

# geranium

## Calliope™

### **Pelargonium x hortorum**

#### **ROOTING UNROOTED CUTTINGS**

\*See General Rooting Requirements for Syngenta vegetative cuttings.

**Rooting Time:** 3.5 – 4 weeks. Calliope roots relatively quickly and easily. Rooting hormones generally are not needed. This is a vigorous-growing variety, so transplant on time and use appropriate PGRs as needed to keep top growth under control.

**Misting:** Average mist cycles. Gradually reduce mist as roots begin to form.

**Pinching:** No.

#### **FINISHING ROOTED CUTTINGS**

**Greenhouse Use:** 6" pots, gallons and baskets. Calliope Dark Red is an interspecific hybrid with zonal-type flowers and leaves. It has an outstanding velvety red flower color. Calliope is a vigorous grower with a mounding to semi-trailing growth habit. It is best used in baskets and larger containers during production. It is not recommended for smaller pots (i.e. 4.5" and quarts) unless adequate spacing is provided and significant growth regulation is used. Outside it is excellent in ground beds, baskets and patio containers. It makes great combination containers when mixed with other bright yellow and blue varieties. Calliope has excellent heat tolerance in the landscape and does well in both full sun and partial shade areas.

**Transplanting:** Transplant directly into the finished container. Place the rooting media slightly below the level of media in the container. Make sure that the root ball is covered and that the cutting is situated in the center of the pot. Moisture: Media should be allowed to dry between irrigations. However, avoid severe drying out and consistent wilting.

**Fertilizer:** 250 ppm nitrogen. Calliope Dark Red is a moderate-heavy feeder.

Monitor EC levels and leach with clear water as needed to avoid fertilizer salt buildup. Calliope Dark Red grows best when using primarily Cal-Mag (i.e. 15-5-15, 14-4-14, etc.) fertilizers. Ammonium-containing (i.e. 20-10-20, 15-15-15, etc.) fertilizers can be used periodically to help maintain adequate EC levels and to encourage growth.

**Light:** 4,000-6,000 foot candles. Calliope grows best under moderate to high light conditions. Supplemental lighting can be used in northern climates under dark, cloudy conditions. Avoid hanging lots of baskets above Calliope as flower quality and number will be reduced. It is also wise to not hang other geranium baskets above the crop because of the chances of bacterial disease contamination from the dripping baskets.

**Media pH:** 6 – 6.4. Watch for iron/manganese toxicity (bronze speckling of older leaves) when pH drops down into the mid 5s.

**Media EC:** 2 – 2.5 mS/cm (in an SME, Saturated Media Extract).

**Temperature:** 70° – 75°F (21° – 24°C) Day and 65° – 70°F (18° – 21°C) Night. Maintain warm temperatures throughout production. Warm temperatures are recommended early on to promote growth and to allow plants to respond to PGR (i.e. Florel). Temperatures can be lowered towards the end of production to tone or hold the plant.

**Pinching:** No. Pinching is not recommended or generally needed if proper chemical growth regulation is used.

**Growth Regulators:** Florel sprays at 350 ppm early on. Calliope (and other geraniums) respond well to early Florel sprays to improve branching and help control growth. Florel can be used from 1 – 3 times depending on the production time allowed for the plant. Calliope gallon and basket crops generally do well with two Florel sprays during the first 3 weeks after transplant. Florel delays flowering so all sprays should be completed 6 – 8 weeks before sale. After the early Florel sprays, Calliope can be controlled with other PGR sprays such as Cycocel at 1,000 ppm, Cycocel + B-Nine (1,000 ppm + 2,500 ppm, respectively), or Bonzi at 5 ppm. A Bonzi drench at 0.25 ppm can be used to hold plants without significantly affecting flower size.

**Insects:** Aphids and Thrips. Aphids tend to be the most common pest encountered in Geranium production. Scout plants regularly and control using appropriate chemical and biological products.

**Diseases:** Botrytis, Pythium and Xanthomonas. Botrytis is the most common disease, especially under close plant spacing and overhead irrigation. Provide good air circulation, proper spacing, and preventative fungicide sprays to reduce the incidence of Botrytis on foliage and flowers.

#### **GARDEN PERFORMANCE**

USDA Hardiness Zone: Not hardy

AHS Heat Zones: 3 – 11

**Garden Height:** Calliope Dark Red 12 – 14" (30 – 36 cm)

**Garden Width:** Calliope Dark Red 18 – 20" (46 – 50 cm)

#### **Geranium SCHEDULING in weeks**

Calliope Dark Red

Rooted to 4" finish 6 – 7 (1 plant/pot)

Rooted to quart finish 7 – 8 (1 plant/pot)

Rooted to 5" finish 8 – 9 (1 plant/pot)

Rooted to 6" finish 9 – 10 (1 plant/pot)

Rooted to gallon finish 10 – 12 (1 plant/pot)

Rooted to 10" basket finish 10 – 12 (3 plants/pot)

Rooted to 12" basket finish 10 – 12 (4 plants/pot)

**Note:** These suggestions are only guidelines and may have to be altered to meet individual grower's needs. Check all chemical labels to verify registration for use in your region.