RESEARCH LABORATORY TECHNICAL REPORT



Salt Recovery Program

From weather events such as hurricanes or from deicing salts, salt deposition on landscape soils can be extremely damaging to the plant material and soil structure. Salts in the soil damage the relationship between plant roots and both water and nutrients in the soil. The harm to the soil results in plant water stress, foliar scorching, defoliation and even death (Figure 1). Rapid and thorough treatment is often necessary.

Bartlett's program for salt recovery consists of two phases to remove the contaminants from the soil and restore the damaged soils to a healthy, functioning state.

Phase 1: ASAP

- Collect soil sample and analyze for soluble salts and sodium.
- Mix 1 gallon of KaPre* ExAlt soil surfactant in 100 gallons of water and surface apply at a rate of 10 gallons per 1000 sq ft. to the affected area. This product may be combined with Sugar Cal (see below) in lieu of lime or gypsum. Follow this application with irrigation.
- Mix 2 gallons of Sugar Cal per 100 gallons of water and surface apply at a rate of 10 gallons per 1000 sq ft to the affected area. Alternatively, gypsum or lime may be applied according to a soil analysis. The calcium in these products will displace the salts (specifically sodium) on the exchange sites of the soil which allows the salts to be leached more readily. Gypsum rates should be between 200-400 lbs/1000 sq ft. Lime should be applied according to a soil analysis to raise pH, if necessary. Supplemental gypsum may also be applied along with the lime. These products should be incorporated using an AirSpade® to speed the interaction with the soil.

By Kelby Fite, PhD, Plant & Environmental Science & Bruce R. Fraedrich, PhD, Plant Pathology

Figure 1: Foliar scorching from salt



• Leach the salts through the soil profile and away from absorbing roots by applying 4 inches of water (3000 gallons) per 1000 sq ft. of root zone.

Phase 2: 3-6 months later

- Sample soil to assess the soluble salt and sodium levels.
- Reapply gypsum or lime and KaPre[®] ExAlt if these levels are still high.
- Perform root invigoration with compost and biochar to repair soil structure and replace/ enhance nutrient levels and microbial activity.



Founded in 1926, The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. Scientists here develop guidelines for all of the Company's services. The Lab also houses a state-of-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff for the benefit of our clients.