

GROWERTALKS

Culture Notes

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Simple Things Growers Miss That Affect Plant Quality

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In today's digital world, we're bombarded with information. That's especially true if you're new to greenhouse production. Best practices, expert advice, training and technology tips abound. The truth is many successful growers take a back-to-basics approach. Focusing on improving and perfecting just a few areas of your growing operation can make you more successful. Here are a few reminders of simple things new and experienced growers alike can use to increase plant quality, efficiencies and profits.

Test your water daily

Water quality is a key element in greenhouse production, affecting everything from plant growth to pesticide effectiveness. Testing your water each morning before irrigation systems start can help avoid mistakes in the growing process, saving you from additional problems down the road. Testing your water for pH and alkalinity will determine the type of fertilizer you should be using and if acid injection is needed. Making sure your pH is between 5 to 7 every day gives you the peace of mind that your irrigation process is off to a good start.

Daily testing also gives you an opportunity to make sure all equipment, including your fertilizer injector, is working properly. Malfunctioning equipment can be detrimental to plant health.

Know your lighting requirements

Managing light levels for your crops can be a tough task, but growers know it's an essential key to controlling plant development. One of the factors growers can miss is learning the lighting requirements it takes for each variety to flower. Taking the time to learn these requirements can make your crop planning easier and enhance crop quality.

One rule of thumb is that long-day plants should be rooted in short days and short-day plants in long days. If you're trying to manipulate a long-day plant to flower early, night interruption from 10:00 p.m. to 2:00 a.m. will do the job. This can be done with as little as 10 foot candles of light.

Temperature control

Temperature can be a great tool for growers, as it can help control crop development. Varying negative or positive temperatures (DIF) can help you to slow or speed up plant growth. Depending on the needs of the crop, growers can enact temperature variations in the early morning hours and still maintain a good average daily temperature (ADT).

If a crop needs to grow faster, growers can warm greenhouse temperatures from 4:00 a.m. to 10:00 a.m. to help

achieve more growth. If plants are maturing too quickly, lowering to colder greenhouse temperatures in that timeframe can slow plant growth.

The majority of plants will grow well between 65 to 72F (18 to 22C). Remember that temperature is a tool to achieve desired growth. Heat means development, so if you need your crop faster, temperature is a great tool to achieve the desired results.

Input tips

One of the best ways to assure quality is proper handling of your unrooted cuttings or liners. At best, a damaged input can make a crop more challenging. At worst, it could lead to crop failure.

When unrooted cuttings arrive, they should be stuck as soon as possible. If more time is needed, they need to be stored in a cooler.

Creating a sticking priority list can also be a big help. Following that list can assure that priority items are being stuck first. I use a system that ranks each variety on a scale from zero to four:

0—Varieties that take priority over all others. This number can also be used when you receive more difficult or “problem” varieties from suppliers.

1—Varieties that are first in the sticking order, typically more difficult varieties, such as lobularia, portulaca and euphorbia.

2—Moderately difficult varieties, such as coleus, dahlia and lamium.

3—Varieties that have a little longer holding time, such as angelonia, nemesia and osteospermum.

4—Items that can be held in the cooler longer without damage, including heuchera, ajuga and gaillardia (double flower).

PGR timing

Every grower needs to know which plant growth regulator works best on their crop variety before applying. Most breeders have good recommendations on PGR use. Always read the label. Knowing the best time to apply the proper PGRs is a crucial second step. Early PGR applications in the liner and after transplant can help eliminate applications later and help produce a better- quality plant. Less time applying PGRs translates into lower labor costs, not to mention the savings in lower product use.

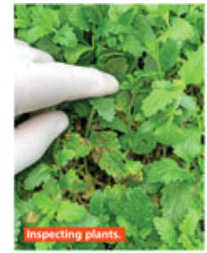
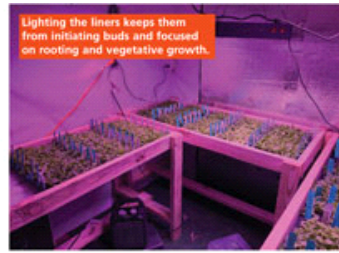
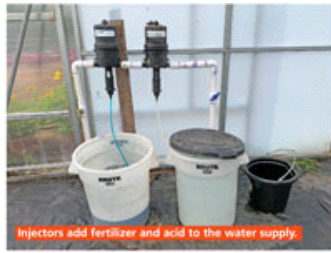
Scouting for pests

Growers should be scouting for pests on a weekly basis. Monitoring sticky cards can give you a sense of the insect population in your greenhouse. It can also tell you what insecticides are working. Charting your data on a graph can help you find trends and keep you on track.

Scouting for disease

Vigilant scouting for disease can help stop a small issue from becoming a big problem. Begin by checking the new plants or cuttings as soon as they arrive at your facility. After sticking or transplanting, set a regular schedule for scouting. At a minimum, review the crops at least once a week. If you have an area of the greenhouse that has higher humidity, that could be considered a problem area and may require more frequent inspections.

Taking the time to focus on the basics can make a big difference in your growing operation. Keeping track of your failures as well as your wins can help your business run more efficiently, be more profitable and ensure more success down the line. **GT**



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