

Salt is a staple for snow and ice control on roads in the northern climes – much to the emotional, and often, financial dismay of the average gardener. It's unrealistic to expect that the crews will stop using salt to keep the roads safe. It's also unrealistic to expect that homeowners will stop putting plant material into their yards. What to do, what to do. How can these two factions live together with the least amount of pain? Understanding how salt affects plants is the first step. Then, consider taking advantage of your role as a citizen and become an active participant in government – lobby for a reduction in salt use, and push for the use of sand where safe and feasible. And of course, as a gardener, engage your brain in some research, exercise good planning skills and choose plants that have at least a moderate tolerance for salt in areas of exposure.

Salt affects plants through both soil and air contact. Soil receives salt from run-off (those flows of melted ice and snow from the roadways), settling into depressions and low areas. If there are not adequate amounts of clean water to wash that salt through the soil structure, the sodium chloride ions remain in the soil. When present, those salt ions displace the potassium, calcium, and magnesium ions – which are much needed by plant material for growth and development. Not only does the salt displace needed nutrients, but as long as those ions remain affixed within the soil structure, water uptake by the plant structure is greatly inhibited and soil structure is altered. Salt infused soils surrounding the plants will act as magnets for all moisture - and salt has a huge water holding capacity. As the salt draws this moisture, it causes a breakdown in the soil aggregates (the clumps of bio material) leading to reduced aeration and decreased levels of water permeability. What does that mean? Well, with those changes, the soil has a decrease on overall health, suffers from an increased level of stress, and has less opportunity for short and long term repair. Think soil disease. Once all of that moisture is drawn from the soil particles, the salt begins to draw moisture from the plant roots. Over long periods of time, the potential to draw water out of the root system can be huge - creating situations of root desiccation from mildly annoying to extremely deadly. Think painful plant death. In order to moderate the levels of salt and reduce the potential for damage – applying copious amounts of water in affected areas will help to flush those salts through the soil.

Salt spray has the potential to cause problems through airborne droplet contact and make no mistake - those droplets serve as an excellent salt delivery system. The droplets land on plants and as the water dries the remaining salt deposits draw moisture directly out of the plant system. Add sun, wind, and any other plant stress bonuses and that can be a nice recipe for severe plant health issues. On evergreens the results of this contact can sometimes be observed within a relatively short time span. Needle browning, stunted growth and reduced vigor are all common symptoms. With deciduous plants, it may take the greater part of a growing season or two to get the full effect of salt spray. Common symptoms may include reduced branch vigor, decreased leafing, reduction in flowers and/or fruit, dried out branches, and some witches' brooms within the plant's branch structure. Periodically and thoroughly rinsing the above-ground portions of the plants exposed to spray throughout the winter will help to limit damage from the salt but

if not timed appropriately may result in causing ice damage. Ah – the joys of plant parenthood.

While salt is extremely effective in winter weather control – and this is an area of the country where safe control is important – contact your local governmental unit in charge of road maintenance and find out the policies on salt use. Ask for explanations on amounts used and whether other materials are feasible from safety and financial aspects. Responsible policies should be in place and if not, use public meetings/forums to voice opinions and get any necessary changes made. It's your community, land, home, and landscape investment - taxes paid should be spent intelligently and with the least amount of costly damage to you.

There is a short list of truly halophytic plant material (plants that grow only in saline soils), most of which really don't much like the Midwest nor should they be in most landscapes around here. So, the best option is to be aware of the potential issues of salt damage - whether soil- or airborne. Figure out how to best deal with those issues and conditions, and plant material that will withstand a bit of salt abuse and still make you and the landscape happy. Listed is a small portion of plants that are hardy for this zone and have exhibited a moderate tolerance for road salt issues - lots more to choose from, have fun checking out the options available.

Acer pseudoplatanus (sycamore maple)  
Aesculus pavia (red buckeye)  
Amelanchier x grandiflora (serviceberry)  
Aronia melanocarpa (black chokeberry)  
Callicarpa americana (beautyberry)  
Catalpa speciosa (catalpa)  
Carya ovata (shagbark hickory)  
Chamaecyparis pisifera (false cypress)  
Chionanthus virginicus (white fringetree)  
Clethra alnifolia (summersweet clethra)  
Cornus sericea (red osier dogwood)  
Ginkgo biloba (ginkgo)  
Gymnocladus dioica (Kentucky coffee tree)  
Hibiscus syriacus (Rose-of-Sharon)  
Hydrangea spp. (hydrangea)  
Juglans cinerea (butternut)  
Juniperus horizontalis (creeping juniper)  
Juniperus virginiana (eastern red cedar)  
Larix decidua (larch)  
Myrica pensylvanica (bayberry)  
Nyssa sylvatica (black gum)  
Philadelphus coronaries (mock orange)  
Picea pungens (blue spruce)  
Prunus serotina (black cherry)  
Quercus macrocarpa (bur oak)  
Rhus typhina (Staghorn sumac)  
Rosa rugosa (Rugosa rose)  
Sambucus canadensis (elderberry)  
Symphoricarpos albus (snowberry)  
Syringa vulgaris (lilac)  
Taxodium distichum (bald cypress)  
Viburnum dentatum (arrowwood Viburnum)