

**COASTAL GARDENER**

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**Author's Notes: Rehabilitation of Freeze Damaged Plants.** It has been several weeks now since the great January freeze of 2007. Plants that were damaged are by now showing most of the effects of the freeze injury.

The following information was taken from a bulletin prepared by Nick Sakovich and Ben Faber – Farm Advisors in Ventura County.

Seriously frozen leaves collapse, dry out, and remain on the plant. Foliage from recent flushes is most susceptible to this damage. If twigs or wood have been seriously damaged, the frozen leaves may remain on the plant for several weeks. If the twigs and wood have not been damaged severely, the leaves are rapidly shed. Plants losing their leaves rapidly is often a good sign and is not, as many growers believe, a sign of extensive damage.

Cold damage to the twigs appears as water soaking or discoloration. In older branches and trunks it appears as splitting or loosening of bark where the cambium has been killed. Bark may curl and dry with many small cracks. Dead patches of bark may occur in various locations on limbs and trunk.

Injury to the foliage and to young trees may be immediately recognizable, but the true extent of the damage to larger branches, trunks, and rootstocks may not appear for on to four months following the freeze. No attempt should be made to prune or even assess damage from the frost until spring when new growth appears.

**WHITEWASHING**

The only treatment that should be done rapidly after a freeze is whitewashing. Often the most severe damage following a freeze results from sunburn of exposed twigs and branches after defoliation. Avocados and lemons are the most susceptible to sunburn, oranges not as much. But if the tree has been defoliated, applying whitewash would be precautionary. Temperatures do not have to be extremely high to cause sunburn.

## **PRUNING**

Pruning should be carried out to prevent secondary pathogens and wood decay organisms from slowing tree recovery. Again, however, there should be no rush to prune. Premature pruning, at the very least, may have to be repeated and, at the worst, it can slow tree rehabilitation. It should be remembered that when pruning, all cuts should be made into living wood. Try to cut flush with existing branches at crotches. Do not leave branch stubs or uneven surfaces. Tools should be disinfected in bleach or other fungicide before moving on to the next tree.

The extent of pruning is dictated by the amount of freeze damage:

Light Damage: Where only the foliage and small twigs are injured, pruning is not required.

Medium Damage: Where a considerable part of the top has been killed, but the trunk and main crown limbs show little damage, branches should be removed back to living wood above vigorous sprouts.

Severe Damage: Where the top and crown limbs are severely damaged, but there are sprouts above the bud union, the tree should be cut back to the uppermost sprout.

Extreme Damage: Where trees are killed to the bud union or the rootstock has been girdled, the trees should be removed and replaced with new trees.

The above information was abbreviated due to space limits of this column. If you would like the full text of this bulletin, contact the **Coastal Gardener**, 624-A West Foster Road, Santa Maria, or the **Ventura County Extension Office**, 669 County Square Drive #100, Ventura, CA 93003-5401.