Soil Sodium (Na^+)

Sodium is present in the earth's crust at about the same concentration as potassium but most turfgrass plants have developed high selectivity for uptake of potassium. Sodium has been found to be an essential nutrient for a few plant species but in practical terms, sodium plays a detrimental role in turfgrass and soil management. For that reason, the target levels of sodium are low and management of sodium focuses primarily on supplying calcium to displace sodium.

The role of sodium in IPM

Sodium plays a direct role in turfgrass susceptibility to rapid blight caused by *Labyrinthula terrestris*. Increased sodium results in increased susceptibility to rapid blight. In addition high salinity and sodium stress have been implicated in increasing susceptibility to senectotrophic pathogens that include anthracnose (*Colletotrichum cerealis*) and the leaf spots and melting out caused by *Bipolaris* spp. and *Curvularia* spp. In addition, low sodium soils benefit general plant health and aid in preventing weed invasion and recovery from damage caused by insects.

Guidelines

	Low	Normal	Excessive
Mehlich III SLAN	unknown	<110 mg/kg	> 110mg/kg
Mehlich III BSCR	unknown	<3 %	>6 %
Saturated Paste	unknown	0 – 30 mg/l	> 30 mg/l
Saturated Paste %	unknown	0 – 30%	> 35%

Management

Application of the calcium products will help to manage and reduce soil sodium levels.

15-0-0 Calcium nitrate

$CaCO_3$ lime

$CaSO_4$*2H2O Magnesium sulfate (Epsom Salt)

$CaCl_2$ Calcium chloride