

## **Topic: Buying, Using and Storing Salt**

Come winter our grandparents spread cinder and stove ash on the driveway and sidewalk in the good old days and they spent a lot of time mopping up what they tracked into the house. Today with the first sign of snow we rush to the store to pick up bags of road salt and hope our house pets survive what they track back home, and our yard landscapes cope with the run off. Today there are many brands and formulas, leaving shoppers wondering which salt will do the job with the least damage.

Along with concern about house pet exposure and yard damage, there is the possibility of polluting nearby waterways, potential burn to roots, low brush and trees, and its effectiveness in temperature drops. For example, Sodium Chloride works down to about 15 degrees F while Calcium Chloride melts ice at -20 degrees F.

The following are recommendations for the four main product base materials currently on the market:

For Sodium Chloride (effective to 15 degrees F) caution needs to be taken with exposure to vehicles as it can corrode auto surfaces, it can also cause minor pitting (holes) in concrete, it is a water pollutant and can burn plants which means that it ought to be used sparingly.

For Calcium Chloride (effective to -20 degrees F) the same concern for corroding auto surfaces, damaging concrete and polluting water, in addition storage must be in a dry area (as it readily absorbs moisture), and can cost up to ten times more than Sodium Chloride.

For Magnesium Chloride (effective to 0 degrees F) water pollution and root burn with plants are both a risk, and this too must be stored in a dry area (readily absorbed by moisture) but it is not as corrosive to vehicles, concrete and is not as hard on the pets.

For Calcium Magnesium Acetate (effective down to 15 degrees F) it is less corrosive than rock salt, it is biodegradable, but less effective in colder temperatures, and it is up to thirty times more expensive than rock Sodium Chloride.

What was so pretty in the first gentle coat soon becomes packed along the roadside, dirty grey with accumulated pollution, salt, and trash. This eventually melts and runs down the street into storm grates which funnel the water not to treatment plants but directly to streams, lakes and ponds. With it are carried pollutants such as lead, chlorides, copper, zinc, mercury, and plastics.

Excessive road salting can damage landscape plants as salt washes into the soil and burns the root base. Trees such as red and sugar maples, Norway spruce, dogwood, and redbuds, for instance, are very sensitive to high chloride levels and can be stunted or killed by high levels of salt in the soil. High salt concentrations are found in lawn soil within five to ten feet of the blacktop and as far as one hundred feet from highways. Reduce damage with mulches on the soil surface around plants to absorb salts, and install salt-tolerant plants near paved/salted areas. For a free list, contact Cornell Cooperative Extension.

Some light applications of road salt near grass and flower beds will usually not harm the plants, if the salt is applied in mid-winter when the ground is frozen and the plants are dormant. Salt applications close to spring are much more damaging to plants that are

beginning to wake from winter dormancy. So choose the right product, treat only the high risk areas and most of all make use of small doses that are applied just before ice begins to form.

And what are the other alternatives? Sawdust, sand, and kitty litter are sometimes used, although they help with traction but do little for actually melting the ice or and, like our grandparents' cinders they are messy. A mixture might be a better option, like: one part Calcium Chloride to three parts sand, sawdust or litter.

Gardeners sometimes use urea fertilizer to melt ice, but it only melts down to 20 degrees F and the application rate on a sidewalk or driveway is ten times greater than recommended for an average lawn fertilizing. Given that the ground is frozen, most of the urea will eventually wash into the street, down the storm drain and into a nearby stream or pond.

So remember: light applications on troublesome areas applied just before the ice begins.

--Stormwater Consortium of Rockland County, Cornell Cooperative Extension