



Protect Your Tender Plants from Frost Damage

by Sue Schieferle UC Master Gardener

Most of us remember those frosty nights last December (2013) when a cold snap hit the San Joaquin Valley. Even though I had prepared my own garden to survive these freezing temperatures, a few plant casualties occurred. Frost injures plants by causing ice crystals to form in plant cells and on the leaf surface. This process makes water inaccessible to plant tissues and interrupts the movement of fluids. When you purchase plants, check the plant ID tag for frost hardiness. Hardy plants will tolerate short-term freezes; semi-hardy plants will tolerate brief freezes; tender plants will be injured or killed by frost. Check the *Sunset Western Garden Book* or your local nursery to identify the frost hardiness of the plants in your yard.

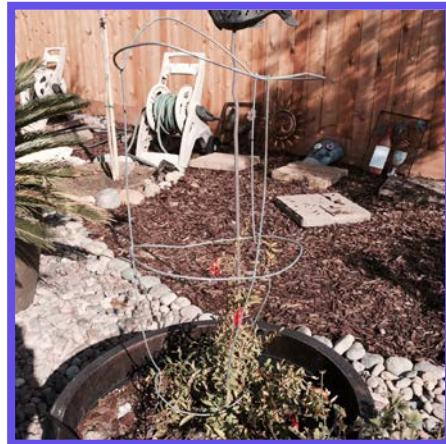


Burlap tucked and staked over potted succulents

Now is the time to prepare your garden for potential freezes. The University of California Cooperative Extension estimates the approximate first frost date in the valley to be mid-November, with a greater probability of frost during December. The lower the temperature and the longer it stays low determines the amount of damage to plants.

Start with these preventative methods:

1. **Site Selection:** Your yard is full of microclimates. The coldest spots in your yard are large, open areas of ground. Low spots invite cold air to sink in. South and west facing walls or fences will help absorb heat during the day. If your tender plants are in movable containers, clustering them in these spots or in sheltered patio areas will help.
2. **Mulching:** Mulching now with a 2-to-4-inch “blanket” of mulch will help keep the root temperature stable. Examples of mulch are shredded bark, compost, shredded newspaper, and leaves.
3. **Watering:** Watering soil thoroughly (except around succulents as their plant cells are storage for water), is beneficial as wet soil holds heat better than dry soil, protecting roots.
4. **Extra Protection:** In addition to all of the above, I cover my tender plants. Row covers (synthetic polyethylene or all-purpose garden fabric), cold frames, and burlap tents will shelter your plants from



Tomato cage over a tender plant

freezing temperatures. Make sure that whatever you use does not block out sunlight and irrigation. Cold frames can be as simple as using a tomato cage with burlap draped over it and staked into the soil. If you use row covers directly on the ground or pots, be sure the cloth is staked securely. Another quick solution is to use plastic sheeting, old sheets, old plastic shower curtains, or cardboard boxes. Be sure to remove these items during the day so the plants can breathe and receive sunlight. Once upon a time, you could put an incandescent light bulb under the cover to generate some heat. However, now that we use LED and CFL light bulbs, very little heat is generated and this is no longer an option.



Burlap tent over the tomato cage

5. Hot Caps: Hot Caps are easy covers for individual small plants or tender vegetable plants. Use an empty milk jug or a large clear plastic container to cover your plant. Be sure there are holes in the top for “breathing room for the plant” and stakes to hold it in place.

Remember, even if you perform all of the above preventative methods, some plants or parts of plants will still succumb to frost damage. If you see signs of damage, do nothing immediately, including pruning off the affected parts or digging up the plant. There may still be healthy new growth in hiding, which will sprout when the weather warms up in early spring. Dead foliage may also help protect lower undergrowth. You can safely unprotect your garden after March 2, which is estimated as the last frost date in our valley.

Take some time soon to ensure that your garden survives an overnight cold snap. Your plants may not look too attractive all covered up, but next spring you (and your plants), will be glad you took these protective methods!

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