

Winter: Time to Prepare for the Year Ahead

Although avocado trees never go truly dormant, they do slow down in winter — a state known as quiescence — making it a good time to review the season that just ended and make some preparations for next year.

Irrigation

Hopefully, there will be some winter rains coming and the grove irrigation can be shut off for a little while. This is the perfect opportunity to perform necessary system maintenance and make sure the system is fully operational ahead of next summer. A good starting point is to check your system's distribution uniformity (DU). DU is a measure of how uniformly your system is applying water across each irrigation block. That is, if you have a microsprinkler system with eight gallon per hour

microsprinklers on each tree, how close to eight gallons per tree is your system putting out? Are some trees only getting four gallons while others are getting 12 gallons? Your local Natural Resources Conservation Service office offers DU testing for little or no cost. A DU of one means your system has perfectly uniform distribution (100% uniformity); anything less than one means your system has less than perfect uniformity. With a well-designed system and modern pressure compensating emitters you should be able to achieve a DU of 0.85 (85% uniformity) or better.

Aside from a DU test, there are many other things that easily can be checked to help improve your irrigation system. Does your system have the same brand and size (output) microsprinklers across an irrigation block? It is

not uncommon over time for systems to become a hodgepodge of sprinkler manufacturers and outputs as broken ones are changed and you don't have the exact replacement on hand. Winter is a good time to walk your system and make sure each block is consistent with the same brand of microsprinklers and the same output volume. Also, if your trees need a higher sprinkler output or larger spray pattern winter is the time to make those changes. Trying to make those adjustments mid-season or right before the first heatwave is a sure way to send your trees into shock.

This also is a good time to check all your system's valves — manual or automatic — to make sure they are all opening and closing smoothly and there are no leaks. Filters and pressure regulators are other components that can introduce large variation in a system's DU if they are not functioning properly. Filters should be thoroughly cleaned and pressure regulators checked to make sure they are doing their job. Any worn or non-functional parts should be replaced.

Fertilization

Every grower should have had a leaf tissue sample (or series of leaf tissue samples) taken in September-October for nutrient analysis. Now is the time to sit down with those reports, your historical yield data, and soil analyses, if you have them, and prepare a fertilizer plan for next year. If you don't feel con-





fidient in doing this yourself, you should consult with a reputable crop adviser or farm adviser.

In addition to needing to fertilize to support the growth and development of the crop you have on the tree, you also need to consider the crop that will be setting with bloom next spring. However, crop load isn't all there is to it. Plant nutrition (i.e., fertilization) supports plant health much the same way that good nutrition supports human health. Have your trees been damaged by fire or heatwaves? Do they suffer from phytophthora root rot? A good nutrition program will help fire or heat-injured trees recover and come back into production.

For an in-depth discussion of fertility management for tree health, please watch the recent video that was recorded at the California Avocado Commission's Pine Tree Ranch featuring a discussion between Dr. Danny Klittich, Doug O'Hara and myself (<https://bit.ly/2V2igvE>).

Harvesting and Pruning

Harvesting and pruning are two activities in avocado production that aren't generally associated with winter.

However, winter is a good time to give some thought to both activities. Do you need to prune your trees next year? If so, then you may want to start thinking about which blocks need pruning and prioritize them for harvest early in the season. The growth produced following pruning may be capable of flowering and setting fruit the following spring if pruning is done early enough so the growth can mature physiologically and respond to environmental signals to produce flower buds. Typically, in California those environmental signals and the transition to flower bud development occur in August, so pruning done after June is unlikely to be mature enough to flower the following spring.

Harvesting strategy also can help you manage your trees' development. A large crop held late into the season will suppress

summer flush growth, reduce flowering potential for the following spring, and potentially throw trees into severe alternate bearing. Winter is a good time to assess your crop load and tentatively plan for a size pick to reduce crop load on heavily cropped trees. Similarly, light crop loads may be an indication that your canopy is not getting enough sunlight and some pruning is necessary to stimulate growth and let light into the canopy (see "Optimize Productivity by Pruning for Maximum Light" in the Spring 2019 *From the Grove*).

Lastly, remember the best laid plans often go awry so be prepared to make adjustments come spring and as the season progresses. If we have learned anything over the past couple of years, it's that Mother Nature is a really good curve ball pitcher. 🍊

