



## Geranium - Vegetative Geranium Propagation

By Karl Trellinger, Syngenta Technical Services

**Before Arrival:** Sanitize and clean the propagation area. Lay out the propagation media and water the day before arrival so the media can drain and warm to 72 to 74°F (22-23°C).

· **Upon Arrival:** Unpack and stick cuttings immediately. If not possible, store the opened boxes at 36 to 38°F (2 to 4°C) for no longer than a day. If a cooler is not available, lay out the opened bags and mist regularly.

· **Soil and Air Temperature:** Until all cuttings are well rooted, 72 to 74°F is ideal for the quickest and most uniform rooting. After all cuttings are fully rooted, temperature can drop to 65 to 68°F (18-20°C). Rooting hormones are not necessary.

· **In case of shipping problems:** To minimize yellowing, spray Fascination® at 2 to 2.5 ppm after the cuttings are turgid. Fascination can be combined with a fungicide plus CapSil® for Botrytis control, but should not be applied too heavily; otherwise delay of rooting could occur. The spray volume should be no more than 1 gal per 200 square feet.

· **Misting:** Apply a spray adjuvant, such as CapSil at 3 to 4 oz/100 gal., a day after sticking with a fungicide against Botrytis. Adjust the mist daily based on weather changes and the conditions of the cuttings. Ivies will be okay with about 20 percent less mist than Zonals. It is crucial that there is no water standing on the leaves. Gradually reduce the mist between days five through 10, depending on the weather conditions.

· **Media:** The media (pH: 6.0) should be well draining and provide adequate oxygen to the roots. Prevent over saturation.

· **Fertilizer:** Start feeding at 150 -200 ppm nitrogen of a 17-5-17 or 15-15-15 fertilizer at about 10 days after sticking. Once all cuttings are rooted, 15-5-15, 13-2-13 or 14-0-14 work well.

· **Growth regulation:** Apply 750 ppm Cycocel®, and for more vigorous varieties, 750 ppm Cycocel plus 750 ppm B-Nine® as needed.

· **Light:** 2,000 foot candles are ideal for the first two weeks after sticking; after rooting, 3,500 foot candles are ideal. Under low light conditions, HID supplemental lighting is highly recommended.

· **Plant Protection:** The main disease problem is Botrytis. Critical steps to prevent Botrytis include: careful misting, sufficient spacing, providing good air circulation and light conditions and removing severely infected leaves from the production area. **Daconil®** and **Chipco® 26019**, **Heritage®**, **Veranda&™ O** and **Decree®** work well in preventing Botrytis. Rotate fungicides and spray thoroughly at an interval of five to seven days, starting once the cuttings are fully turgid. Spray adjuvants such as CapSil at 3 to 4 oz/100 gal may be used with some fungicides to enhance spreading. **Note:** Daconil formulations do not require the use of an additional adjuvant.

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