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| <b>Cultural Information for:</b>        | Vinca Virtuosa      | Annual   |
| <b>Common Name:</b>                     | Vinca               |          |
| <b>Botanical Name:</b>                  | Catharanthus roseus |          |
| <b>Seed Count:</b>                      | 18,500/ounce        | 650/gram |
| <b>Optimum Germination Temperature:</b> | 75-78°F / 24-26°C   |          |
| <b>Optimum Growing Temperature:</b>     | 75-80°F / 24-27°C   |          |

### Plug Culture – 5 weeks (288 / 12 x 24 tray)

**Stage One** (days 1-5) Select a sterile, soiless media and new plug trays to ensure a disease-free start with a pH between 5.8 - 6.0 and EC < 0.75 mmhos (2:1 diluton). Lightly cover the seed with #2 course-grade vermiculite and maintain uniform moisture and a temperature of 75-78°F / 24-25°C. **Vinca Virtuosa germinates best in total darkness.**

**Stage Two** (days 6-14) Remove the seedlings from the germination area and provide, 1,500-2,000 f.c. / 16,000-22,000 lux with good ventilation. Reduce the humidity to 75% and the temperature to 72-75°F / 22-24°C. Apply a light feed of 50-75 ppm N using a well-balanced calcium-nitrate-based fertilizer as the first true leaves start to appear. Supplemental lighting is beneficial in promoting strong healthy plugs; especially in the north. Once full seedling stand is achieved apply a protective fungicide for pythium, rhizoctonia and thielaviopsis.

**Stage Three** (days 15-28) As plants develop additional leaves, maintain warm temperatures, and fertilize at 100-150 ppm N or as needed to maintain EC levels between 0.7 and 0.8 mmhos (1:2 slurry). Light levels should be 2,500-3,000 f.c. / 27,000-30,000 lux. Allow the plugs to dry slightly between irrigations to promote a healthy and strong root system. Water early in the morning to allow the foliage to dry before sundown. If height control is needed, apply B-Nine (daminozide) at 2,500 ppm or A-Rest (ancymidol) at 5-10 ppm. Bonzi foliar sprays may cause leaf spotting of the lower foliage, especially at high temperatures.

**Stage Four** (days 29-35) When the plugs have 3-4 true leaves, they are ready to transplant. Reduce fertilizer and irrigations to prepare the plugs for transplanting or shipping. Do not reduce the temperature too much as vinca responds negatively to temperatures below 65°F / 18°C.

### Transplanting to flower 4 – 6 weeks

**Transplanting:** Select a well-drained soiless media with a pH between 5.5 and 6.0 and EC of 0.75 mmhos. Carefully dislodge the plants from the plug tray in order to avoid root and stem damage. Also, be careful not to bury the plants too deeply as this encourages rhizoctonia.

**Fertilizer:** Wait 7-10 days after transplanting, until the roots reach the container

sides and bottom before applying fertilizer. Vinca does best with continuous feed at 100-150 ppm N, using a well-balanced fertilizer that is low in phosphorus. EC level should not exceed 1.0 mmhos. At lower nitrogen rates commercial fertilizers may not supply enough boron. To avoid a boron deficiency, target 0.25 ppm B. High pH causes iron deficiency but applying ammonium nitrate is not recommended. Periodic applications of magnesium using MgSO4 at 16 oz. /100 gallons - 120 grams/100 liters promote a deep green color.

**Temperature:** Vinca does best grown warm with high light. Ideal temperatures are 75-80°F / 24-27°C, during the day and 68-72°F / 20-22°C, at night. Avoid lower temperatures, (less than 65°F / 18°C), as this promotes leaf rolling and leaf chlorosis. Temperatures lower than 60°F / 16°C promote flower spotting.

**Diseases:** Vinca has very few pest problems but can be seriously affected by disease. Thielaviopsis (black root rot) and Pythium are major greenhouse problems that are best controlled by practicing good sanitation. Fungicidal drenches can be applied as a preventive measure. However, good cultural practices, (growing the crop warm, providing good air movement, optimum media pH and allowing the media to dry slightly between irrigations), is the best defense.

**Growth Regulators:** Moisture stress, moderate fertilizer rates and high light levels (5,000 f.c. / 54,000 lux) are the best tools for controlling height. If necessary, foliar applications of A-Rest® (ancymidol) at 5-10 ppm or B-Nine® (daminozide) at 2,500 ppm work well. Do not apply growth retardants above 80°F / 27°C as foliar damage may occur.

**Marketing:** Vinca Virtuosa is a uniform series with 1½-2” / 6 cm. sized flowers that produces strong upright and bushy plants (12-14” / 30-35 cm tall by 12-16” / 30-40 cm. wide). Ideal for pots, packs and combination planters. Vinca Virtuosa is available in a wide range of colors.

### **Crop Timing:**

| Container Size  | Total Crop Time |
|-----------------|-----------------|
| Cell Packs      | 8-9 weeks       |
| 4-inch / 10 cm. | 9-10 weeks      |
| 6-inch / 15 cm. | 10-11 weeks     |

*“All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North America conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions.”*