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## SUMMER HOURS - PLEASE NOTE!

Yard/Will Call Hours  
5:30 am to 2:30 pm

Office Hours  
6:30 am to 3:30 pm

Closed Weekends and Major Holidays

## UPCOMING EVENTS / NOTICES

**May 16**  
**17th Annual Desert Horticulture Conference**  
Sponsored by the Arizona Cooperative Extension Service Tucson Convention Center, Tucson, AZ  
Info: Contact Jack Kelly at 520.626.5161 or visit: <http://ag.arizona.edu/deserthort/>

**May 31**  
**Water Wise Seminar**  
Sponsored by the High Country Xeriscape Council of Arizona Gila Community College, Payson, AZ  
Info: Contact Karen Robert at 928.474.5242 ext. 2235 or visit: [http://xersiscapeaz.org/waterwise\\_seminar.htm](http://xersiscapeaz.org/waterwise_seminar.htm)

**June 6-7**  
**Palm Culture in the Southwest**  
Sponsored by the Western Chapter ISA and the College of Southern Nevada College of Southern Nevada Henderson Campus, Henderson, NV  
Info: Contact WC – ISA at 866.785.8960 or visit: [www.wcisa.net](http://www.wcisa.net)

**June 13-15**  
**American Penstemon Society Annual Meeting and Field Trips**  
Prospector Hotel, Ely, NV  
Info: Contact Bob Pennington at 505.983.4831 or visit: [www.apsdev.org](http://www.apsdev.org)

**June 19-20**  
**American Horticultural Society – Garden School “Gardening with Native Plants”**  
Denver Botanical Gardens, Denver, CO  
Info: visit: [http://www.ahs.org/events/garden\\_schools/08/0806\\_index.htm](http://www.ahs.org/events/garden_schools/08/0806_index.htm) or call 703.768.5700 ext 137

### Survey Says!

Don't forget to send in your survey regarding your preference for the newsletter delivery. Don't miss out on a single issue by letting us know if you wish to continue to receive a printed copy or by digital transmission.

## Touch Points

When you go to your local nursery and stroll down the aisles do you think about what goes on behind the scenes to produce all those gorgeous plants? Probably not. Actually, a plant goes through considerable grooming before you pick it up to admire. Even more goes on to produce shrubs and large trees. We thought you might find it interesting to follow the footsteps of the grower to see what happens.

First, an introduction is in order. Ron “Al” Alewine is our Production Manager. Al has been with the nursery 32 plus years, although you would not know it by looking at him. He has seen many changes in technology and procedures over the years. He has also participated in several relocations of the nursery. The most recent move gave him the opportunity to construct a beautifully designed and laid out production yard that is likely our most efficient yet.

Getting plants to the market starts off with some major planning. As with any business, production

is predicated on demand. Each year the sales representatives provide Al with feedback on what they feel the consumers want in the way of trees and shrubs. Then Al goes about developing a plan of action based on the sales figures from the previous year. He has a pretty good idea on how many plants can be produced in a given space over a specific period of time. This is where the magic begins.

Propagation is the first order of business. Al will present our Propagation Manager, Kelly Jones, with a wish list of plants he wants and a schedule for delivery. Kelly then goes about acquiring seed for the various trees and shrubs we grow. In addition, Kelly also collects numerous cuttings for the plants that are clones. Some trees are produced from grafts for which the understock is grown from seed so Kelly must sow enough to provide for these as well. Some plants like grasses are divided to make new plantlets. Timing can be critical for harvesting seed, rooting cuttings or separating plants. Many species are particular about when they will

germinate or root, and if you miss the correct time to do this then you are out of luck until next year.

Once Kelly has successfully produced the fledgling plants they are shifted into liners or occasionally into larger containers (some trees). We have adopted the use of air-pruning containers that help to reduce the incidence of circling or girdling roots during these formative years. This has proven to be quite valuable in producing a higher quality plant.



**RootMaker® liners.**

(continued)

MAY/JUNE 2008

From here the production process is all about touch “points”. Each time a plant is handled there is a touch point. For each of these required activities there is some labor involved. As you might suspect labor is the major cost involved in plant production. If you think about it, most plants cost about the same as they did 20 years ago. In some cases they are even cheaper. With rising costs (mostly due to the goods produced related to fuel chiefly power, plastic pots and fertilizer) one of the only ways to maintain lower prices is by containing labor costs. Nurseries are constantly looking for ways to increase efficiency to stay competitive in the market.

How many touch points are involved with say a one gallon grass? In the plant propagation department cuttings and seedlings might be handled 8 or more times. Once the young plants reach the production yard they might require 10 or more touch points. Each time a plant is pinched or pruned, fertilized, shifted in container size or even relocated from one site to the next is considered a touch point and each requires labor. There is a saying amongst nursery owners that you can’t possibly sell a plant unless it is moved at least three times.

Once the smaller containers are moved to the growing yard each is provided with an application of a timed release fertilizer so that they will receive a consistent supply of nutrient during the growing season. Long-term crops like trees may require multiple applications of slow-release products. In addition the crops receive a supplemental application of a soluble fertilizer injected into the irrigation system.

Certain plants that require little to no pruning are finished in a short period of time. Some require repeated pinching or light pruning to create a more bushy shrub. For example, a one gallon Senna must be pinched repeatedly to achieve a finished plant.

Some plants can be efficiently sheared with motorized trimmers. Grasses and some shrubs fit into this category and thousands of plants can be trimmed in one day by relatively few workers. Some plants require hand pruning to do the job right. This would include the Lantana species,

Iceland, Rosemary, Gazania and Wedelia. The timing of the pruning operation can be important for certain crops like Verbena and Rosemary. These plants can not be pruned during the summer months as it can be deadly.

Certain species have a limited holding time in the nursery. For example, Bulbine, Drosanthemum, Malephora, Rosemary and Verbena look their best when vigorously growing and compact. If you hold the plants too long then the marketability is lost making the timing critical for their production.

Vines pose a special problem in that they must be vertically staked, often with multiple stakes to create a pyramid. If the plants are placed in close proximity to one another then there is always a potential for the vines to become entangled. Much like unruly schoolboys these plants require constant supervision to keep them separated.

And did we mention weed control? Every attempt is made to keep the soil medium and the growing yard free of weeds, but invariably the strong winds we experience will introduce a few weeds that require attention. Depending on the situation we may need to simply pluck a weed by hand, but occasionally we will resort to herbicides. They say cleanliness is next to Godliness, and it is certainly true in the nursery business. Weed free rows help to keep the production plants free of hitchhikers.

Did you know that growers constantly inspect the root system of their crops? Good growers are often found tipping the root balls out of the buckets to check for root development. In a grower’s mind the root system is far more critical than the top portion. We look for plump, white roots that are just beneath the soil at the edge of the root ball. In the process we can also check moisture conditions and trunk development.

During the summer months the application of water is essential to prevent wilt and to temper the intense heat. Crops are syringed during the afternoon to keep the roots cool. This can be a risky practice for some



**Root ball with plump white roots.**

Certain plants look better if provided more space between the containers. While most one gallon shrubs and grasses are grown “pot-to-pot”, many of the five gallon shrubs like Leucophyllum and Tecoma demand more space to properly finish the plant. This can add a touch point to reposition the plants in the nursery.

Long-term crops like trees require considerably more touch points. This task is under the direction of Allen Bensal our tree quality expert. Allen ensures that superior trees are produced through the proper selection of stock and key management practices. Trees like oak and pistache are trained to maintain a strong central leader. This helps the tree to



**Single dominant leader.**

species as many xeric plants have problems with “wet feet”. Species like Rhus can rot easily in the bucket if there is too much moisture. We have developed our soil mix to be very well drained to minimize these issues. We closely watch the application of water to ensure that the roots are not waterlogged.

develop a slightly shorter, but thicker trunk that can withstand strong winds. Some of the tree species develop best with a multi-trunk branch system. This process also requires training to properly orient the primary branches. Trees like desert willow, mesquite and palo verde are commonly grown in this manner.

Allen and crew are also responsible for the placement of nursery stakes on the trees to ensure a straight trunk. What you may not realize is that the nursery stakes are constantly being switched as the trees develop. Taller stakes are placed on the trees as they grow, with anything from 4 to 8 foot stakes being positioned on the trunks during their time at the nursery, each time adding a touch point.

Pulling the plants from the production area is the last step before the plants take their journey to their new homes. Hoffman Carlos heads up our Dispatch Crew. Prior to shipment, Hoffman’s loading dock crew selects plants from the various production areas and places each order in a congregation area. Here they are closely monitored for necessary irrigation and restaking. Labels are applied to the containers if requested. Care is taken to load the plants in the order in which they will be delivered which is determined by the route developed. The plants are carefully placed on portable racks or simply placed on the truck depending on the plant type. Again the timing of the operation is critical to ensure that the plants are not frozen or super heated depending on the season.

Well as you can see there is much more than meets the eye to produce a quality plant. To get each step right is much like moving through a dance routine. The more you practice the more fluid the steps become. We hope you have enjoyed following in the footsteps of the growers in our nursery and have a greater appreciation of the plants we produce.