

PREVENT Winter Stress



Purchase together
3 cases (15 gal) of Tuff Turf® or P-K Plus®
AND 2 cases (10 gal) of Ultraplex®
between Sept 1 - Nov 30, 2011 and
receive your choice of either a Columbia®
Ascender™ II Softshell OR Vertical Victory™ pants!

DOUBLE your order and receive BOTH the softshell and Pants!!

** ONLY available in the US & Canada*



Columbia® Sportswear
ASCENDER II SOFTSHELL*



** color & style may vary depending on availability*

Columbia® Sportswear
VERTICAL VICTORY PANT



Grigg Brothers
Foliar Fertilizers

Voucher Must Be Received By 12/15/2011
 Offer only valid when purchased on a single invoice between 9/1 and 11/30 2011. Only one offer per purchase.

Winter Stress Promotion 2011
 Complete this voucher and attach to a copy of invoice (proof of purchase).
MAIL TO: Grigg Brothers
7875 South 1800 West, Ste. #2
Rexburg, ID 83440
FAX TO: 1-866-519-3255
**Due to production delays with Columbia, Allow 10-12 weeks for delivery.*

Name: _____

Company: _____

Address: _____

City, State, Zip: _____

Phone: _____

Softshell SIZE: S M L XL 2XL

Pant SIZE: S M L XL 2XL *Call for availability of additional sizes*

Prevent Winter Stress

Every autumn in the northern United States and Canada, golf course superintendents begin to prepare for the coming winter to improve the likelihood of turfgrass survival on greens, tees and fairways.

While the genetics of the bentgrass or annual bluegrass species and the severity of the winter weather have the greatest impact on survival there are cultural practices that golf course superintendents can employ to help harden the turf for the oncoming cold weather and improve survivability. Spring turf quality will depend in large part on the plant health and hardening of the turf achieved during fall.

One of the factors known to influence winter hardiness is the potassium level in the plant tissue. Research reports and recommendations from several major universities recommend K levels of 3% or more for best winter protection. Potassium functions as an osmotic regulator within the plant to prevent ice crystal formation within sensitive crown tissue.

Tuff Turf® is a highly efficient potassium source designed to help the plant cope with stress, disease, and to prepare for winter. Tuff Turf® also contains silicon for increased cell strength and turgidity. The inclusion of magnesium helps increase chlorophyll production for improved color.



Recent research from Oregon and the United Kingdom has shown that sequential applications of P-K Plus® at 6 fl.oz. per 1,000 ft² on 14 day intervals during fall and winter (where possible) may significantly reduce the incidence of pink snow mold*. P-K Plus® (3-7-18 + 14% phosphite) delivers low amounts of nitrogen and high amounts of potassium for foliar absorption.

In general the utilization level of foliar fertilization is much higher than soil fertilization. Combine that with the fact that when soil temperatures cool in the fall to 50° F the plant is not always able to take up adequate potassium through the roots. Foliar fertilization bypasses this problem!

Additionally, using Carboplex™ as a foliar applied product at a rate of 6 – 9 fl.oz. 1,000 ft² can boost energy fixation and carbohydrate storage in the plant to achieve and maintain maximum winter hardiness.



Carboplex™ combined with Ultraplex® and P-K Plus® in the autumn is a foliar fertility program optimized to maintain desired growth and color, boost plant potassium levels, increase carbohydrate storage and may reduce the incidence of snow mold disease*.

The Grigg Brothers® recommendation is to start applications about Sept. 1st and continue until plant growth secession

- **Tuff Turf® 1-0-14** 6 fl.oz. per 1,000 ft²
or **P-K Plus® 3-7-18**..... 6 fl.oz. per 1,000 ft²
- **Ultraplex® 5-0-3** 3 fl.oz. per 1,000 ft²
- **Carboplex™ 6-4-4** 6-9 fl.oz. per 1,000 ft²

For more than a decade now, Grigg Brothers has been dedicated to research supporting nutritional IPM tools for golf course superintendents. The above recommendations are research based and will be successful in helping reduce winter injury to turf. For more details on all our ongoing research visit us online at <http://www.griggbros.com/edu>

* P-K Plus® is not a registered fungicide and should be used as one component to an integrated approach to pest management, or nutritional IPM