Will ice melt products harm my plants?

Products used to melt ice on walks and driveways may harm plants, but this depends on what and how much is used. Most of the chemicals marketed to melt ice are salts that lower the freezing point of water. All are useful if the labeled directions are followed carefully.

Four of the most commonly used chemicals are sodium chloride (table salt), calcium chloride, calcium magnesium acetate and urea. All are salts except urea, which is a chemical normally found in fertilizers. These products thaw ice, but also have some undesirable effects. They may cause corrosion of concrete and metal, water pollution, as well as harm to plants.

Sodium chloride is the cheapest and most widely used for ice melt. It has a significant potential for corrosion and plant damage in high concentrations. Calcium chloride and urea have similar risk for corrosion but are less harmful to plants. Calcium magnesium acetate does not corrode or pollute water and does not harm plants, but it is the most expensive.

Damage to plants occurs in two ways - directly when splashed on plants and secondarily when absorbed into the soil. When slush containing salt comes in contact with a plant, it may cause direct injury to evergreen leaves and buds as well as stems of deciduous plants. Be aware that this injury, especially in deciduous plants, may not appear until spring.

Salts that filter into the soil can kill plant roots by dehydrating them, which is very similar to fertilizer "burn". In addition, large amounts of sodium from sodium chloride can damage the soil structure, making it less friendly to plants.

The ideal approach to ice and snow is to remove as much as possible by hand and then, if you feel it is needed, apply an ice melt chemical to help remove the last layer. Avoid the "more is better" mindset, and follow the labeled directions. Mixing sand 3 to 1 with ice melt can reduce the need for chemicals as the added sand actually gives traction to feet and tires. Cat litter will work in some situations. It is usually made of clay or one of several organic products which are not harmful to the environment.

Harmful effects of these chemicals may be minimized by hosing salt off plants, when possible. Much of the salt in soils may be removed if irrigated with generous amounts of water. We are fortunate that ice and snows are not long-term winter problems in our area and that most people are able to cope without ice melt chemicals.