

Deicers May Be Harmful to Plants

Winter often brings precipitation in the form of snow and ice which tend to accumulate on driveways and walks. Many homeowners and property managers will be using chemical deicing agents to thaw ice and reduce slippery conditions leading to falls or accidents. Several of these materials can have damaging effects on plants, as well as some concrete surfaces. Deicers work by lowering the freezing point of water, creating a brine (chemical-water solution) and allowing water to evaporate.

The oldest and most common deicing agent is sodium chloride (rock salt), but calcium chloride, potassium chloride and magnesium chloride are also used. The damaging effects of these materials on plants come from their reducing the ability of plants to take up water. The effects may not show up until late spring or summer when water stresses begin to prevail so don't expect damage to be immediate. Damaging effects depend on the material used as well as concentrations and the type of plants involved. Limited use of deicers and spreading the ice slush when scooping it away over a wide area will lessen potential damage. Heavy applications of water in the spring season can also flush salts downward through the soil.

A new chemical deicing agent called calcium magnesium acetate (or CMA) is made from dolomite (limestone) and acetic acid (vinegar) and has very minimal damaging effects on plants, animals, or concrete surfaces. It is more expensive but may eliminate replacing sensitive plant materials if you have had problems in the past.

Lynn Loughary is the Horticulture Agent for Wyandotte County, K-State Research and Extension. She can be reached by calling 913-299-9300, ext 104, or by email

lloughar@ksu.edu