DLC RESOURCES, INC.

MAINTAINING CITRUS TREES

Citrus Fertilization 101

Citrus trees need three primary nutrients: NITROGEN - PHOSPHORUS - POTASSIUM. Phosphorus and Potassium, along with a multitude of other micro-nutrients, are in most cases sufficiently provided by the soil; however, nitrogen needs to be applied regularly.

Any kind of citrus fertilizer will provide your trees with the right nutrients, but any fertilizer with a high percentage of nitrogen will suffice. Fertilizers are labeled with the percentage of Nitrogen (N), Phosphorus (P), and Potassium (K) they contain. For example a 20-10-10 fertilizer has 20% Nitrogen, 10% Phosphorus and 10% Potassium.

When shopping for fertilizer make sure you are getting the best value for your money by purchasing the highest amount of nitrogen per dollar. If you have the choice of purchasing a 10 pound bag of 20-10-10 for $9.95 or a 10 pound bag of 12-5-8 for $8.95 the higher priced bag is a better value.

How Much Nitrogen ?

You will also need to calculate the amount of actual nitrogen you will need to feed your citrus tree. To find the actual amount of nitrogen in a bag of fertilizer multiply the weight of the bag by the percentage of nitrogen. In a 20 pound bag of 12-5-8 you have 2.4 pounds of actual Nitrogen (20 x 0.12 = 2.4). Citrus trees require an increasing amount of nitrogen as they mature.

When Do I Fertilize?

The best time to apply fertilizer to citrus trees is just before they bloom, typically in January or February. You don't want to give them their total annual nitrogen requirements at one time though. A good rule of thumb is to fertilize on the holidays - Valentines Day (mid February), Memorial Day (end of May) and Labor Day (beginning of September). This way they receive a constant supply of nitrogen when they first start to bloom, just before the heat and just after the heat.

Nutrients

It's not easy keeping your citrus happy! It is very important for citrus trees to recieve the right amount and the right kind of nutrients. Nutrient deficiencies can cause discoloration in leaves and adversely impact the taste of the fruit. On the other hand, over fertilizing can burn your citrus trees and drastically alter the ph of the soil. If your citrus is unhealthy or problematic it may be a good idea to get your soil tested. The Arizona Cooperative Extension can refer you to the closest lab - https://extension.arizona.edu/local-offices/maricopa-county

Sunburn On Trunks

One of the challenges with growing citrus trees is sunburn, especially where the trunk and larger lateral branches are exposed to intense sunlight and have not been exposed before. This causes the bark to split, crack, and peel, exposing the wood beneath to diseases and harmful insects.

To prevent sunburn, avoid pruning during the spring and summer. If it is necessary to prune, protect the exposed areas by painting the trunk with a white,

water-based latex paint and water mixture or shade the trunk with a loose cloth or paper trunk wrapping. Avoid consistently moist wrappings by changing when necessary.

To treat an already damaged tree, remove any cracked or peeling bark from around the wound to allow the surrounding healthy tissue to re-grow and cover the wound. If removing bark will cause more damage to the tree, leave it in place. Also, be sure the tree is receiving adequate irrigation and watch for bacterial or fungal infection and apply fungicide according to the product label.

Water and Stress

Because water carries nutrients throughout the tree, the first noticeable sign of water stress is dull, curling leaves. With continued stress, dead leaves will fall off, followed by flowers and then fruits. Surprisingly, citrus will often bloom about one month after being drought-stressed, if allowed to recover.

Rather than irrigating citrus daily, which does not allow all of the roots to get water, follow the watering intervals in the table below and utilize shade and mulch to minimize evaporation. A mature citrus tree uses about 60 inches of water a year which, depending on the size of the tree, can correspond to 17 gallons of water per day in the winter and as much as 135 gallons per day in the summer.

Applying Water

Basin irrigation is often the easiest irrigation method for the homeowner. This method uses a 4- to 8-inch high dike around the tree, at least as large as the canopy but preferably extending one foot beyond to accomodate larger roots. As the tree needs water, simply fill the basin.

Flood irrigation is used in older Arizona neighborhoods. This is very effective, but if you have grass around the tree you may need to apply additional water to wet the entire root zone.

If using bubblers, emitters or soaker hoses, be sure to buy enough to distribute the right amount around the entire base of the tree and design the system so it can expand to provide water further from the trunk as the tree grows.

Frost Damage

With preparation, most attempts to protect citrus from frost are successful. Steps that can be taken prior to the first frost or freeze are the most important. Choosing the right location for your tree is vital to its cold weather protection. A wind-protected, sunny area is the ideal location for citrus trees. Because actively growing trees are more sensitive than dormant trees, they should not be pruned in the fall, as this may stimulate new, tender growth.

Steps that can be taken for short-term protection are: covering the tree, providing additional heat, maintaining soil moisture and spraying the canopy with water.

Despite the best preparation, sometimes a tree will be damaged by frost. In this case, do not remove damaged leaves or wood until the spring growth shows the extent of the damage. See “Preventing Frost Damage” article for further information.

References: 1. Wright, Glenn C., Protecting a Citrus Tree from Cold. The University of Arizona, AZ1222. ag.arizona.edu/pubs/crops/az1222.pdf. Mar 2001. 2. Wright, GLenn C., Irrigating Citrus Trees. The University of Arizona, AZ 1151. ag.arizona.edu/pubs/crops/az1151.pdf. Feb 2000.