

Winterizing Your Garden, Part 2

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Despite the mild fall temperatures in Angelina County our first frost date is mid-November. Today we'll discuss how to protect our plants from freezing temperatures.

Frosts occur on nights when it is clear, and calm, causing warm air to rise and cold air to sink. Sometimes we will see frost in low areas when the official temperature is several degrees above freezing. This had puzzled me, because the temperature must be 32 degrees or lower for frost to form. However, official temperatures are measured five feet above the ground in an enclosure and most of our thermometers are also at eye level. Temperatures in low areas can be much colder than the official temperature since cold air moves downhill like water and "puddles" in low areas.

Freezes occur during the winter months caused by massive movements of arctic air, usually accompanied by winds. The wind makes the temperature the same at all levels. Tender plants have little chance of survival unless protected from the winds.

Plants are damaged the most when temperatures drop rapidly. When fall temperatures gradually cool some plants are able to "harden", and thus are less affected by freezes. Plants are damaged as ice crystals form within the plant and water moves rapidly out of the cells causing the cell walls to collapse. Most frost damage occurs the following morning if the morning sun warms plants too quickly. Water flows rapidly back into the shrunken cell causing the walls to break.

There are several things a homeowner can do to prevent frost damage. Last week we discussed mulches. Mulching protects roots and conserves moisture. One to two inches of bark, or three inches of pine straw or leaves around a plant protect it from

sudden changes in temperature. After the holidays, consider using branches from your Christmas tree to place over your perennial plants. It provides protection while allowing good air circulation.

We have recently had plenty of rain, but often we have dry spells during the winter. If we go for long periods without rain you may need to water. Evergreen shrubs lose moisture all winter and can be damaged by cold winds. Well-hydrated plants survive freezing temperatures better because cells are plumped up and not as fragile.

During a frost, simply covering tender plants will prevent damage. Use old sheets, blankets, cardboard boxes, or buckets. In areas that receive early morning sun leave the coverings in place a few hours to allow plants to warm up slowly. Plastic does not protect very well, as plastic conducts the cold where it touches the foliage. In the morning plastic covering will allow the sun to warm the plants too quickly causing further damage. Do not wash frost off leaves with water, as this will also warm plants too quickly, causing more damage.

Move potted plants off concrete onto protected areas on the ground. Potted plants may also be moved into the garage when a frost is expected. If you have special potted plants, such as citrus, you may consider building a frame, and covering it with plastic. A light bulb could be hung inside on cold nights for gently warming, making sure the bulb is not touching plant material or your frame.

Drain hoses of water, but keep it close at hand if you need to water during the winter. When freezes with cold winds are expected, cover your outdoor faucets with a foam faucet cover, available at local stores. For gardening and yard care information contact the Angelina County Extension Office at 634-6414.

