Cut Flower Poinsettia Production

While production of poinsettias as cut flowers has been minimal in recent years, commercial production of poinsettias actually got its start as a cut flower. Recent breeding has produced a poinsettia with a much longer post harvest life and more desirable cut flower characteristics. Poinsettias are grown as cut flowers for the Christmas holiday but the bright colors also make poinsettias suitable for other holidays such as Valentines Day.

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Stem Length:	The stem length on cut poinsettias is determined by the number of weeks the plant are grown under long days following pinching or planting in the case of none pinched forms. Stem length will increase by approximately 2" for every extra week from pinching (or planting with non- pinched forms) until flower initiation. A positive DIF maintained in the greenhouse will promote stem elongation. Gibberellic acid can be used for additional stem length when plants are grown on a shorter schedule. Do not continue applications after flower initiation as it may delay bract coloring.
Spacing:	For pinched crops, provide four stems/square foot of bench or bed space. When planting in pots, plant two rooted cuttings per 8" container and space pots 12"x 12". When plants are grown non-pinched use closer spacing (6"x 6") and more plants per pot. They can also be grown pot tight to encourage stem elongation and straight stems.
Pinch and Disbudding:	Pinch plants 1.5 to 2 weeks after transplanting or when the roots have reached the edge of the pot. If pinched to early the roots will not be able to support the axillary shoots and will result in weak shoots that are slow to develop. If plants are behind schedule, raising the average daily temperature to 75˚ F (24˚C) will help speed the root development. Non-pinched forms will produce larger flowers, longer stems, and flower earlier than pinched forms, but will produce less stems per square foot.
Containers and Support:	Grow cut poinsettias in large pots, bulb crates, or ground beds. Support is necessary to prevent breakage and stems from falling over. One or two wires or string around the edge of the bench is usually sufficient. Do not use netting as this makes harvesting more difficult.
Greenhouse Environment :	After propagation grow plants at 68-72˚F (20-21˚C) night temperatures and 75-85˚F (24-29˚C) day temperatures until stems are thinned or plants are spaced. At that point night temperatures can be reduced to 62-68˚F (17-20˚C) until finish. During the last two weeks of production reduce temperatures to 55-60˚F (13-16˚C) to enhance bract color. Temperatures below 60˚F (16˚C) before the recommended time will delay flowering and reduce bract size. Night temperatures above 72˚F (21˚C) after flower initiation may also delay flowering.
Insect and Disease Concerns:	Whiteflies – Whiteflies can be more difficult to control on a cut poinsettia crop. The heavy foliar canopy and thick stems make spray applications difficult toward the end of the crop. Choose an early granular chemical such as Marathon followed by routine spray applications early in the crop to avoid elevated levels of whiteflies towards the end of the crop. Botrytis – Botrytis can be an issue on cut poinsettias due to the heavy canopy and lengthy crop cycle. To reduce problems with botrytis in shipping do not harvest and pack plants when the foliage or bracts are wet.
Physiological Disorders:	Splitting – Splitting is the premature initiation and development of terminal flower buds on vegetative or young reproductive plants. Center Bud Drop – Premature abscission of the cyathia will make cut poinsettias appear old. Premature cyathia drop may be the result of low light levels or high night temperatures. Moisture stress at finish can also contribute to premature cyathia drop. Leaf Drop – Close spacing can contribute to extensive foliage loss on the lower stems. While botrytis can be a problem with the fallen foliage, this loss of foliage does not reduce the quality of a cut poinsettia. Stem Breakage – Provide support to avoid stem breakage, which could be a problem with the extended crop cycle and long stems.
Harvest:	Cut stems when at least two cyathia are shedding pollen. Cut stems up to 2" above the base of the plant to improve water uptake. Latex from the stem or bracts should not be treated specially as the latex will dry clear and will not reduce quality. Remove all foliage or at least two-thirds for easier handling and prolonged vase life. For bucket sales place stems in clean water with a low EC (.01-0.5) and a low pH (below 5). For dry shipping ,stems can be allowed to wilt slightly to allow more stems to be packed in a box. However, slight wilting decreases vase life.

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Sample schedule for Christmas flowering

Cultural Step	Date
Receive and plant rooted cuttings	July 7th (Week 27)
Pinch plant to 4 nodes per plant	July 21st (Week 30) - or when roots have reached the edge of the pot
Thin stems to 2-3 per plant	August 18th (Week 33) - or when stems are large enough to thin
Respace to 12”x12” (30x30 cm) if using 2 plants per 8” pot	September 8th (Week 36/37)
Flower Initiation	September 22nd-26th (Week 38/39)*
Flower	December 1st-5th (Week 49)**

Recommendations for long lasting poinsettia cut flowers

1. Open the box as son as possible and take out the bunches. Remove the plastic cover by cutting it with scissors. Remove rubber bands and water picks. Blooms may appear wilted as they actually ship better slightly dry.
2. To re-hydrate, cut 1-2 inches from the bottom of the poinsettias stems. While cut poinsettias produce white sap, no extra treatments (hot water, flaming, etc.) are needed. Placing the stems in water will dissolve the sap and stems can be used as with any other cut flower.
3. Place the flowers in buckets with 2” of pure water (we recommend deionized water). While chemicals used in water treatment may reduce the vase life of poinsettias, in most areas tap water in clean buckets will work well.
4. Place the flowers in a room with temperatures between 60°F—70°F (15.5°C-21°C), maintain relative humidity at 40-60%. Cut poinsettias should not be stored at temperatures below 55°F (13°C). The stems can tolerate a few hours at colder temperatures to allow for delivery, but should not be held for more than 24 hours in cold storage.
5. Keep the buckets free of bacterial contamination using hpochlorite (chlorine bleach), which can be used at 1 ppm concentration.
6. Cut stems can be used in floral foam with no decrease in vase life.
7. Cut flower poinsettia should not be confused with using stems of traditional potted poinsettias. Vase life without special handling (preservatives, sealing of stems, etc.) is 2-3 weeks.

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