



By Erik Runkle

Extending Holding Time for Crops

Growers have several methods of increasing the time they can hold crops to stave off the point where plants become unmarketable.

In an ideal world, plants are promptly shipped, marketed and sold once they reach their desirable market stage. Unfortunately, circumstances outside our control can delay shipping. The most common delay is probably poor weather: A rainy weekend can slow down sales, forcing stores to reject additional shipments of plants. Often, shipping delays are a week or less, but they're sometimes longer.

If held too long, plants may become unmarketable, and growers may be forced to dump them. Fortunately, there are steps growers can take to extend the holding time of their crops.

Lower the Temperature

By far, the most effective strategy to hold crops is to lower the growing temperature. Plant development is primarily related to temperature, so lowering the setpoint slows down growth. Flowers also last longer at cooler temperatures. How low should you go? If we think only about the crops that are being held and ignore other crops that are in the same greenhouse zones, then a desirable temperature is 45-50° F for many cold-tolerant crops and 55-60° F for many cold-sensitive crops.

retardant can be applied to inhibit subsequent elongation of leaves, stems and flowers. For bedding plants, perennials and tropicals intended for planting in the landscape, sprays or light spranches are recommended. Drenches should be avoided because the effect may be too persistent, potentially preventing plants from growing when planted outdoors. For potted plants, drenches are acceptable and potentially desirable because a more long-term effect may extend their attractiveness in the home.

As an alternative, consider using a negative DIF (-DIF) temperature regimen to reduce elongation. This means adjusting the temperature setpoints so that crops receive a lower day temperature and warmer night. When the day is cooler than the night, the mathematical difference between the day and night temperatures is negative, creating a condition that inhibits stem elongation of most plants. For example, if a desirable average daily temperature is 65° F and the photoperiod is 14 hours, then a 60° F day temperature and a 72° F night temperature could be used. Attaining a negative DIF can be difficult at best in the South once temperatures outside become warm during the day.

When Desperate, Pinch Plants

If you know that plants can or will need to be held for several weeks, you may consider pinching or cutting the plants back to remove flowers and elongated shoots. There are several downsides to this, including the labor required to cut and remove plant debris and the several weeks required for plants to flower again. Some plants, such as seed impatiens, lend themselves to being cut back more than others.

Generally, crops with short production times can more readily be pinched because their rebloom time is short compared to crops with longer production times. Usually, pinching plants once they've flowered is a last-ditch effort to save a crop before going to the dumpster. Consider whether the effort involved, space required and delay in flowering time — as well as the risk of potentially shipping lower-quality plants to their marketplace — is worth pinching to save the crop. [GPN](#)

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Plant growth retardants can be used to inhibit elongation of leaves, stems and flowers, allowing plants to remain marketable for longer periods of time.

Examples of cold-tolerant crops include ageratum, alyssum, campanula, dianthus, nemesia, petunia and pansy. Examples of cold-sensitive crops include blue salvia, celosia, hibiscus, New Guinea impatiens, purple fountain grass, vinca and most tropicals.

Unfortunately, marketable crops that are being held are often in the same greenhouses as crops that were planted later and are not yet marketable, so you may have to weigh the consequences of adjusting the temperature.

Apply a PGR or Use Negative DIF

Some plants pass their prime partially because they have become elongated and floppy in their containers. To help prevent this problem, a plant growth

