
Missoula County

Integrated Plant Management

Fact Sheet No. 6

Winter Injury in Montana Landscapes

When spring warms the Missoula Valley, it is time to assess our plants for winter damage. Winter damage occurs when snow and ice covers the plants all winter, causing branches and whole plants to bend, droop, split, and/or break. Winter injury also occurs as the result of temperature extremes and fluctuations, and/or from drying winds racing through the valley while the ground is too frozen for the roots to provide the plant with water. Also, snow cover provides a home for rodents during the winter and they can injure the bark and water/nutrient conducting tissue of a plant.

Assess Plants for Winter Injury

To assess plants for winter injury, look for:

- Dried and brown buds
- Dried and brown stems
- Bark splitting and tearing
- Limb and branch breakage

CONIFERS

Injured plants can become targets for disease infections and insect infestations. Bark beetles, such as pine engravers, are attracted to down wood (broken tree tops and branches.) If this debris is not removed, beetle populations may build and move into adjacent healthy trees.

SHADE TREES

Wounded trees are more susceptible to stem-boring insects, particularly poplar, aspen, willow, and birch trees. Stem-boring insects can infest a tree and eventually kill it if left untreated.

LARGE TREES

Large trees can become a hazard if they are injured. An injured tree should be assessed by a professional for falling branch potential, splits in forks, or the eventual falling of the entire tree.

Care for Injured Plants

When new growth begins in the spring, start assessing plants for damage. When weekly temperatures are averaging 45°F. and buds are ready to break, shape and prune trees/shrubs. Also, be sure to remove or burn branches and limbs greater than three inches in diameter.

LARGE TREES

Consult a ***certified*** arborist, forest consultant, or local nursery professional to determine whether your tree damage is repairable. Solutions may include pruning, guying, cabling/bracing, staking, or removal.

SMALL TREES

Even if winter-damaged trees are properly pruned, some discoloration from bacteria and fungi may occur, but little decay will develop. For smaller ornamental trees and shrubs, assess and prune the damaged branches, using the following 3-cut method:

1. Cut part way through the underside of the branch, two to six inches from the trunk.
2. Cut branch top just past the first cut and remove the branch;
3. Remove the remaining stub close to the trunk c just past the branch collar.

Torn bark may need to be repaired. Remove the bark back to where it is attached to the tree. Use a sharp knife to smooth the ragged edges. Try not to expose the green (cambium) tissue which is just under the bark. Keep wounds as narrow as possible since the wider the wound, the slower it heals. To save partially-uprooted trees, keep the soil moist and reposition the tree. Stake or anchor the tree for one to two growing seasons or until it is stable.

NOTE: Use soft, expansive materials on the trunk, ***not wire!***

SHRUBS

Shrubs require shaping and thinning as injured branches are removed. Remove the injured branches back to the ground, or to the main stem, if they are badly broken or bent (will not stand up by themselves, once the weight of the snow is removed.) Drooping branches can sometimes be saved without pruning. Gently pull the branches back into position and tie them to the central stem. This balances small trees and shrubs until the branches become strong.

Spring pruning may sacrifice this year's bloom capacity but will help restore the form of the shrub.

Always prune 1/8" to 1/4" above an outward-growing bud when shaping shrubs because it helps keep centers open (which allows aeration to prevent disease.)

For specific pruning techniques, the following references are available at the:

MISSOULA COUNTY EXTENSION OFFICE
2825 Santa Fe Court \$ Missoula MT 59808

- Pruning Techniques for Deciduous Trees
- Tree City USA Bulletin Nos. 1, 2 and 8
- IPM Fact Sheet No. 7