



Research Driven,  
Proven Results®

## TECHNICAL BULLETIN

# WINTER PREPARATION PROGRAM

Every fall, superintendents in northern climates prepare turfgrass for winter to improve the likelihood of turfgrass survival.

The two factors that have the greatest impact on turf survival are genetics and weather severity. However, there are cultural practices that can help harden-off turf to improve survivability. The quality of turf in the spring will largely depend on turf vigor, nutrition status and overall hardening of the turf.

One of the critical nutrients that impacts winter hardiness is potassium. Potassium impacts turf strength and vigor. It also regulates physiological processes that impact turf response to stress; and supports cellular processes that impact water regulation and respiration. Maintaining adequate levels of potassium can help maintain moisture during prolonged cold temperatures and buffer intracellular freezing during late winter when crowns are rehydrating. We recommend low dose, frequent applications of potassium to maintain optimal nutrient levels. Applying too much potassium (2-4 lbs/M) can increase the risk of pink snow mold.

To prepare turf for winter, we recommend the use of GRIGG Proven Foliar® and Soil Specialty fertilizers in rotation throughout the fall. Using the products below will boost turf vigor, nutrient levels and carbohydrate storage - to facilitate the hardening off process before winter. The use of foliar products is especially important because soil nutrients are less available when the soil temperature drops below 50° F.

For best results, begin applications around September 1 and continue until just prior to turfgrass dormancy.

Proven Foliar Applications	fl oz / 1,000 ft <sup>2</sup>
GRIGG Tuff Turf® or GRIGG P-K Plus®	6
GRIGG Ultraplex®	3
Specialty Soil Applications	fl oz / M
GRIGG Rhizonify™	9-12

For a distributor near you contact:  
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## PRODUCT SPOTLIGHT

### GRIGG Proven Foliar Nutrients

**GRIGG P-K Plus** contains 17% potassium, two sources of phosphorus (phosphate and phosphite), two sources of nitrogen and a micronutrient package. It promotes turfgrass color, strength and vigor. GRIGG research (OSU, Ireland, UK) has shown that sequential applications of potassium may reduce the incidence of Microdochium patch\*.

**GRIGG Tuff Turf** contains 14% potassium, two forms of nitrogen, amino acid complexed magnesium and iron. The highly efficient form of potassium helps facilitate hardening off. It also contains silicon which improves plant strength.

**GRIGG Ultraplex** contains two sources of nitrogen, potassium, micronutrients, sea plant extract and a non-ionic surfactant that improves foliar application wetting and absorption. Nitrogen promotes consistent turfgrass growth and vigor.

### GRIGG Soil Specialty Nutrients

**GRIGG Rhizonify** contains three sources of nitrogen, phosphorus, potassium, amino acid complexed micronutrients and a wetting agent. It provides superior soil penetration - even on hard-to-wet, hydrophobic soils. This improves soil moisture uniformity and optimizes the air, soil and water ratio to improve winter hardiness. The nutrient package promotes turf color, strength and vigor.



\*Research can be found on [grigg.co](http://grigg.co)