

Do's and Don'ts in the Container Nursery

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Do

- ✓ think out of the container occasionally.
- ✓ test irrigation water during a very dry and very wet period to establish benchmarks.
- ✓ monitor pH and nutrition.
- ✓ monitor pH of incoming pine bark.
- ✓ look at the roots
- ✓ plan for run-off water.
- ✓ catch and recycle irrigation water.
- ✓ strive to catch 100% of run-off
- ✓ plant quality liners.
- ✓ perform the various tasks timely to gain the optimum benefit.
- ✓ record daily the tasks completed. It will help in future.
- ✓ spray to prevent dogwood borers: (E.g. - flatheaded apple tree borer in maple, oak and cherry liners; lilac borer & banded ash borer in ash liners; maple shoot boring caterpillar).

- ✓ spray dormant oil in Feb/March on crops likely to have mites (hemlock, arborvitae, juniper), adelgid (white pine) and scale (mulberry, lilac, euonymus).
- ✓ leave lower leaves and branches to generate more caliper.
- ✓ spray thiophanate methyl (Cleary's 3336) immediately after major pruning to protect the wounds from canker diseases.
- ✓ strive to keep straight central leaders in shade trees.
- ✓ replace filters in respirators and tractor cabs each spring.
- ✓ scout for pests
- ✓ stand fallen containers up before watering
- ✓ prevent erosion
- ✓ be honest and strive to present a professional image; personally, at office, at trade shows.
- ✓ avoid stress, monitor container moisture frequently.
- ✓ maintain machinery: change air filters & oil filters on schedule; lubrication.
- ✓ protect equipment from the elements whenever possible.
- ✓ plan ahead.
- ✓ attend educational sessions, field days, and workshops whenever possible.
- ✓ support your local nursery association
- ✓ look at the roots
- ✓ install a backflow prevention valve
- ✓ determine how much water is applied in tenths of an inch per hour (unit of time)
- ✓ confirm all sprinkler heads are the same brand, output, spread, etc

- ✓ check for the uniformity of the irrigation distribution pattern with rain gauges
- ✓ organize plants by container size and with same water requirements by zone
- ✓ plan for and provide adequate winter protection; but plan for the unexpected
- ✓ support gravel with Geotextile fabric, especially in roadways; rather than mash gravel to China
- ✓ use cyclic irrigation to reduce amount of water required
- ✓ base amount of water applied on plant need and not a time
- ✓ compare the water volume applied to the volume of leachate to adjust application rate
- ✓ rain events of $\frac{1}{4}$ to $\frac{1}{2}$ inch can be substituted for the next irrigation
- ✓ design water collection structures to retain about 90% of the water applied plus the first half inch of rainwater runoff.
- ✓ manage water runoff; collect to reuse
- ✓ practice good sanitation practices in and around the nursery
- ✓ turn or move stored pine bark monthly and keep it moist. Check it's pH and EC
- ✓ practice IPM (integrated pest management)
- ✓ maintain records of pesticide applications
- ✓ keep pesticides secure and protected from getting wet or freezing
- ✓ calibrate all pesticide application equipment frequently.
- ✓ dispose of pesticide containers according to label instructions
- ✓ store pine bark on a concrete slab located on high ground, where water runoff cannot enter, bringing seed and pathogens

- ✓ look at the roots
- ✓ use substrates (media) with added controlled release fertilizer immediately before they begin releasing salt (nutrients) and damage roots when potted
- ✓ uniformly mix all amendments into the substrate (media) (E.g. -organic amendments, controlled release fertilizer, minor elements, lime, etc)
- ✓ record daily the crops potted, the substrate mix and the lot numbers of the fertilizer.
- ✓ monitor soluble salts (EC) every 4-6 weeks during the winter if additional fertilizer was added during the summer or fall to stay ahead of problems
- ✓ place large containers or barrels throughout the production area for labor to throw trash, plant debris, weeds, etc into rather than throw onto the floor
- ✓ instruct labor to pull dying plants or culls to the roadways when discovered. Haul them away periodically.
- ✓ look at the roots
- ✓ realize the most important person is the person that is in charge of the irrigation
- ✓ plan what labor will do next, tomorrow, next week and next month. Are the necessary inputs available (E.g. - containers, fertilizer, poly, pruners, tape gun, pesticides, etc)?
- ✓ maintain a supply of sprinkler heads
- ✓ space plants to allow sunlight to reach the lower branches and grow a quality plant
- ✓ begin with a quality, disease free liner; with a good root system

- ✓ plan how to market the crop
- ✓ read the UT Extension Container Production handout and the BMP written by SNA. Ask about what you do not understand

Do Not

- ✓ do not cut too many of the fibrous roots from liners in preparation to plant.
- ✓ do not plant too deep.
- ✓ do not over fertilize.
- ✓ do not cut branches off too close to the stem, removing the cells that regenerate callus tissue.
- ✓ do not apply dry fertilizer after July 1. Later is likely to invite freeze injury.
- ✓ do not change a successful media recipe.
- ✓ do not overwater
- ✓ do not be afraid to look at the roots
- ✓ do not allow containers to dry out during the winter or prior to a cold spell
- ✓ do not allow piles of substrate to dry out when in storage
- ✓ do not allow weeds in containers, the production area or drainage ditches to seed
- ✓ do not design a level container production area
- ✓ do not allow water to stand anyplace, especially around the containers to spread pathogens.
- ✓ do not allow the cull pile to become a breeding site for pests; burn or chip it frequently
- ✓ do not store substrate (media) in piles higher than 6-8' tall

- ✓ do not spray for pests on schedule but after scouting and determining the economic threshold
- ✓ do not add sand to the media. It causes more bifenthrin to be used to satisfy the fire ant quarantine, plus it clogs the internal drainage in the container
- ✓ do not add additional fertilizer during the season without checking the soluble salts
- ✓ do not discard empty fertilizer bags. Cut out the lot number and keep them in one bag for each potting season. Discard annually.
- ✓ do not straighten a leaning tree in a container by stomping the media with your boot. Pathogens and seed can be introduced into the container with mud.
- ✓ do not allow mud puddles to develop in areas where the water will be splashed onto the crop, spreading pathogens
- ✓ do not place the new hire with no experience in charge of irrigation
- ✓ do not irrigate a zone without first standing fallen containers up
- ✓ do not replace a bad sprinkler head with whatever is available
- ✓ do not expect a buyer to drive up every time a crop is ready

Comm/Cont./Do's & Don'ts in Containers