



TAKING CARE OF FROST DAMAGED YARDS

STARNOTE 110
June 2009

What to do after a severe freeze

Faced with a yard full of frost damaged plants, often the first impulse of the gardener or homeowner is to start pruning, removing and replacing. Unfortunately, even in the aftermath of a light freeze, this is not the best course of action. After a hard freeze the results can be catastrophic.

RECOVERY: Any plant that is still alive will attempt to recover from freeze damage. The threshold of absolute damage (death) will be different individually and of course for each species. Be assured that many plants that look completely dead will begin to recover when the weather warms up. The method of recovery and resulting appearance will not always match our idea of how the plant should look or behave in our gardens. Many plants will have lost all their woody parts, but will begin to re-grow from root or stem tissue. This is normal and typical recovery process for the plant. However, the temporary appearance of the landscape may not be acceptable to some gardeners. This means that each site will have to be evaluated. Do you let the plants recover in their own way or time or replace them with already vigorously growing (and pleasingly shaped) specimens? This decision will be particularly difficult with cassias, eucalyptus, acacias and African Sumacs.

PRUNING OF FROST DAMAGED MATERIAL: The extent of damage will not be apparent until re-growth starts in warm weather. While initial damage estimates can be made by observing foliage, tissue rigidity or stem flexibility, many plants are still in the process of realizing damage inflicted by the freeze. In some cases, root systems or circulatory damage is not yet apparent. Some of the plants so damaged may show no outward signs until heat or other stress causes the plant to collapse. What this means to you is that pruning should be delayed in all cases where frost damage is apparent (including discoloration). When growth resumes in the spring, you will easily see which stems or branches are not recovering fully. By the beginning of March, many plants, like Mock Orange, Photinia, Privet and Texas Ranger Sage will leaf out and show generally good recovery. Species like Eucalyptus and African Sumac probably won't show any signs of re-growth until April or May. Replacement and/or pruning decisions might need to be delayed until May, unless the decision to replace these plants with other species has already been made.

PALMS: Palms and other monocot plants such as yuccas, tuberous tropical lilies, irises and some grasses are particularly prone to damage through pruning, because their method of re-sprouting is so different from other plants. The palms are particularly vulnerable because they have only one growing point, called the heartbud. If this heartbud is damaged, palms are incapable of manufacturing a new one. Exceptions are clumping palms such as the Mediterranean Fan Palm, or tropical branching palms, not grown here. This is why it is critical to not prune palms until active growth resumes. Any additional stress on the heartbud, or the removal of the insulating thatch (dead leaves) could cause the palm to die. Most palm varieties growing here have not undergone weather colder than ours any place else in the world they are grown, so data on recovery is spotty. Since we know that nothing active can be done to help the palm, a course of nonintervention is strongly indicated. The Mediterranean Fan Palm may respond to the freeze by sending up many new shoots from the base. When they appear, they can be retained or removed as the owner wishes. Generally, no pruning should be done on any palms until at least five strong new leaves are visible.

After the catastrophic freeze of December 1990, inspections of local palms conducted early the following March showed a large number with strong signs of recovery. The majority of these palms that were over six feet tall and in the ground for over a year, did in fact recover. Some problems developed with fungus in the crowns of freeze-damaged palms. If you suspect this, or wish to prevent it, treat the crown with a drench of copper-based fungicide.

OLIVES: Olives damaged by a freeze can be pruned beginning in March. Pruning should consist mainly of removing twiggy secondary growth, while allowing scaffold branches to remain. Olives pruned in this manner should show a generally strong recovery by mid-summer. **Don't spray fruit-inhibiting chemicals on trees noticeably damaged by a freeze.** Most of these chemicals also have growth-inhibiting properties, which can keep the tree from re-sprouting new leaves and shoots. Fruit is not expected on the majority of trees since most flower buds were destroyed by the freeze. Some trees will be undamaged by the freeze. These can be sprayed normally.

EUCALYPTUS AND AFRICAN SUMACS: Part of the problem with these trees is their inability to re-sprout well from freeze-damaged branches. Wood loss on these trees will range from minor to total depending upon age, size, exposure and growing conditions. By May you will have a clearer picture of damage, but even then the long-term effects may not be evident. Homeowners may want to evaluate the trees for extent of damage, importance of the tree to the landscape and emotional attachment then weigh replacement with better suited species. Most Eucalyptus and Sumac trees re-sprout from the roots and many will re-grow to 6 feet in one growing season. The choice, of course, is yours.

BEDDING PLANTS: Ground cover plantings Like Hearts and Flowers, Gazania and Australian Racer will have to be individually evaluated. In some cases they will be damaged enough to warrant replacement. Decisions on this will have to be based on individual economics, timing and aesthetic factors.

LAWNS: Most Fescue lawns are made dormant by extremely cold weather. Those that have not revived by mid March should be thoroughly raked to remove thatch and then fed with a high nitrogen fertilizer such as *WinterGem*[®] or *Nitra King*[®]. Thatching lawns before fertilizing will remove dead grass and improve water and fertilizer penetration. The following procedures should be used when applying fertilizer:

- Wet lawn thoroughly. Make sure ground is thoroughly soaked to a depth of 3-4 inches.
- Apply fertilizer according to package instructions.
- Water thoroughly so fertilizer disperses throughout wet soil.
- Avoid using Weed-and-Feed formulations at this time. The chemicals used for weed control can have a damaging effect on ornamental plants in and near lawns.
- Bermuda lawns should be treated normally. Bluegrass should be treated the same as fescue for recovery purposes.
- Stressed plants in lawns should have an area free of grass around their bases. This will help protect them from lawn fertilizers and is generally healthier for the plants even under normal circumstances.

FERTILIZATION: Plants damaged by freezing should not be fertilized until active growth resumes in the spring. The loss of growing tissue and leaves experienced by most freeze or frost damaged plants inhibits their ability to metabolize and use fertilizers. In some cases, depending on soil chemistry and plant tolerances, more damage could result from improper and over-zealous fertilization. This is again critical for palms, which should not be fertilized until hot weather in June or July, and again in August or early September.

When fertilizing does take place, caution should be used, taking into account the compromised state of many plants. Probably the most effective fertilizers will be those which are balanced and which have a low analysis (9-9-9 or below), and those which are organically based like *Star Nursery's Dr. Q's*[®] *Fertilizers*, traditional fish emulsion. To help soil microorganisms re-establish, homemade compost, commercially available inoculants or manufactured fertilizers with microorganisms present will be helpful. Top dressings with organic material like *Dr Q's Paydirt*[®] or *Humus-Gro* will not only improve the soil, but also reduce stress on roots due to soil superheating. **IN NO CASE SHOULD STRONG DOSAGES OF HIGH NITROGEN BE USED ON LANDSCAPE PLANTS following a severe freeze.** Even plants with no apparent damage can be disturbed by rapid growth caused by excessive nitrogen.

WATERING: Proper watering of damaged plants is vital. While moist soil is necessary in almost all cases to avoid further damage from drying winds, plants which have had foliar damage or root damage have a compromised ability to make use of soil moisture. This means that the watering regime must be carefully watched, and the soil watered only when it begins to dry significantly. Doing otherwise will result in root rot and further losses. The reduced soil evaporation rate in cool weather combined with reduced demand from damaged plants indicates watering no more than once a week. Lawns should do quite well in cold weather with approximately 10 minutes once a week, or even less. Even with these guidelines, you should watch and adjust watering schedules according to prevailing conditions. *Over watering at this time would be devastating to plants that have been significantly damaged by a severe freeze.*

SUMMARY - conservatism is called for in all gardening and landscaping activities. Too much water, fertilizer or pruning could be very detrimental and could cause much more loss than might be experienced otherwise. It is comforting to know that not doing anything at all except watering appropriately, at least until growth resumes in the spring, is the course of action least likely to cause damage. While the prospect of facing a devastated yard for many more weeks is disturbing, facing costs of a full landscape replacement because of impatience and improper maintenance is even more disturbing. Read our Gardening Tip #1045 for more information and make full use of local resources such as the University Cooperative Extension, State Department of Agriculture, UNLV Arboretum, the Springs Preserve and your local Star Nursery. Remember, replacing in haste will waste plants and money!

© 2009 Star Nursery, Inc.