

NOW WHAT? - Gardening after a freeze

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Patience is a difficult virtue and it is never more difficult for a gardener than after a freeze. If we were lucky enough to have advance warning, we old hands have spent hours protecting our plants and we want to know right away how they did and to fix what needs fixing. We want to rip off those coverings, water and fertilize those babies and prune off the ugly damage. Unfortunately, one of the worst things to do is to fertilize or prune right away. I read a number of articles and here's an explanation of what happens during a freeze and a summary of what the experts say about helping plants after a freeze.

Frost occurs when air temperatures dip below 32 degrees and ice crystals form on plant leaves, injuring and sometimes killing tender plants. Clear, calm skies and falling afternoon temperatures are usually the perfect conditions for it. The damage caused by frost depends on both the low temperature and its duration.



The Farmers' Almanac defines the terms this way:

- **LIGHT FREEZE:** 29 – 32 degrees. Tender plants killed with little destructive effect on other vegetation.
- **MODERATE FREEZE** 25 – 28 degrees. Wide destruction on most vegetation with heavy damage to fruit blossoms and tender semi-hardy plants.
- **SEVERE FREEZE:** 24 degrees and below. Heavy damage to most plants.

So we first determine what kind of freeze we had (and this one was certainly a bad one) and then we can have a better idea of what to expect.

Damage from a freeze occurs when ice crystals form within plant tissues, damaging their cells. Leaves and tender growth are usually affected first. They appear wilted, but later the wilted parts turn brown or black and die. Our first impulse is to cut off the ugly damaged growth right away, but it's best to leave the dead material on the plants that will remain outdoors for a while because the dead tissue provides insulation for the rest of the plant. We have to be sure we can eliminate the possibility of another frost that would damage the plant more extensively. Also, waiting for new growth will make the extent of the damage more clear and we will be less likely to accidentally remove living tissue that survived the freeze. So we wait until the danger of another frost is past. We wait for other reasons as well and those reasons will be explained later in this article.

Fortunately, one thing we CAN do right away is water. For one thing, watering the plant can defrost the soil. Secondly, water will help cold-shocked plants recover from the trauma and stress. When plants experience freeze, moisture is removed from their tissues; in fact, they look as if they are wilted. Watering them allows them to rehydrate. One source recommended an inch or so of water, but I think just soaking them will get the job done.

We should wait to fertilize. Even though we would like to give our plants a little extra feeding to bring them around, new growth would be in danger as long as the possibility of frost exists. This is because frost-damaged plants are unbalanced in that while they have fewer leaves, they still have the same root system. This imbalance can result in extensive new growth over the entire plant in the spring once regrowth begins. Because the plant needs the new shoots to grow at a moderate rate, we should use little or no fertilizer and water (after the first soaking) with moderation. Too much nitrogen can encourage suckers and water sprout growth while too much water regularly can damage roots. So again we wait.

But to get back to that pruning we all want to do, let's check the predicted last frost date for our area. Google last freeze date by zip code and you will see just how unlikely our freeze was. In fact the probability of a freeze on or before February 19 was only 10%. I guess we need to remember that Mother Nature is still in charge. Despite the fact that we should be pretty safe from another freeze now, these suggestions still apply to most of what we should do

Here are more specifics on pruning: For container plants wait as long as you can - You may even find that some plants that look damaged immediately after a freeze actually aren't. Natives especially are more likely to survive because they're use to the weather fluctuations in our area.

Light freezes on all but the most tropical plants are usually something the plant can recover from. Hard freezes obviously have more dire results. The bad thing is that you won't really know immediately. Try to give your plants at least several days after you've water them thoroughly. Pruning them in any way right now could cause further damage – like causing them to send out new shoots that will be affected by cold weather that comes later.

IF YOUR PLANTS ARE WOODY, WAIT EVEN LONGER (wait about a month) because when the weather warms you can assess the damage by scratching the bark and looking at the color underneath. Green means it's still alive, even if it's losing its leaves. Black or brown or tan means it's not. So clean up dried leaves on woody plants and leave them alone if you saw green. In warm weather you can cut out the stems that need cutting.

Some perennials might have root damage and you'll be able to divide them out and replant the healthy part if you wait a bit.

- **SUCCULENTS** are more susceptible to damage because they store water in their cells and their bodies. The thick pads and leaves store a great deal of water, as do their bodies and stems. If their interiors are mushy and black after a few days or if interior leaves pull out easily and are mushy and black at their base, they're probably goners. If you see new growth they'll likely survive. Watch them for a period of weeks.
- **TROPICALS** – even severely damaged – may respond in April or May from the roots, so don't be too quick to pull them out. Keep them out of direct sunlight and water them periodically. Putting them in a warm room will cause them to go into shock so put them in the garage or on an enclosed porch or deck temporarily.
- **HERBACEOUS** plants and **PERENNIAL BEDDING PLANTS** like penta, begonia, impatiens, periwinkles, cannas, elephant ears, Bird of Paradise, ginger and philodendron may just collapse. If they have mushy slimy tissue, remove them from the bed to avoid fungus or bacteria spreading. If they haven't collapsed, you'll hopefully be able to prune them back to healthy living tissue. Plants that are annuals elsewhere can be treated the same way. Penta and periwinkles can be cut back if you see green at the base. Remember these plants were a gift. They were not intended to be perennial even though they gave us an extra year or two of bloom.

Remove the dead leaves on **WOODY TROPICALS** such as hibiscus, croton, ixora, schefflera, copper plants, and rubber trees. Prune when you can clearly see which branches are dead by using the scratch test (green = alive; black, blown or tan = dead). Start at the top and work down to see how far the damage went. Remember that you can put off a hard pruning until new growth begins in the spring and alive/dead is easier to determine.

So, dealing with the aftermath of a freeze isn't pretty. So much of our time has gone into nurturing those beautiful sprouts in our yards that losing them is actually painful. However, spring is just around the corner and we will have more opportunity to cultivate those plants we love and experiment with those that are new.

SOURCES: gardening solutions.ifas.ufl.edu ucanr.edu/sites/bcmg nola.com davesgarden.com gardeningknowhow.com farmersalmanac.com