keep the moisture level to medium moist (moisture level 3).

**Fertilizer:** Maintain fertilizer at rate 1 (less than 100 ppm N/less than 0.7 mmhos/cm EC) from nitrate-form fertilizers, and keep media with a medium pH of 5.5 to 6.2

**Growth Regulators:** Digitalis is responsive to B-Nine/Alar (daminozide), and Bonzi. B-Nine/Alar (daminozide) at 2000 ppm (3.0 g/l of 64% formulation or 2.5 gr./l. of 85% formulation) can be applied at 2-3 weeks after sowing. Repeat a week later if necessary. In warmer conditions, Bonzi (paclobutrazol) spray at about 5 ppm (1.25 ml/l 0.4% formulation) or Sumagic (uniconazole) spray at 3ppm (5.5 ml/l of 0.055% formulation) can be used. In Northwest Europe, Tilt (propiconazole) is also effective for Digitalis height control. A weekly spray with 0.3 ml/l is advised.

## Stage 4

**Soil temperature:** 57 to 65°F (14 to 18°C)

**Light:** Up to 5,000 f.c. (53,800 Lux) if temperature can be controlled.

**Moisture:** Same as Stage 3.

**Fertilizer:** Apply fertilizer to rate 1-2 (up to 150 ppm N / up to 0.5 mmhos/cm EC) from nitrate-form fertilizers.

## Growing On to Finish

### Container Size:

6 in. (15 cm) 1 plug/pot from 288

1 Gallon: (18 cm): 1 plug/pot

2 Gallon: (30 cm): 3-4 plugs/pot from 288 or 1 plug/pot from 84

### Media

Use a well-drained, disease-free, soilless media with a pH of 5.8 to 6.2 and a medium initial nutrient charge (EC 1.0 mmhos/cm).

### EC schedule from start to finish:

Start production stage EC = 1.0 – 1.2

Final production stage EC = 1.3 – 1.5

### Temperature

**Nights:** 50 to 65°F (10 to 18°C)

**Days:** 60 to 68°F (16 to 20°C)

Avoid temperatures below freezing.

### Light

No additional light is required. High light will enhance flowering.

### Photoperiod

Digitalis is a facultative long-day plant and has a critical day length of approximately 14 hours.

### Irrigation

Maintain media constantly moisture. Avoid both excessive watering and drought.

### Fertilizer

Apply constant fertilizer at rate 1-2 (75 to 100 ppm N/0.5 to 0.7 mmhos/cm EC). Maintain the pH at 5.8 to 6.2. A pH of 7 or higher may cause younger leaf yellowing, short plants and stress flowering.

## Growth Regulators

Digitalis is responsive to multiple applications of B-Nine/Alar (daminozide) 2,500 ppm (3.0 g/l 85% formulation or 4.0 g/l of 64% formulation). If necessary, the first application can be done at 2 weeks after transplanting. In warmer conditions, Bonzi (paclobutrazol) spray at 5 to 10ppm (1.25 to 2.50 ml/l 0.4% formulation) or Sumagic (uniconazole) spray at 5ppm (9.1 ml/l of 0.055% formulation) can be used before flower spike begins to elongate. In Northwestern Europe, Tilt (propiconazole) 0.3 ml/l weekly spray is also effective.

**Note:** Use Topflor with caution as it is very strong for Digitalis and could stunt plants and significantly delay flowering.

### Pinching

Pinching is not needed.

### Spacing:

Space plants when foliage is touching.

### Crop Scheduling

**Sow to transplant (288 cell plug):** 5 to 6 weeks

**Sow to transplant (180 cell plug):** 6 to 7 weeks

**Sow to transplant (84 cell plug):** 6 to 7 weeks

**Transplant to flower:** 11 to 12 weeks

Under proper day length and temperature range from 60°F (16°C) to 68°F (20°C)

**Total crop time:** 15 to 18 weeks

Under proper day length and temperature range from 60°F (16°C) to 68°F (20°C)

**Note:** Dalmatian Purple will flower about a week earlier, and Peach about a week later than other varieties.

**Spring Production:** Sow middle to late February for natural flowering in middle to late June.

### Common Problems

**Insect:** Aphids, White Flies

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**Disease:** Botrytis, Downy Mildew, Leafspot

### **Garden and Landscape Information**

- Dalmatian Digitalis is a first year-flowering perennial to USDA Hardiness Zone 5 to 9.
- Garden height will be approximately 80-110 cm (22-28 in.). Protection against heavy winds is advised.
- Plant in a partly shaded location after all danger of frost has passed.
- Space plants at 12 to 16 in. (30 to 40 cm) apart in well-drained soil
- Avoid higher salt levels as this is of negative influence for length and plant habit.

**Note:** Growers should use the information presented here as a starting point. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. Chemical and PGR recommendations are only guidelines. It is the responsibility of the applicator to read and follow all the current label directions for the specific chemical being used in accordance with all regulations.

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