ZONAL GERANIUM
PROPAGATION

PELARGONIUM BROCADE-TYPES

Pelargonium x hortorum

TRAY & ROOTING

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Vegetative Cutting</td>
</tr>
<tr>
<td>Rooting Hormone</td>
<td>Yes</td>
</tr>
<tr>
<td>Tray Size</td>
<td>32, 52, 72, 102 strip</td>
</tr>
<tr>
<td>Plants Per Cell</td>
<td>1</td>
</tr>
<tr>
<td>Days In Mist</td>
<td>7-10</td>
</tr>
<tr>
<td>Wks. From Stick To</td>
<td>4-5</td>
</tr>
<tr>
<td>Transplant</td>
<td></td>
</tr>
<tr>
<td>Pinch?</td>
<td>No</td>
</tr>
<tr>
<td>Days To Pinch</td>
<td>N/A</td>
</tr>
</tbody>
</table>

FERTILITY

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertilize Through Mist?</td>
<td>No</td>
</tr>
<tr>
<td>Fertilizer Rate</td>
<td>Moderate: 100-150 ppm N (20-10-20 constant feed)</td>
</tr>
<tr>
<td>EC Range</td>
<td>Moderate (1.0-1.5 mS via SME)</td>
</tr>
<tr>
<td>pH Range</td>
<td>6.0-6.4</td>
</tr>
</tbody>
</table>

TEMPERATURE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vernalization Required?</td>
<td>No</td>
</tr>
<tr>
<td>Average Soil Temperature</td>
<td>65-68°F (18-20°C)</td>
</tr>
<tr>
<td>Average Air Temperature</td>
<td>65-68°F (18-20°C)</td>
</tr>
</tbody>
</table>

IRRIGATION FREQUENCY

Level 3: Keep media moderately moist with mild dry cycles

LIGHT (SUPPLEMENTAL)

When light levels fall below 1000 fc (10,800 lux)

SHADE

Keep light intensity between 700-1200 fc (7500-12900 lux) until callus formation, 2000-2500 fc (21500-26900 lux) during root initiation, and 2500-4000 fc (26900-43100 lux) for toning.

POTENTIAL DISEASES

Botrytis, Pythium, Rhizoctonia, Xanthomonas

POTENTIAL PESTS

thrips, whitefly, fungus gnats, spider mites

PGR SUGGESTIONS

- Daminozide (85%) at 1000-2000 ppm + Chloromequat (11.8%) at 750ppm tank mix for height control 14-21 days after stick
- Ethephon (3.9%) at 350-500 ppm can be used for bud removal and branching 14-21 days after stick; do not apply within 6-8 weeks of ship date

CULTIVAR LIST

Mrs. Pollock, Vancouver Centennial, Wilhelm Langguth

TIPS

- Apply a 200 ppm IBA spray (or equivalent product) within 24 hours of sticking to aid root formation.
- ‘Wilhelm Langguth’ is sensitive to high salt concentrations; avoid foliar feeding.
- Only mist enough to keep leaves turgid.

WE'RE HERE TO HELP YOU GROW

Tech.NA@DummenOrange.com
614-850-9551
DummenOrange.com
## Zonal Geranium

## Finishing

### Pelargonium Brocade-Types

*Pelargonium x hortorum*

<table>
<thead>
<tr>
<th>Container Size</th>
<th>Plants Per Pot</th>
<th>Early Season</th>
<th>Mid Season</th>
<th>Late Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 in. (10 cm)</td>
<td>1</td>
<td>7-9</td>
<td>6-8</td>
<td>5-7</td>
</tr>
<tr>
<td>6 in. (15 cm)</td>
<td>1-2</td>
<td>8-10</td>
<td>7-9</td>
<td>6-8</td>
</tr>
<tr>
<td>8 in. (19 cm)</td>
<td>2-3</td>
<td>8-11</td>
<td>7-9</td>
<td>6-9</td>
</tr>
<tr>
<td>10 in. (22 cm)</td>
<td>3-4</td>
<td>9-12</td>
<td>8-11</td>
<td>8-12</td>
</tr>
</tbody>
</table>

### Fertility

- **Fertilizer Rate**
  - Moderate: 125-200 ppm N (15-5-15 at or similar calcium-nitrate formula alternated with 20-10-20)
- **EC Range**
  - High (2.0-2.5 mS via SME)
- **pH Range**
  - 6.0-6.4

### Temperature

- **Day Temperature**
  - 65-75°F (18-24°C)
- **Night Temperature**
  - 62-65°F (17-18°C)

### Irrigation

- **Irrigation Frequency**
  - Level 4: Keep media moderately moist at all times

### Light

- **Daylength Neutral?**
  - Yes
- **Supplemental**
  - Optional
- **Benefits From Shade?**
  - No

### Pinching

- **Finishing Pinch?**
  - No

### Potential Diseases

- Botrytis, Pythium, Rhizoctonia, Xanthomonas

### Potential Pests

- thrips, whitefly, fungus gnats, spider mites

### PGR Suggestions

- 750-1500 ppm Chloromequat (11.8%) as needed
- Ethephon (3.9%) at 350-500 ppm can be used for bud removal and branching; do not apply within 6-8 weeks of ship date

---

**TIPS**

- Proper sanitation will help control Botrytis, Pythium and Rhizoctonia. Avoid over-applications of mist and fertilizer; this will help control waterborne pathogens and limit the fungus gnat population.
- Consider direct-stick with callused cuttings to reduce overall production time by 1-2 weeks.

---

**WE'RE HERE TO HELP YOU GROW**

Tech.NA@DummenOrange.com
614-850-9551
DummenOrange.com
ZONAL GERANIUM

FEATURES AND BENEFITS

PELARGONIUM BROCADE-TYPES

*Pelargonium x hortorum*

---

**DESCRIPTION**

Brocade is a novel geranium collection featuring a vigorous growth habit and cultivar options ranging from early-late season.

---

**KEY GARDEN INFORMATION**

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Full Sun to Partial Shade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>18-22 inches (46-56 cm)</td>
</tr>
<tr>
<td>Garden Spacing</td>
<td>18-22 inches (46-56 cm)</td>
</tr>
<tr>
<td>Watering</td>
<td>Allow soil to dry slightly between thorough waterings.</td>
</tr>
</tbody>
</table>

Hardiness Zone: **10-12**

---

**CONSUMER APPEAL**

- With their equally intriguing foliage and blooms, consumers feel they are getting a two-for-one deal with our Brocade geraniums.
- With their rich foliage, striking blooms, and mounding growth habit, Brocade-type geraniums work well in mixed-genera combos, or in the landscape.

---

**GARDEN ATTRIBUTES**

- If planted in the landscape, Pelargonium prefer rich well-drained soils. However, they can tolerate heavy clay soils if not overwatered.
- Although not favored by bees, the long bloom season and bright flowers of Pelargonium naturally attract hummingbirds. Additionally, their recognizable foliage aroma is a natural deterrent to rabbits, deer, and herbivorous insects.
- Pelargonium can be overwintered indoors for extended seasonal interest.

---

**NATIVITY**

Of hybrid origin: parental lineages native to Southern Africa.

---

WE'RE HERE TO HELP YOU GROW

Tech.NA@DummenOrange.com
614-850-9551
DummenOrange.com