

Poinsettia Temperature Management after Flower Induction

Managing temperatures correctly after flower induction is vital to plant health and grower success. Along with maintaining adequate greenhouse temperatures, growers should continue to scout and protect against disease with preventive treatments. Read the tips below for information on day and night temperatures, timing, disease protection, cold growing/finishing and how to apply this knowledge to different poinsettia varieties.

IDEAL TEMPERATURE

For all varieties, temperatures at 68–73 °F (20–23 °C) and 66–68 °F (19–20 °C) are ideal for day and night until two to three weeks prior to shipping. Toward the end of the crop, slowly drop the temperature down to 65 °F (18 °C) during the day and night for medium-green leaf varieties and 61–62 °F (16 °C) night temperatures for dark leaf varieties. Many dark leaf white varieties develop a creamy white bract color if finished at temperatures below 68 °F (20 °C) at night. Bracts of Cortez™ Burgundy poinsettia can get a waxy sheen at temperatures below 65 °F (18 °C), so this variety should be finished at night temperatures above 66 °F (19 °C). With cooler night temperatures during the last 2–3 weeks, bracts will generally be smaller and more upright, the colors more intense, and the flowering delayed from several days up to one week.



Photo 1. Late season Botrytis infection on white varieties due to high relative humidity (above 75%), poor air circulation, and lack of fungicide treatments.

If plants are grown under cooler temperatures, they should be planted and pinched about one week earlier than usual. Watch for Botrytis on leaves and bracts and inspect roots regularly when finished under cool temperatures.

Spray with fungicides, such as Mural® and Palladium® fungicides (with CapSil® surfactant if used on bracts to avoid residue) if necessary. White varieties (e.g., Whitestar™, Alpina™ White, Biancaneve™ White, Alaska™ White, Virgo™ White poinsettia, etc.) are generally the first to show signs of lateseason Botrytis infections (**Photo 1**) and should be sold within a week of being finished.

Cool Morning Dip: Drop temperatures by 5°F (or 8–10 °F if humidity is low) for two to three hours before sunrise. In case of high day time temperatures (greater than 76 °F/24 °C), balance with a cool morning approach and growth regulator treatments.

Negative DIF: Temperatures at 65 °F/18 °C during the day and 68 °F and during the night would work well to reduce the growth of poinsettias without running into Botrytis problems, which are often caused by low night temperatures combined with high humidity.

COLD GROWING AND FINISHING

Syngenta Flowers conducted extensive trials across North America with many varieties to better understand the effects of cold growing/finishing on growth and flowering. **View more information on cold growing here.**

Cold growing/finishing yields fuel savings, less chemical growth regulation, lower insect pressure and sturdier plants, but care must be taken when growing/finishing cold. Some colors, such as reds, pinks, and marbles, intensify; however, whites become creamier. Be conservative with low temperatures and don't go below 60°F (16°C) for any significant length of time. Temperatures that are too low can dramatically delay flowering and reduce bract size. Run trials first by lowering average temperatures just a few degrees below conventional warm growing protocols. Adjust crop schedules and planned market dates as cold grown plants will be significantly delayed.

VARIETY SELECTION

The best varieties for cold growing/finishing are those that have early flower response times, good vigor, naturally large bracts and strong root systems. An excellent variety for cold growing is Early Orion™ Red poinsettia. This variety maintains adequate height and bract size under relatively low temperatures (e.g., 62°F average daily temperature) beginning in early mid October (**Photo 2**). Refer to Syngenta's poinsettia catalog for a complete list of varieties that can be grown cold or finished cool.

Orion™ Early Red



Control | 70 °F / 21 °C ADT
Sale Date: **November 5**



October 5 | 62 °F / 16.5 °C ADT
Sale Date: **November 20**

Orion™ Early Orion comparison: Warm versus cold finishing. Bract coloring is about two weeks delayed and color enhanced with average daily temperatures of 62 °F starting October 5th (plant on the right).

IRRIGATION

Monitor irrigation closely and do not overwater plants. With colder temperatures, plants use less water, and pots stay wetter longer. Monitor roots regularly and apply preventative fungicides if needed. Also watch for Botrytis on those varieties that are more prone to infection.

PLANT GROWTH MANAGEMENT

Reduce early chemical growth regulation. Compared to normal “warm” growing, the use of plant growth regulators can be reduced. Do not put an overly growth regulated plant into a cold environment. Try to keep the plant at the top of its height tracking curve before lowering temperatures. Cold growing/finishing results in shorter plants, so be sure to schedule plenty of time to get the plant up to size before entering the cold temperature regime. It is best to wait until the middle of October and the beginning of bract coloration before dropping temperatures. Use the natural warmth of August and September to build the plant, and the naturally cool periods of October and November to save fuel. The later plants go into the cold environment in October, the less height, bract size, and flower timing will be affected.

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