

Protecting Plants from Freezing Temperatures

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For Immediate Release

How to Protect Plants for Blast of Cold Air

Start by making sure the soil around the plants is moist:

Watering landscape plants before a freeze can help protect plants. A well watered soil will absorb more solar radiation than dry soil and will reradiate heat during the night. This practice can elevate minimum night temperatures in the canopy of plants by as much as 2°F. However, prolonged saturated soil conditions damage the root systems of most plants.

Covering with sheets or plastic:

The covering of tender plants left outdoors during the winter is not always effective nor practical. Covering can help, but only if this practice is done right. Improper cold protection by this method can be worse than no covering at all.

Though temperatures are usually only a few degrees warmer under the covering, this is often enough to get a sensitive plant through a cold night. Coverings protect more from frost than from extreme cold. Covers that extend to the ground and are not in contact with plant foliage can lessen cold injury by reducing radiant heat loss from the plant and the ground. Foliage in contact with the cover is often injured because of heat transfer from the foliage to the colder cover. Some examples of coverings are: cloth sheets, quilts or black plastic. It is necessary to remove plastic covers during a sunny day or provide ventilation of trapped solar radiation. A light bulb under a cover is a simple method of providing heat to ornamental plants in the landscape.

Covering with wheat or pine straw:

Wheat straw or pine straw can be scattered loosely over vegetable crops and probably left during a cloudy cold day, but removed if the next day gets hot. I have heard of newspaper and paper towels laid over the rows also. Just depends how big the area is. Sawdust can be applied to cover the seedlings, but will probably need to be removed the next day. It can be removed with a leaf blower but the sawdust now can not be found to use another night.

Covering with water – use with caution:

Ornamental plants can be protected during a freeze by sprinkling the plants with water. Sprinkling for cold protection helps keep leaf surface temperatures near 32°F (0°C) because sprinkling utilizes latent heat released when water changes from a liquid to a

solid state. Sprinkling must begin as freezing temperatures are reached and continue until thawing is completed. Water must be evenly distributed and supplied in ample quantity to maintain a film of liquid water on the foliage surfaces. Keep in mind this may mean leaving the water on all night. No need to do it 2 nights and not be able to the 3rd. It usually means someone staying up to determine when to turn the water on and determine when to shut it off. An accurate thermometer should be placed near the plant that is to be protected, not on the house 6' above the ground. Irrigation for several days may water soak the soil resulting in damaged root systems and/or plant breakage due to ice build up.

What to do after the freeze:

Water Needs

Plant water needs should be checked after a freeze. The foliage could be transpiring (losing water vapor) on a sunny day after a freeze while water in the soil or container medium is frozen. Apply water to thaw the soil and provide available water for the plant. Soils or media with high soluble salts should not be allowed to dry because salts would be concentrated into a small volume of water and can burn plant roots.

Pruning

Severe pruning should be delayed until new growth appears to ensure that live wood is not removed. Dead, unsightly leaves may be removed as soon as they turn brown after a freeze if a high level of maintenance is desired. New growth and young branch tips may be damaged while older wood is free of injury. Cold injured wood can be identified by examining the cambium layer (food conducting tissue) under the bark for black or brown coloration. Prune these branches behind the point of discoloration.

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