

Hurricane toppled trees

Recovery after resetting

Resetting and rehabilitation of *hurricane-toppled* trees

By Bob Rouse

his article is a sequel to the May article, "Hurricane preparation and recovery for Florida citrus groves." Here we will discuss resetting trees blown over and toppled with exposed roots. As soon as passage in the grove is safe and equipment can be manned, resetting leaning and toppled trees should begin.

A priority should be given to trees with exposed roots. First complete a survey to locate damaged trees and determine the amount of root system remaining in the ground and the amount of soil around exposed roots.

Mounding soil on exposed roots and covering with prunings from the tops will provide shade to keep roots alive until resetting is possible. There is no good rule-of-thumb about how much root system must remain in the soil to guarantee recovery.

Depending on how soon after the storm resetting occurs will determine the recovery possibility of the tree. However, a tree with exposed roots that have died and has less than 50 percent of the root system securely attached may be a good candidate for removal and replanting a new tree.

The amount of canopy pruning should be in proportion to the amount of root system exposed or lost. Balance the amount of viable root system remaining in the soil with the top. Pruning the top before up-righting the tree reduces the weight of the tree, making it easier to stabilize and reduces transpiration water loss during recovery. Treatment of pruned cut surfaces is not considered necessary.

A heavy-duty emergency tow strap made of woven synthetic material is best used to pull trees upright. Tow straps are available at auto supply stores. Ropes, chains, and cables can injure bark and can be dangerous to workers.

During resetting, it may be necessary to remove damaged and exposed roots to allow the tree to be up-righted. Removal of soil may be necessary to permit the tree to be positioned upright as it was before the storm and to reestablish the soil line. Shovels and a backhoe expedite this process. It may be necessary to use bracing to secure the tree in the upright position until new roots establish in the soil to anchor the tree.

Direct sunlight to limbs after severe pruning (buck horning) can result in sunburn of exposed bark. Spray or hand painting exposed bark with white latex paint diluted with water in a ratio of 1:1 or 1:2 will reflect direct sun and prevent overheating and splitting of the bark.

IRRIGATION

Following resetting of fallen trees, a crew needs to re-establish the irrigation system and ensure it is in good work-ing condition. Damaged trees with lim-

ited feeder roots will require irrigation to prevent drought stress resulting in leaf loss and dieback of emerging shoots. Irrigation schedules may need to be adjusted to increase frequency (every other day) and maintain the same amount of water as needed for undamaged trees.

FERTILIZER

Fertilizer needs for recovering trees should be reduced to be proportional with the amount of tree canopy lost. This is a situation where a controlled-release fertilizer can save time and labor. Although nitrogen is the primary nutrient needed to re-establish the tree canopy in the short run, any complete formulation of low or medium analysis fertilizer can be used.

DEBRIS

Debris cleanup and hauling can add additional cost. In an environmentally sensitive world today, it might serve to obtain a wood chipper and mulch around the trees to conserve water. Only course textured chips should be used in a thin layer. Heavy mulching can lead to increased soil fungal problems. Wood chips should not be within 12 inches of the tree trunk.

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