

Managing Poinsettia Production through Summer Heat

Many areas are reporting record high temperatures earlier in the summer than ever. Poinsettia production during intense summer heat can be a real challenge. It can be very difficult to manage the environment and minimize stress to cuttings in propagation and newly transplanted young plants. Environmental stresses early in the production cycle can result in poor branching, deformities in the foliage, and overall reduced plant quality, that's why it is so important to manage the environment properly to mitigate stress.

Here are some helpful tips to reduce stress to cuttings in propagation:

- Unpack cuttings immediately upon arrival. If cuttings can't get stuck immediately place in a cooler held at 50-55°F/10-13°C. Misting cuttings will help restore turgidity and hold up better to early stress in the propagation environment. Maintain relative humidity at 70% in the cooler if possible. If cuttings appear overheated upon arrival notify supplier immediately!
- Only remove the amount of cuttings that can be stuck from the cooler in one hour.
- Have mist ready to go as cuttings are being stuck.
- Maintain relative humidity in the prop environment at near 100%.
- If possible, reduce night temperatures to 65°F/18°C during the first 5 nights to reduce cutting stress. Reduced night temperatures will reduce the incidence of *Erwinia* and help cuttings stand up faster.
- Maintain light levels at 1200-1500 ft. candles. Higher light will increase the amount of mist needed resulting in leaching, saturated media, and slow rooting. Higher light will also result in warmer temperatures!
- Mist to provide a constant film of moisture to the leaf surface without over wetting the media. High heat will increase mist needed to allow cuttings to remain turgid. With increased mist botrytis may be a concern. Apply a preventative fungicide spray.
- Monitor cuttings closely and adjust mist based on changing environmental conditions. Hand mist on the edges of the bench.
- With extreme temperatures misting may continue at night or more frequently during the day than during propagation when temperatures are more moderate. Mist based on the cutting's needs, not according to a preset schedule!
- Wet walkways frequently to increase humidity. Evaporative cooling from wetting walkways will also help cool the air temperature. Also, keep nearby open/unplanted areas wet. Run the booms or mist in empty areas to keep them cool.
- Watch for leaf roll. See photo below. If leaf roll is apparent cuttings are likely too dry in a hot greenhouse!



*Leaf roll from high light/low humidity

Establishing rooted cuttings can also be a challenge when extreme heat is an issue. Here are some helpful tips to reduce stress to rooted poinsettia cuttings:

- Cuttings must be shaded! Make sure the greenhouse environment is shaded before cuttings are transplanted and placed in the greenhouse.
- Light levels initially should be 3,000 ft. candles. If it's very hot start at 2000-2500 ft. candles, then gradually increase light levels. Once cuttings are established and actively growing light should be increased to 4,000 ft. candles if possible. Shade initially to control greenhouse temperatures also. Cuttings that have been properly acclimated to higher light in propagation can handle higher light levels however if extreme heat is also a problem leaf scorch may occur.
- The greenhouse should be nice and humid. Wet walkways frequently to provide increased humidity and evaporative cooling.
- Check cuttings frequently. Syringing several times a day with cool, clear water will reduce stress. **Do not use fertilizer when syringing!** Apply water only to the base of the cutting and rooting media, do not water the entire container thoroughly! Overwatering the media will result in slow establishing and a risk for increased fungus gnat pressure.
- Some growers mist newly transplanted cuttings. This is ok as long as the mist is managed properly so that the media doesn't become over saturated.
- Keep cuttings pot tight. Pot tight spacing will create a microclimate around cuttings and increase humidity and decrease airflow.
- Avoid excess airflow. If the entire greenhouse is not being utilized consider hanging temporary plastic which will decrease airflow around cuttings and create a smaller more manageable space while environmental conditions are stressful.

Careful and frequent monitoring of the greenhouse environment whether the cuttings are in propagation or newly transplanted is the first critical step to minimizing plant stress due to extreme

heat. Watch changing conditions and react accordingly. We can't do anything about the heat but steps can definitely be taken to reduce stress and ensure that your poinsettia production gets off to a good start!

If you have further questions or concerns you can post those questions in On Board™ at www.EckeRanchTechHelp.com or email Rebecca Siemonsma at rsiemonsma@eckeranch.com. She can also be reached at 760.944.4060

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