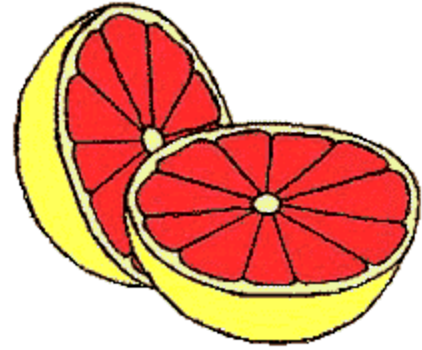


Cold Protection for Citrus Trees

Citrus trees can be damaged by a severe freeze. Consequently, cold protection practices must be implemented to minimize the damage. The duration of freezing temperatures can be more critical than the minimum temperature, i.e., a brief drop to 24 degrees F may not cause as much damage as several hours at 26 degrees F. Moreover, exposure to cold weather increases the ability of citrus trees to withstand cold, as short days and cool weather condition the tree to stop growing and acquire greater cold-hardiness. For example, Satsuma trees may withstand 18 degrees F in early February when it is completely dormant and most cold-hardy, but may be seriously damaged at 24 degrees F in early December.



The tops of citrus trees may be draped with blankets, quilts or plastic for further protection. It is not necessary to encase the tree completely. Put such coverings on and anchor them securely the afternoon before the freeze. Remove plastic coverings during sunny days to prevent cooking the trees. Permeable covers can be left in place until freeze danger has ended.

Additional heat can be provided and is very effective in combination with covers, particularly if the cover does not completely encase the tree. Incandescent lights (such as trouble-shooter lights) in the tree or small electric heaters under the tree generate considerable heat. Exercise extreme caution with electrical equipment outdoors, as many freezes begin with strong winds and often include precipitation.

A gas lantern or camp stove will burn for 10 to 12 hours on a tank of fuel, but will require pumping up once during the night. The propane types do not require pumping. These can be placed on the ground beneath the tree. A portable gas grill works fine on low heat if there is room to place it under the tree, but leave the lid closed.

A water sprinkler placed over the tree (without the other methods) can prevent freezing by covering the tree with ice. But, the sprinkler must be started before the temperature drops to the critical level - 28 degrees F on calm nights, 30 degrees F on windy nights - and must run continuously until the temperature is sufficiently above freezing that ice in the shade begins to melt. However, the ice load can cause significant limb breakage and a freeze lasting several days can result in excessive waterlogging of the soil.

The information in this article was provided by Julian W. Sauls, Extension Horticulturist, Texas A&M.