

Managing Hail Damaged Trees

Hail injury to landscape plants is not an uncommon occurrence, although damage from any one storm is usually localized to a small geographic area.

Hailstones rip and shred leaves, and defoliate branches on the windward side of the tree. They tear bark on young, thin-barked trees, on both the upper surface of smaller secondary branches and the side of the main trunk facing the storm, and damage the underlying vascular tissues. As bark tissue around these injury sites dies, it can coalesce to the point that practically all bark and vascular tissue on one side of the tree is dead. Physical damage to tree bark is usually easy to see on smaller trees following the storm. Mature trees with hail damage may show symptoms later as drying of the dead tissue and formation of callus tissue causes the bark to crack.

Damage to a tree's vascular system limits its ability to move water up from the roots and into the secondary branches and leaves. Movement of nutrients throughout the tree is also reduced. Over the next few years, trees will produce callus tissue to seal off bark wounds and re-establish vascular function. Until then, they have a reduced ability to cope with dry conditions, which in Nebraska are often exacerbated by high winds that accelerate water loss from leaves.

Since evergreen trees hold their needles for several years, they put a greater amount of energy and resources into needle production. This makes defoliation much more serious on evergreen trees than on deciduous shade trees. Evergreen trees may show severe thinning of the needles on the side of the tree that faced the storm. If a majority of the branches are still alive and put out new growth this spring, the tree has a good chance to survive and eventually fill in on the damaged side.

To help your trees recover from hail damage, follow these guidelines:

- Wait to evaluate trees after they have put on their spring growth. Branches that do not have any green leaves or needles, and did not put out new growth are dead and should be removed.

Keep trees well watered throughout the summer by a deep soaking each week, with 1 inch of water applied in one application, over the tree's root area if not provided by rain. Turf irrigation systems apply water more shallowly for lawns than is ideal for trees and shrubs. Avoid running automatic irrigation systems more than twice per week as needed in spring and fall. Water trees separately and deeply.

- Apply a 2-3 inch layer of wood or bark chips beneath trees to prevent soil temperature fluctuations and maintain soil moisture.

Unless a need is indicated by a soil test or symptoms of a nutrient deficiency, do not fertilize trees.

- Protect trees from additional injury by borers, which are often attracted to stressed or damaged trees, and diseases such as Sphaeropsis tip blight of pine. Watch for more information on Sphaeropsis tip blight next week.

Sarah Browning is a Horticulture Extension Educator with University of Nebraska- Lincoln Extension in Dodge and Saunders Counties. She can be contacted by phone at 727-2775; by mail at 1206 W. 23rd Street, Fremont, NE 68025; or by e-mail at sbrowning2@unl.edu.