

Melt the Ice, But Save the Plants

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Be careful when using material to melt ice and snow from your walkways this winter, also use some precautions to protect your lawn and landscape plantings. This material if handled incorrectly can damage lawns, shrubs, ground-cover plants, and potentially water ways.

The most common material used to melt ice is unrefined rock salt, which is about 98.5 percent sodium chloride, the same chemical compound used as table salt, rock salt and an ingredient in water softeners. This chemical can injure plants if too much is applied. Sodium can cause soil to become compacted, inhibiting root growth. Salts can damage plants in two ways--through direct contact and through the cumulative effect of repeated yearly application. A high amount of salt will block nutrients needed by plants and absorbs water, causing drought-like conditions. Sodium and chloride ions can be taken up by plants and can injure leaf margins and the tips of new shoots. Salty water splashed on plants can damage buds, twigs and new leaves. Over application of chemical de-icers can shorten the life span of concrete surfaces, corrode metal railings, pollute streams and lakes through runoff, damage soils and stunt or kill plants adjacent to de-iced areas. Evergreens can show symptoms as early as February and March, including needle flecking, yellowing or browning, and twig die back. Salts can also affect plants as they leech into soils where they can burn tender roots.

Symptoms may resemble drought stress include wilting, an abnormal blue-green cast in the foliage, marginal leaf burn, or needle tip burn and general stunting or lack of vigor. Over time, some clay soils may have their structures altered by very high salt levels and become unable to support plant life.

The Park Maintenance Division of the U.S. Department of Interior considers the maximum safe application per season to be one-half pound of salt per square yard. Garden fertilizer can be a safe alternative for melting ice, if used sparingly. In a complete fertilizer, such as 5-10-10, muriate of potash (KCl) is the ice melter, the super phosphate adds traction.

Fertilizer is not quite as effective as salt for melting ice, but it is beneficial to plants if applied in about the same quantities recommended for sodium compounds. Applying too much fertilizer also can harm plants. Pure nitrogen fertilizer, such as urea can be used. It melts ice at temperatures as low as 11 degrees F, and is best applied at temperatures between 25 and 30 degrees. Urea can be applied at a rate of 10 pounds per 100 square feet. For small areas, a mixture of 3 pounds of urea and 100 pounds of sand works well.

Kitty litter (preferably straight from the bag), available in many homes, can be effective as a traction enhancer for steps and walks.

Calcium chloride is a more effective ice melter than fertilizer, but it, too, can harm plants. Mixing calcium chloride with sawdust, however, will keep most of it from leaving the sidewalk in runoff water. Apply one part calcium chloride to three parts sawdust. This provides traction, and when warmer weather comes, you can sweep up the mixture and either compost it or dispose of it in the garbage.

Other materials that can be used for traction are sand, or cinders. One more thing if you decide to use fertilizer, sawdust or any of these materials that provide traction, keep a sturdy mat at your front door to prevent them from being tracked into your house. Also, recognize whatever is applied to the sidewalk will end up in our streams as a potential pollutant. Most of us try to shovel the snow off sidewalks before it melts and freezes, and if it is put on our lawns or trees it will provide needed moisture this spring.

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