



Research Driven,
Proven Results®

A large, solid green diagonal shape, resembling a stylized 'Z' or a series of connected line segments, starts from the middle left and extends towards the bottom right, crossing the middle of the page.

SPECIALTY FERTILIZERS FOR GOLF AND SPORTS TURF

RESEARCH DRIVEN, PROVEN RESULTS

For over 25 years, GRIGG has been an innovator in turfgrass nutrition, product development and research.

The high quality, science-based products are supported by years of university and independent field testing. GRIGG products are used by many of the world's most prestigious golf courses and sports fields, including the Rose Bowl Stadium®.



*BRANDT® is the official fertilizer partner
of the Rose Bowl Stadium*

Our History

GRIGG was founded in 1995 by Mark and Gary Grigg, who were early pioneers in turf nutrition product innovation. In 2014, GRIGG was purchased by BRANDT – a leading global manufacturer of nutrition, adjuvants and sustainable solutions for the ag, turf and ornamental, and lawn and garden markets. The company currently sells its turf and ornamental products under the BRANDT, BRANDT iHammer and GRIGG brands.

BRANDT operates seven state-of-the-art manufacturing facilities and a 500-acre research farm. The Discovery and Innovation team is the lifeblood of the company – dedicated to developing new specialty products that help customers achieve better results. BRANDT currently serves customers in over 40 countries.

For more info, visit brandt.co and grigg.co

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GRIGG

PROVEN FOLIAR NUTRIENTS

GRIGG Proven Foliar nutrients are the turfgrass industry's premier line of foliar fertilizers. They supply highly efficient, reliable nutrition and have been rigorously tested in independent and university trials.

- Easy to use, highly compatible formulations
- Nutrients are in the proper ionic form for optimal plant use
- Most formulations contain amino acid complexed nutrients, which are highly efficient and mobile

Benefits of Foliar Feeding

Foliar feeding is one of the most efficient ways to supply nutrition to turfgrass. Depositing nutrients on the leaf surface allows faster nutrient absorption and uptake – allowing quick correction of nutrient deficiencies and better results. Supplying turfgrass with the right nutrients in the right form may also impact plant response to stress. High efficiency nutrition products may also reduce the potential for nutrient leaching.

GRIGG A-O-K 2-0-24

GRIGG A-O-K is a 24% soluble potassium that provides an economical source of K for putting greens. It may be used in-season and/or applied to turfgrass during the hardening off process before winter.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Improves turfgrass strength and vigor
- Excellent on soil where potassium availability is an issue – typically loam soils and sand-based root zones
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

Cool Season Grasses: Apply 3-6 fl oz per 1000 sq ft or 1-2 gal per acre [10-20 L per hectare] as needed every 14 days.

Warm Season Grasses: Apply 2-6 fl oz per 1000 sq ft or 0.75-2 gal per acre [7-20 L per hectare] as needed every 14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	2.0%
2.0% Urea nitrogen	
Soluble Potash (K_2O)	24.0%

Derived from urea and potassium hydroxide.



GRIGG CARBOPLEX

6-4-4

GRIGG Carboplex contains three sources of nitrogen, phosphate, potassium, amino acid complexed micronutrients and sea plant extract (*Ascophyllum nodosum*). It helps boost turf strength, vigor and hardiness – making it a great option for winter turfgrass preparation.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen promotes consistent turfgrass shoot growth
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production
- Iron plays a key role in chlorophyll production, which improves turf color

Application and Use

Foliar Applications: Apply as needed every 7-14 days.

Tees, Greens: 6-12 fl oz per 1,000 sq ft or 2-4 gal per acre [20-40 L per hectare].

Fairways, Sports Field: 9-12 fl oz per 1,000 sq ft or 3-4 gal per acre [30-40 L per hectare].

Soil Applications: Apply as needed every 7-21 days.

Tees, Greens: 9-12 fl oz per 1,000 sq ft or 3-4 gal per acre [30-40 L per hectare].

Fairways, Sports Fields: 12-15 fl oz per 1,000 sq ft or 4-5 gal per acre [40-50 L per hectare].

Make frequent applications at lower rates, or apply higher rates for greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	6.00%
0.70% Ammoniacal nitrogen	
1.10% Nitrate nitrogen	
4.20% Urea nitrogen	
Available Phosphate (P ₂ O ₅)	4.00%
Soluble Potash (K ₂ O)	4.00%
Iron (Fe)	0.20%
0.20% Water soluble iron	
Manganese (Mn)	0.05%
0.05% Water soluble manganese	
Zinc (Zn)	0.05%
0.05% Water soluble zinc	

Derived from monoammonium phosphate, potassium nitrate, urea, iron amino acid complex, manganese amino acid complex, zinc amino acid complex, potassium hydroxide and kelp (*Ascophyllum nodosum*).



This product is not intended for use on food crop sites.
This product is not for sale in CA.

GRIGG FAIRPHYTE

1-0-25

GRIGG Fairphyte is a 25% soluble potassium derived from potassium phosphite. It is designed for golf course fairways and sports turf to provide quality nutrition at a great value.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Improves turfgrass strength and vigor
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

Cool or Warm Season Grasses: Apply 3-4 fl oz per 1,000 sq ft or 1-1.25 gal per acre [10-13 L per hectare] as needed every 14 days

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen	1.0%
1.0% Urea nitrogen	
Soluble Potash (K_2O)	25.0%

Derived from urea and potassium phosphite.



This product is sold as GRIGG Fairphyte 1-27-25 in California. Visit grigg.co to view the complete label.

GRIGG GARY'S GREEN

18-3-4

GRIGG Gary's Green is the flagship of GRIGG's Proven Foliar Nutrient line – offering the ultimate in quality, performance and compatibility. It contains three sources of nitrogen, potassium, phosphorus and a micronutrient package. It improves turf color response, density and vigor. It is widely used as a primary source of N for effective 'spoon feeding' in turf nutrition programs.

Also available in a phosphate free version.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Proprietary formulation provides fast nitrogen uptake; N promotes consistent turfgrass shoot growth
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production
- Recommended for golf and sports turf

Application and Use

Cool Season Grasses: Apply 6-9 fl oz per 1,000 sq ft or 2-3 gal per acre [20-30 L per hectare] as needed every 7-14 days.

Warm Season Grasses: Apply 9-12 fl oz per 1,000 sq ft or 3-4 gal per acre [30-40 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	18.00%
2.00% Ammoniacal nitrogen	
1.50% Nitrate nitrogen	
14.50% Urea nitrogen	
Available Phosphate (P ₂ O ₅)	3.00%
Soluble Potash (K ₂ O)	4.00%
Magnesium (Mg)	0.50%
0.50% Water soluble magnesium	
Copper (Cu)	0.12%
0.12% Water soluble copper	
Iron (Fe)	1.00%
1.00% Water soluble iron	
Manganese (Mn)	0.10%
0.10% Water soluble manganese	
Zinc (Zn)	0.10%
0.10% Water soluble zinc	

Derived from urea ammonium nitrate, monoammonium phosphate, urea, potassium citrate, magnesium amino acid complex, copper amino acid complex, iron amino acid complex, manganese amino acid complex and zinc amino acid complex.



GRIGG

GARY'S GREEN ULTRA

14-2-3

This formulation combines two best-selling formulations: GRIGG Gary's Green and GRIGG Ultraplex. It contains three sources of nitrogen, potassium, phosphorus and a micronutrient package. It Improves turf color, density and vigor. It is an important component of most GRIGG foliar nutrition programs.

Also available in a phosphate free version.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Proprietary formulation provides fast nitrogen uptake; N promotes consistent turfgrass shoot growth
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

Cool Season Grasses: Apply 6-12 fl oz per 1,000 sq ft or 2-4 gal per acre [20-40 L per hectare] as needed every 7-14 days.

Warm Season Grasses: Apply 9-15 fl oz per 1,000 sq ft or 3-5 gal per acre [30-50 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

This product is not intended for use on food crop sites.

Guaranteed Analysis

Total Nitrogen (N)	14.00%
1.50% Ammoniacal nitrogen	
1.25% Nitrate nitrogen	
11.25% Urea nitrogen	
Available Phosphate (P ₂ O ₅)	2.00%
Soluble Potash (K ₂ O)	3.00%
Magnesium (Mg)	0.50%
0.50% Water soluble magnesium	
Boron (B)	0.02%
Copper (Cu)	0.12%
0.12% Water soluble copper	
Iron (Fe)	1.40%
1.40% Water soluble iron	
Manganese (Mn)	0.20%
0.20% Water soluble manganese	
Zinc (Zn)	0.20%
0.20% Water soluble zinc	

Derived from urea ammonium nitrate, monoammonium phosphate, potassium nitrate, urea, potassium citrate, magnesium amino acid complex, sodium borate, copper amino acid complex, iron amino acid complex, manganese amino acid complex, zinc amino acid complex and kelp (*Ascophyllum nodosum*).

ALSO CONTAINS NON-PLANT FOOD INGREDIENT:

0.25% *Yucca schidigera*



Proven Foliar Nutrients

GRIGG

IRON COMBO 1-0-2

1-0-2

GRIGG Iron Combo 1-0-2 is a multi-nutrient formulation that contains nitrogen, potassium, boron and amino acid complexed copper, iron, manganese and zinc. It is an excellent option for improving turf color and correcting micronutrient deficiencies.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Iron plays a key role in chlorophyll production, which improves turf color
- Recommended for golf and sports turf

Application and Use

Cool or Warm Season Grasses: Apply 2-6 fl oz per 1000 sq ft or 0.75-2 gal per acre [7-20 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	1.00%
1.00% Urea nitrogen	
Soluble Potash (K ₂ O)	2.00%
Boron (B)	0.16%
Copper (Cu)	0.13%
0.13% Water soluble copper	
Iron (Fe)	4.00%
4.00% Water soluble iron	
Manganese (Mn)	1.00%
1.00% Water soluble manganese	
Zinc (Zn)	0.80%
0.80% Water soluble zinc	

Derived from urea, potassium citrate, sodium borate, copper amino acid complex, iron amino acid complex, manganese amino acid complex and zinc amino acid complex.



GRIGG KELPLEX

1-2-2

GRIGG Kelplex is a sophisticated formulation that contains three sources of nitrogen, phosphorus, potassium, amino acid complexed iron and sea plant extract (*Ascophyllum nodosum*).

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

Foliar Application: Apply 1-3 fl oz per 1,000 sq ft or 0.25-1 gal per acre [4-10 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	1.0%
0.4% Ammoniacal nitrogen	
0.1% Nitrate nitrogen	
0.5% Urea nitrogen	
Available Phosphate (P_2O_5)	2.0%
Soluble Potash (K_2O)	2.0%
Iron (Fe)	0.1%
0.1% Water soluble iron	

Derived from urea, monoammonium phosphate, potassium nitrate, iron amino acid complex and kelp (*Ascophyllum nodosum*).



GRIGG MAGNESIUM COMPLEX

Foliar Complex

GRIGG Magnesium Complex contains 5% amino acid complexed magnesium. It is an excellent option for improving turf color and correcting micronutrient deficiencies.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Magnesium is integral to molecular structure and plays a key role in chlorophyll production, which improves turf color

Application and Use

Cool Season Grasses: Apply 1-3 fl oz per 1,000 sq ft or 0.25-1 gal per acre [4-10 L per hectare] as needed every 7-14 days.

Warm Season Grasses: Apply 2-4 fl oz per 1,000 sq ft or 0.75-1.25 gal per acre [7-13 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Magnesium (Mg)	5.0%
5.0% Water soluble magnesium	

Derived from magnesium amino acid complex.



GRIGG MANGANESE COMBO

Foliar Complex

GRIGG Manganese Combo is an amino acid complexed multi-nutrient formulation that contains 5% manganese and lower amounts of copper, magnesium and zinc. It is an excellent option for improving turf color and correcting micronutrient deficiencies.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Manganese plays a key role in plant enzyme functions and photosynthesis

Application and Use

Cool or Warm Season Grasses: Apply 1-3 fl oz per 1,000 sq ft or 0.25-1 gal per acre [4-10 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Magnesium (Mg)	1.2%
1.2% Water soluble magnesium	
Copper (Cu)	0.4%
0.4% Water soluble copper	
Manganese (Mn)	5.0%
5.0% Water soluble manganese	
Zinc (Zn)	1.0%
1.0% Water soluble zinc	

Derived from magnesium amino acid complex, copper amino acid complex, manganese amino acid complex and zinc amino acid complex.



GRIGG MICRO BURST 0-0-1

GRIGG Micro Burst is a multi-nutrient formulation that contains potassium, boron and amino acid complexed micronutrients. It is an excellent option for improving turf color and correcting micronutrient deficiencies.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Iron plays a key role in chlorophyll production, which improves turf color
- Manganese plays a key role in plant enzyme functions and photosynthesis
- Recommended for golf and sports turf

Application and Use

Cool or Warm Season Grasses: Apply 2-4 fl oz per 1,000 sq ft or 0.75-1.25 gal per acre [7-13 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Soluble Potash (K_2O)	1.00%
Boron (B)	0.04%
Copper (Cu)	0.05%
0.05% Water soluble copper	
Iron (Fe)	3.40%
3.40% Water soluble iron	
Manganese (Mn)	2.40%
2.40% Water soluble manganese	
Molybdenum (Mo)	0.01%
Zinc (Zn)	1.00%
1.00% Water soluble zinc	

Derived from potassium citrate, sodium borate, copper amino acid complex, iron amino acid complex, manganese amino acid complex, sodium molybdate and zinc amino acid complex.



GRIGG NUTRA GREEN

5-10-5

GRIGG Nutra Green is a multi-nutrient formulation that contains 10% phosphate, three sources of soluble nitrogen, potassium and a micronutrient package. It improves turf color and vigor. It is recommended for spring green up, overseeding and aeration.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Excellent on soils where phosphorus availability is an issue – typically sand-based root zones and calcareous soils
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production
- May be used on turf, ornamentals or shrubs

Application and Use

Cool Season Grasses: Apply 3-9 fl oz per 1,000 sq ft or 1-3 gal per acre [10-30 L per hectare] as needed every 7-14 days.

Warm Season Grasses: Apply 4-10 fl oz per 1,000 sq ft or 1.25-3.5 gal per acre [13-31.5 L per hectare] as needed every 7-14 days.

Ornamentals: Trees, Shrubs and Flowers: Mix 1-2 fl oz per gal of water (128x-64x dilution) and apply topically.

Greenhouse and Landscape: For soil applications, mix 2-4 fl oz per gal of water (64x-32x dilution) and drench into the soil.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	5.00%
2.70% Ammoniacal nitrogen	
0.80% Nitrate nitrogen	
1.50% Urea nitrogen	
Available Phosphate (P ₂ O ₅)	10.00%
Soluble Potash (K ₂ O)	5.00%
Magnesium (Mg)	1.00%
1.00% Water soluble magnesium	
Boron (B)	0.12%
Copper (Cu)	0.10%
0.10% Water soluble copper	
Iron (Fe)	1.00%
1.00% Water soluble iron	
Manganese (Mn)	0.50%
0.50% Water soluble manganese	
Zinc (Zn)	0.10%
0.10% Water soluble zinc	

Derived from monoammonium phosphate, urea ammonium nitrate, potassium citrate, magnesium amino acid complex, sodium borate, copper amino acid complex, iron amino acid complex, manganese amino acid complex and zinc amino acid complex.



Proven Foliar Nutrients

GRIGG P-K PLUS 3-5-17

GRIGG P-K PLUS is a multi-nutrient formulation that 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. It is an excellent option for spring green up and winter turfgrass preparation.

Also available in a phosphate free version.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

Cool or Warm Season Grasses: Apply 6 fl oz per 1,000 sq ft or 2 gal per acre [20 L per hectare] every 14 days.

Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	3.00%
0.90% Ammoniacal nitrogen	
2.10% Urea nitrogen	
Available Phosphate (P_2O_5)	5.00%
Soluble Potash (K_2O)	17.00%
Boron (B)	0.02%
Cobalt (Co)	0.01%
0.01% Water soluble cobalt	
Molybdenum (Mo)	0.001%

Derived from monoammonium phosphate, urea, potassium phosphite, sodium borate, cobalt sulfate and sodium molybdate.



This product is sold as GRIGG P-K Plus 3-20-17 in California. Visit grigg.co to view the complete label.

GRIGG SILI-KAL B

8-0-4

GRIGG Sili-Kal B is a multi-nutrient formulation that contains two sources of soluble nitrogen, potassium, 10% calcium, and boron. It improves turf strength and vigor. It is also an excellent option for turf in sand-based root zones, which tend to be low in available calcium.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Calcium is important for cell wall strength
- Potassium regulates primary physical processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production
- Contains silicon dioxide (SiO_2); silicon improves plant strength

Application and Use

Cool or Warm Season Grasses: Apply 3-6 fl oz per 1,000 sq ft or 1-2 gal per acre [10-20 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	8.00%
7.50% Nitrate nitrogen	
0.50% Urea nitrogen	
Soluble Potash (K_2O)	4.00%
Calcium (Ca)	10.00%
10.00% Water soluble calcium	
Boron (B)	0.05%

Derived from potassium nitrate, urea, calcium amino acid complex and sodium borate.

ALSO CONTAINS NON-PLANT FOOD INGREDIENT:

0.015% Silicon Dioxide (SiO_2) derived from sodium silicate.



GRIGG SUPREMA

12-0-12

GRIGG Suprema is a multi-nutrient formulation that contains 12% nitrogen, 12% potassium and amino acid complexed iron, manganese and zinc. It is an excellent option for zero phosphorus fertilizer programs.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Provides an efficient source of nitrogen and potassium at a 1:1 ratio
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

Cool Season Grasses: Apply 4-12 fl oz per 1,000 sq ft or 1.25-4 gal per acre [13-40 L per hectare] as needed every 14 days.

Warm Season Grasses: Apply 6-15 fl oz per 1,000 sq ft or 2-5 gal per acre [20-50 L per hectare] as needed every 14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	12.0%
12.0% Urea nitrogen	
Soluble Potash (K_2O)	12.0%
Iron (Fe)	1.0%
1.0% Water soluble iron	
Manganese (Mn)	0.05%
0.05% Water soluble manganese	
Zinc (Zn)	0.05%
0.05% Water soluble zinc	

Derived from urea, potassium citrate, iron amino acid complex, manganese amino acid complex, zinc amino acid complex.



GRIGG TUFF TURF

1-0-14

GRIGG Tuff Turf is a multi-nutrient formulation that contains 14% potassium, two forms of nitrogen, amino acid complexed magnesium and iron. It is an excellent tool for improving turf strength, vigor and color.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production
- Magnesium and iron play a key role in chlorophyll production, which improves turf color
- Silicon improves plant strength

Application and Use

Cool or Warm Season Grasses:

Apply 3-6 fl oz per 1,000 sq ft or 1-2 gal per acre [10-20 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	1.0%
0.75% Nitrate nitrogen	
0.25% Urea nitrogen	
Soluble Potash (K_2O)	14.0%
Magnesium (Mg)	0.5%
0.5% Water soluble magnesium	
Iron (Fe)	0.5%
0.5% Water soluble iron	

Derived from potassium nitrate, urea, potassium citrate, magnesium amino acid complex and iron amino acid complex.

ALSO CONTAINS NON-PLANT FOOD INGREDIENT:

0.015% Silicon Dioxide (SiO_2) derived from sodium silicate.



NEW

GRIGG TURFTOPIA

5-0-5

A sophisticated new formulation that helps maintain turf resilience, playability and cellular hydration during environmental stress conditions. Recommended for foliar application.

Contains concentrated liquid complexed macro and micro nutrients, osmoprotectants, amino acids, an antioxidant and signaling molecules.

Key Advantages

- Nutrients feed turf and support optimum growth and development. Amino acids provide excellent nutrient uptake efficiency.
- Acts as an osmoprotectant, helping maintain cellular hydration to support turf during water deficits.
- Protects cell structure/membrane to support turf strength.
- Helps reduce oxidative stress. Signaling molecules trigger natural plant defense mechanisms leading to improved turf performance under abiotic stress.

Application and Use

Cool or Warm Season Grasses: Apply 3-6 fl oz per 1,000 sq ft or 1-2 gal per acre [10-20 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

This product is not intended for use on food crop sites.

Guaranteed Analysis

Total Nitrogen (N)	5.00%
5.00% Urea nitrogen	
Soluble Potash (K ₂ O)	5.00%
Manganese (Mn)	0.20%
0.20% Water soluble manganese	
Molybdenum (Mo)	0.003%
Zinc (Zn)	0.20%
0.20% Water soluble zinc	

Derived from urea, potassium citrate, potassium acetate, manganese amino acid complex, sodium molybdate and zinc amino acid complex.



GRIGG ULTRAPLEX

4-0-3

GRIGG Ultraplex is a proprietary and sophisticated multi-nutrient formulation that contains two sources of nitrogen, potassium, micronutrients, sea plant extract and a wetting agent. It an excellent option for enhancing turf color and vigor.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen promotes consistent turfgrass shoot growth
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production
- Non-ionic surfactant (*Yucca schidigera*) reduces water surface tension to improve foliar application wetting and absorption

Application and Use

Cool or Warm Season Grasses: Apply 3-6 fl oz per 1,000 sq ft or 1-2 gal per acre [10-20 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

This product is not intended for use on food crop sites.

Guaranteed Analysis

Total Nitrogen (N)	4.00%
0.50% Nitrate nitrogen	
3.50% Urea nitrogen	
Soluble Potash (K ₂ O)	3.00%
Magnesium (Mg)	0.50%
0.50% Water soluble magnesium	
Boron (B)	0.05%
Copper (Cu)	0.05%
0.05% Water soluble copper	
Iron (Fe)	1.95%
1.95% Water soluble iron	
Manganese (Mn)	0.40%
0.40% Water soluble manganese	
Zinc (Zn)	0.40%
0.40% Water soluble zinc	

Derived from potassium nitrate, urea, magnesium amino acid complex, sodium borate, copper amino acid complex, iron amino acid complex, manganese amino acid complex, zinc amino acid complex and kelp (*Ascophyllum nodosum*).

ALSO CONTAINS NON-PLANT FOOD INGREDIENT:
0.8% *Yucca schidigera*



GRIGG

GREENSPEC GRANULAR NUTRIENTS

GRIGG GreenSpec is the turfgrass industry's premier granular nutrient line. It is designed to complement GRIGG Proven Foliar products in integrated nutrition programs.

- Pure, homogeneous formulations provide soluble, efficient nutrition
- Low dust formulations dissolve easily and have excellent spreading characteristics
- Greens grade prills effectively penetrate dense turfgrass canopies on putting greens
- Perform in a variety of agronomic conditions

GRIGG

10-2-4

10-2-4

GRIGG 10-2-4 is a greens grade fertilizer that contains two sources of nitrogen, phosphate, potassium, secondary nutrients, humic acid and sea plant extract.

*Available in greens grade (100-120 SGN)
and fairway grade (140-160 SGN)*

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen promotes consistent turfgrass shoot growth
- Greens grade prills effectively penetrate dense turfgrass canopies and spreads well
- Low dust formulation dissolves quickly

Application and Use

General Maintenance of Cool and Warm Season Grasses:

Apply 5-10 lb per 1,000 sq ft or 218-435 lb per acre
[2.5-5 kg per 100 sq m or 244-488 kg per hectare]
as needed.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

For suggested spreader settings, visit
grigg.co/greenspec-granular/

Guaranteed Analysis

Total Nitrogen (N)	10.0%
1.1% Water soluble nitrogen	
8.9% Water insoluble nitrogen	
Available Phosphate (P_2O_5)	2.0%
Soluble Potash (K_2O)	4.0%
Calcium (Ca)	1.5%
Sulfur (S)	1.0%

Derived from feather meal, soybean meal, bone meal, blood meal, sulfate of potash and kelp (*Ascophyllum nodosum*).

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:

2.5% Humic acids derived from Leonardite



GRIGG 19-2-19

19-2-19

GRIGG 19-2-19 is the newest homogeneous greens grade fertilizer that contains four sources of nitrogen along with 19% potassium, calcium carbonate and ferric oxide. This product can be used all season to maintain turf strength and keep a vibrant color during play.

Key Advantages

- Provides soluble, efficient nutrients
- Nitrogen promotes consistent turfgrass shoot growth
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

General Maintenance of Cool and Warm Season Grasses:

Apply 3-6 lb per 1,000 sq ft or 131-261 lb per acre
[1.5-3 kg per 100 sq m or 146-292 kg per hectare]
as needed.

Make frequent applications at lower rates, or apply higher rates for greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

For suggested spreader settings, visit
grigg.co/greenspec-granular/

Guaranteed Analysis

Total Nitrogen (N)	19.0%
0.5% Ammoniacal nitrogen	
12.5% Urea nitrogen	
3.5% Other water soluble nitrogen*	
2.5% Water insoluble nitrogen	
Available Phosphate (P_2O_5)	2.0%
Soluble Potash (K_2O)	19.0%
Calcium (Ca)	3.5%
Sulfur (S)	6.7%
6.7% Combined sulfur	
Iron (Fe)	0.6%
0.0% Water soluble iron	

Derived from monoammonium phosphate, urea, methylene urea, sulfate of potash, sulfate of potash magnesia, calcium carbonate and ferric oxide.

* 3.5% Slowly available nitrogen from methylene urea.



GRIGG CK-BALANCE

0-0-24

GRIGG CK-Balance is a greens grade micro-granular (70-90 SGN) that contains 24% soluble potash, 18% calcium and 8% sulfur. It is recommended for monthly, in-season use to maintain turf strength and vigor during periods of heavy use.

Key Advantages

- Provides soluble, efficient nutrients
- Small particle size can pass through 200 mesh sieve
- Soluble potassium is derived from sulfate of potash. Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production.

Application and Use

General Maintenance of Cool and Warm Season Grasses:

Apply 3-6 lb per 1,000 sq ft or 131-261 lb per acre
[1.5-3 kg per 100 sq m or 146-292 kg per hectare]
as needed.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Soluble Potash (K_2O)	24.0%
Calcium (Ca)	18.0%
Sulfur (S)	8.0%

Derived from sulfate of potash and calcium carbonate.



GRIGG SK-BALANCE

0-0-24

GRIGG SK-Balance is a greens grade micro-granular (70-90 SGN) that contains 24% soluble potash, 11% calcium and 16% sulfur. It is recommended for monthly, in-season use to maintain turf strength and vigor during periods of heavy use.

Key Advantages

- Provides soluble, efficient nutrients
- Small particle size can pass through 200 mesh sieve
- Soluble potassium is derived from sulfate of potash. Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production.
- Gypsum-derived calcium is recommended for alkaline or sodic soils. Calcium is important for cell wall strength.

Application and Use

General Maintenance of Cool and Warm Season Grasses:

Apply 3-6 lb per 1,000 sq ft or 131-261 lb per acre
[1.5-3 kg per 100 sq m or 146-292 kg per hectare]
as needed.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Soluble Potash (K_2O)	24.0%
Calcium (Ca)	11.0%
Sulfur (S)	16.0%

Derived from sulfate of potash and gypsum



GRIGG ENDURANCE

8-4-16

GRIGG Endurance is a greens grade granular (100-120 SGN) that contains three sources of nitrogen, phosphorus, potassium, secondary and micronutrients, sea plant extract and humic acid. It is recommended for in-season use to revitalize turf vigor and color. It is also ideal for fall application to prepare turf for winter.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen promotes consistent turfgrass shoot growth
- Soluble potassium is derived from sulfate of potash. Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production.
- Calcium is important for cell wall strength

Application and Use

General Maintenance of Cool and Warm Season Grasses:

Apply 6-10 lb per 1,000 sq ft or 261-435 lb per acre [3-5 kg per 100 sq m or 292-488 kg per hectare] as needed.

Promote Plant Recovery: Use this product to increase turfgrass vigor and recovery from mechanical and/or environmental stress. Apply 8-10 lb per 1,000 sq ft or 348-435 lb per acre [4-5 kg per 100 sq m or 390-488 kg per hectare] 1-3 days after aeration, spiking, verticutting or other mechanical disruption to promote recuperation and speed time to recovery.

Establishment: As a pre-plant fertilizer, incorporate 10 lb per 1,000 sq ft or 435 lb per acre [5 kg per 100 sq m or 490 kg per hectare] to root-zone mix or soil during seedbed preparation.

Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

For suggested spreader settings, visit grigg.co/greenspec-granular/

Guaranteed Analysis

Total Nitrogen (N)	8.0%
2.4% Ammoniacal nitrogen	
4.6% Urea nitrogen	
1.0% Water insoluble nitrogen	
Available Phosphate (P ₂ O ₅)	4.0%
Soluble Potash (K ₂ O)	16.0%
Calcium (Ca)	4.0%
Sulfur (S)	7.0%
7.0% Combined sulfur	
Iron (Fe)	3.0%
0.03% Water soluble iron	
Manganese (Mn)	0.2%
0.02% Water soluble manganese	
Zinc (Zn)	0.2%
0.002% Water soluble zinc	

Derived from ammonium sulfate, monoammonium phosphate, urea, soybean meal, sulfate of potash, calcium carbonate, iron sucate, manganese sulfate, manganese sucate, zinc sucate and kelp (*Ascophyllum nodosum*).

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:

2.5% Humic acids derived from Leonardite



GreenSpec Granular Nutrients

GRIGG SEVEN IRON 7-7-7

GRIGG Seven Iron is the flagship product of the GRIGG Green Spec granular nutrient line. It provides three sources of nitrogen, phosphorus, potassium, secondary and micronutrients, sea plant extract and humic acid. It corrects nutrient deficiencies and maintains turf color. It is recommended for pre-plant or starter applications during turf establishment.

*Available in greens grade (100-120 SGN)
and fairway grade (140-160 SGN)*

Key Advantages

- Contains soluble nutrients for efficient uptake and use at a 1:1:1 ratio of NPK
- Contains ferrous sulfate which supplies quickly available iron. Iron plays a key role in chlorophyll production, which improves turf color.
- Nitrogen promotes consistent turfgrass shoot growth
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Soluble potassium is derived from sulfate of potash. Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production.

Application and Use

General Maintenance of Cool and Warm Season Grasses: Apply 7-14 lb per 1,000 sq ft or 305-610 lb per acre [3.5-7 kg per 100 sq m or 342-684 kg per hectare] as needed.

Promote Plant Recovery: Use this product to increase turfgrass vigor and recovery from mechanical and/or environmental stress. Apply 8 lb per 1,000 sq ft or 350 lb per acre [4 kg per 100 sq m or 390 kg per hectare] 1-3 days after aeration, spiking, verticutting or other mechanical disruption to promote recuperation and speed time to recovery.

Guaranteed Analysis

Total Nitrogen (N)	7.0%
1.4% Ammoniacal nitrogen	
4.6% Urea nitrogen	
1.0% Water insoluble nitrogen	
Available Phosphate (P_2O_5)	7.0%
Soluble Potash (K_2O)	7.0%
Calcium (Ca)	3.0%
Sulfur (S)	7.0%
7.0% Combined sulfur	
Iron (Fe)	7.0%
2.3% Water soluble iron	
Manganese (Mn)	1.5%
1.3% Water soluble manganese	
Zinc (Zn)	0.2%
0.05% Water soluble zinc	

Derived from monoammonium phosphate, urea, soybean meal, sulfate of potash, gypsum, ferrous sulfate, iron sucate, manganese sulfate, manganese sucate, zinc sucate and kelp (*Ascophyllum nodosum*).

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:
2.5% Humic acids derived from Leonardite

Establishment: As a pre-plant fertilizer, incorporate 14 lb per 1,000 sq ft or 610 lb per acre [7 kg per 100 sq m or 684 kg per hectare] to root-zone mix or soil during seedbed preparation. To increase establishment vigor, uniformity and color during over/interseeding of existing turfgrass swards, apply 10 lb per 1,000 sq ft or 435 lb per acre [5 kg per 100 sq m or 488 kg per hectare] every 4-6 weeks.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

For suggested spreader settings, visit grigg.co/greenspec-granular/

GRIGG TURF RALLY

16-4-8

GRIGG Turf Rally contains four sources of nitrogen, phosphorus, potassium, secondary and micronutrients, sea plant extract and humic acid. It helps correct nutrient deficiencies and provides turf color.

Available in greens grade (100-120 SGN), fairway grade (140-160 SGN) and phosphorus free versions.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen provides even feeding and promotes consistent turfgrass shoot growth
- Contains iron sucrate. Iron plays a key role in chlorophyll production, which improves turf color.

Application and Use

General Maintenance of Cool and Warm Season Grasses:

Apply 3-6 lb per 1,000 sq ft or 174-261 lb per acre
[2-3 kg per 100 sq m or 195-292 kg per hectare]
as needed.

This product will increase turfgrass uniformity, vigor and color after establishment or for existing turfgrass swards. Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

For suggested spreader settings, visit grigg.co/greenspec-granular/

Guaranteed Analysis

Total Nitrogen (N)	16.0%
2.9% Ammoniacal nitrogen	
10.2% Urea nitrogen	
1.1% Other water soluble nitrogen	
1.8% Water insoluble nitrogen	
Available Phosphate (P ₂ O ₅)	4.0%
Soluble Potash (K ₂ O)	8.0%
Calcium (Ca)	2.0%
Sulfur (S)	6.0%
6.0% Combined sulfur	
Iron (Fe)	3.0%
0.03% Water soluble iron	
Manganese (Mn)	0.2%
0.02% Water soluble manganese	
Zinc (Zn)	0.1%
0.001% Water soluble zinc	

Derived from ammonium sulfate, monoammonium phosphate, urea, methylene urea, soybean meal, sulfate of potash, gypsum, calcium carbonate, iron sucrate, manganese sulfate, manganese sucrate, zinc sucrate and kelp (*Ascophyllum nodosum*).

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:

2.5% Humic acids derived from Leonardite



GRIGG ZEROPHOS

7-0-14

GRIGG Zerophos is a greens grade granular (100-120 SGN) that contains three sources of nitrogen, potassium, micronutrients, sea plant extract and humic acid. It is a great no phosphorus multi-purpose fertilizer that may be used year-round.

Key Advantages

- Provides soluble, efficient nutrients and delivers nitrogen and potassium in a 1:2 ratio
- Nitrogen promotes consistent turfgrass shoot growth
- Contains ferrous sulfate which supplies quickly available iron, and iron sucrate provides a slow release form of iron. Iron plays a key role in chlorophyll production, which improves turf color.
- Soluble potassium is derived from pure sulfate of potash. Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production.

Application and Use

General Maintenance of Cool and Warm Season Grasses:

Apply 7-10 lb per 1,000 sq ft or 305-435 lb per acre [3.5-5 kg per 100 sq m or 342-488 kg per hectare] as needed.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

For suggested spreader settings, visit grigg.co/greenspec-granular/

Guaranteed Analysis

Total Nitrogen (N)	7.0%
1.4% Ammoniacal nitrogen	
4.6% Urea nitrogen	
1.0% Water insoluble nitrogen	
Soluble Potash (K ₂ O)	14.0%
Calcium (Ca)	2.5%
Sulfur (S)	7.0%
7.0% Combined sulfur	
Iron (Fe)	7.0%
0.05% Water soluble iron	
Manganese (Mn)	1.5%
0.06% Water soluble manganese	
Zinc (Zn)	0.2%
0.004% Water soluble zinc	

Derived from ammonium sulfate, urea, soybean meal, sulfate of potash, calcium carbonate, ferrous sulfate, iron sucrate, manganese sulfate, manganese sucrate, zinc sucrate and kelp (*Ascophyllum nodosum*).

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:
2.5% Humic acids derived from Leonardite



GRIGG

SOIL AMENDMENTS

Soil Amendments

Soil amendments help improve physical and chemical soil properties by providing the correct ratios of air, soil and water necessary to help turf thrive. They add nutrients to the soil, help retain moisture and help maintain the correct pH balance. They may also help reduce compaction and aerate the soil to allow water and nutrients to move through it more easily.

GRIGG soil amendments provide supplemental nutrition and components that improve soil structure, including:

Zeolite, a naturally occurring microporous mix of silica and alumina that can be added to soil and growing media to enhance cation exchange capacity (CEC). Zeolite may be blended into a root-zone mix prior to planting to enhance establishment or injected into the root-zone. It also can be used in greenhouse nursery mixes, planting beds and containers, for landscaping, transplants, and horticultural crops. Can be used for turfgrass on all soil types, but best to use on sandy or loam (modified sand) soils.

Dolomite, an anhydrous carbonate mineral composed of calcium magnesium carbonate that helps raise the pH level of acidic soils. When soil pH is too low, soil nutrients may become bio-unavailable to plants.

Soil Types

There are three primary types of soil, which are determined by the amount of clay, silt or sand particles present.

Clay soil contains a high percentage of clay and silt. The small particles cling together to hold water and nutrients well. However, clay soil is susceptible to compaction. This can make it difficult for water and nutrients to reach plant roots and limit their growth and development.

Sandy soil is composed of larger, coarser particles. It drains quickly, but it does not hold moisture and nutrients effectively.

Loam soil has a nice balance of clay, silt, sand and organic material. It's the ideal soil type and provides adequate drainage and retention of moisture and nutrients.



GRIGG RHIZO AIDE

1-0-0

GRIGG Rhizo Aide is a dry specialty product that contains tea seed meal and dolomite, which provide natural sources of nutrition. Recommended for use after aeration or similar mechanical treatment to prevent and correct nutrient deficiencies. Can be used year round, but applications from fall through spring provide optimal results.

Key Advantages

- Tea seed meal supplies nitrogen
- Dolomite is an anhydrous carbonate mineral composed of calcium magnesium carbonate that raises the pH level of acidic soils. When pH is too low, soil nutrients may become bio-unavailable to plants.
- Calcium is important for cell wall strength
- Magnesium plays a key role in chlorophyll production, which improves turf color
- Best results are achieved by watering in

Application and Use

Soil Applications: Use any conventional spreading equipment.

Tees, Greens, Fairways, Sports Fields: Initial application of 6 lb per 1000 sq ft [268 lb per acre; 300 kg per hectare]. Additional applications of 3-6 lb per 1000 sq ft [134-268 lb per acre; 150-300 kg per hectare] may be made at 4 week intervals. Light irrigation after application is recommended for best results. Do not apply during frost conditions.

Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	1.0%
1.0% Water insoluble nitrogen	
Calcium (Ca)	5.0%
Magnesium (Mg)	3.0%

Derived from tea seed meal and dolomite.

No Phosphate Fertilizer



GRIGG

SPECIALTY SOIL FERTILIZERS

GRIGG specialty soil fertilizers deliver readily available nutrients to the root zone and promote root growth and overall turf quality. They are designed to complement GRIGG Proven Foliar nutrients and GRIGG GreenSpec granular nutrients.

Unlike GRIGG Proven Foliar products, specialty soil fertilizers should be watered into the root zone soon after application for best results.



GRIGG IRON 12-0-0 12-0-0

GRIGG Iron 12-0-0 contains 12% nitrogen and amino acid complexed iron, manganese and zinc. It is an excellent option for fairways to improve turf vigor and color.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen promotes consistent turfgrass shoot growth
- Iron plays a key role in chlorophyll production, which improves turf color
- Recommended for golf and sports turf

Application and Use

Cool Season Grasses: Apply 4-12 fl oz per 1,000 sq ft or 1.25-4 gal per acre [13-40 L per hectare] as needed every 7-14 days.

Warm Season Grasses: Apply 6-15 fl oz per 1,000 sq ft or 2-5 gal per acre [20-50 L per hectare] as needed every 7-14 days.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen	12.0%
12.0% Urea nitrogen	
Iron (Fe)	5.0%
5.0% Water soluble iron	
Manganese (Mn)	0.5%
0.5% Water soluble manganese	
Zinc (Zn)	0.5%
0.5% Water soluble zinc	

Derived from urea, iron amino acid complex, manganese amino acid complex and zinc amino acid complex.



GRIGG BI BLEND 10-0-0

GRIGG Bi Blend is a liquid fertilizer that contains 5% calcium and three sources of nitrogen. It improves turf strength and vigor. It may be used on all soil types and is especially beneficial in sandy soils.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen promotes consistent turfgrass shoot growth
- Calcium is important for cell wall strength
- GRIGG Bi Blend may be used with Grigg Rhizonify, which provides additional nutrition and an anionic surfactant

Application and Use

Cool or Warm Season Grasses

Soil Application: Apply 3-6 fl oz per 1,000 sq ft or 1-2 gal per acre [10-20 L per hectare] every 14-28 days or as needed.

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	10.0%
1.0% Ammoniacal nitrogen	
5.0% Nitrate nitrogen	
4.0% Urea nitrogen	
Calcium (Ca)	5.0%

Derived from urea, urea ammonium nitrate and calcium nitrate.



GRIGG

BURLEY GREEN

18-2-3

GRIGG Burley Green is a liquid fertilizer that contains potassium, phosphorus, urea and slow release nitrogen. It provides extended feeding and is an excellent value for fairway applications. It may be applied foliarly or through fertigation.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Slow release nitrogen promotes consistent turfgrass shoot growth
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production
- GRIGG Burley Green may be used with GRIGG foliar nutrients complexed with amino acids

Application and Use

Foliar and Soil Applications: Apply as needed every 21-28 days.

Cool Season Grasses: Apply 6-9 fl oz per 1000 sq ft or 2-3 gal per acre [20-30 L per hectare].

Warm Season Grasses: Apply 9-15 fl oz per 1000 sq ft or 3-5 gal per acre [30-50 L per hectare].

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	18.0%
12.0% Urea nitrogen	
6.0% Other water soluble nitrogen*	
Available Phosphate (P ₂ O ₅)	2.0%
Soluble Potash (K ₂ O)	3.0%

Derived from urea, methylene diurea, methylene urea, phosphoric acid and potassium citrate.

*6% Slowly available nitrogen from methylene diurea and methylene urea.



GRIGG DISPLACE 9-0-0

GRIGG Displace is a liquid fertilizer that contains two sources of nitrogen, 12% calcium and a wetting agent. It provides superior soil penetration – even on hard-to-wet, hydrophobic soils.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen promotes consistent turfgrass shoot growth
- Calcium is important for cell wall strength

Application and Use

Maintenance Rate: Apply every 7-21 days. Water-in for best results or apply before rainfall.

Cool Season Grasses: 6-12 fl oz per 1,000 sq ft or 2-4 gal per acre [20-40 L per hectare].

Warm Season Grasses: 9-15 fl oz per 1,000 sq ft or 3-5 gal per acre [30-50 L per hectare].

Poor Irrigation Water Quality or Sodic Conditions:

Apply every 7-10 days. Water-in for best results or apply before rainfall.

Cool Season Grasses: 9-12 fl oz per 1,000 sq ft or 3-4 gal per acre [30-40L per hectare].

Warm Season Grasses: 12-15 fl oz per 1,000 sq ft or 4-5 gal per acre [40-50L per hectare].

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/ tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	9.0%
8.0% Nitrate nitrogen	
1.0% Urea nitrogen	
Calcium (Ca)	12.0%

Derived from calcium nitrate and urea.

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:
2% Wetting Agent



GRIGG

RHIZONIFY

6-4-4

GRIGG Rhizonify is a liquid fertilizer that 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 targeted nutrient placement. Recommended for golf and sports turf, particularly on areas suffering from localized dry spot.

Key Advantages

- Contains soluble nutrients for efficient uptake and use
- Nitrogen application promotes consistent turfgrass shoot growth
- Phosphorus plays a role in plant metabolic processes that transfer energy throughout the plant
- Potassium regulates primary physiological processes that impact turf response to stress and supports cellular processes that impact photosynthesis, water regulation, respiration and protein production

Application and Use

Soil Application: Apply as needed every 14-28 days. Water-in for best results or apply before rainfall.

Tees, Greens: 9-12 fl oz per 1,000 sq ft or 3-4 gal per acre [30-40 L per hectare].

Fairways, Sports Fields: 12-15 fl oz per 1,000 sq ft or 4-5 gal per acre [40-50 L per hectare].

Make frequent applications at lower rates, or apply higher rates at times of greater plant demand. Optimum rate of application will vary depending on treatment interval, soil properties (such as pH, organic matter content, texture), weather conditions, time of year, plant species and its nutrient requirements. For best results, follow soil/tissue test recommendation.

Guaranteed Analysis

Total Nitrogen (N)	6.0%
0.70% Ammoniacal nitrogen	
1.10% Nitrate nitrogen	
4.20% Urea nitrogen	
Available Phosphate (P_2O_5)	4.00%
Soluble Potash (K_2O)	4.00%
Iron (Fe)	0.20%
0.20% Water soluble iron	
Manganese (Mn)	0.05%
0.05% Water soluble manganese	
Zinc (Zn)	0.05%
0.05% Water soluble zinc	

Derived from monoammonium phosphate, potassium nitrate, urea, iron amino acid complex, manganese amino acid complex and zinc amino acid complex.

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS:
3% Wetting Agent



GRIGG PIGMENTS FOR TURFGRASS MANAGEMENT

Overview of Pigments

Pigments optimize turf color, quality and aesthetics. Other pigments provide additional benefits, including protection and increased reflection of near infrared (NIR) and UV light.

GRIGG research has documented an increase in NIR light reflectance from turf treated with GreenPIG. We continue to learn how this measurement correlates with decreased oxidative stress.

Turf managers have the ability to use colorants for a specific agronomic objective, or simply paint the turf. Applying pigment provides additional color and is an excellent alternative to overseeding.

In general, pigments and paints are chemically similar, but very different physically. For pigmented products, the formulation and inert ingredients determine its use.

Key Advantages

- Low viscosity and metal load, hence lower weight
- Compatible with tank mix partners such as crop protectants and plant growth regulators
- Designed for repeated use
- Increased reflectance of potentially damaging NIR light

Things to Consider When Choosing a Pigment

Carefully consider the turf species, stage of growth, and height of cut to determine the correct rate and application frequency. If you select a pigment, apply prior to turf dormancy (while turf is actively growing) and continue using routinely during the entire dormancy period*.

Product	Golf Applications	Sports Applications	Actively Growing Turf	Semidormant Turf	Dormant Turf	Near Infrared Protection	UV Protection
GRIGG GreenPIG	■	■	■	■	■	■	■
GRIGG GreenPIG Ultra	■	■	■	■	■	■	■
GRIGG GreenPIG UV	■	■	■	■	■	■	■

- Ideal application as determined by desired results
- Possibly good results if factors considered
- Less than ideal results

*The color attained using pigmented products is very subjective and should be tested prior to extensive use in order to determine optimum rate and application interval at different sites. Products list recommended rates as a guideline.

GRIGG GREENPig PREMIUM TURF PIGMENTS



Optimum rate of application will vary depending on treatment interval, turfgrass species, mowing height, weather conditions and time of year. Generally, higher mowing heights and warm season turfgrasses will require higher rates to achieve the best results.

GRIGG GreenPig

Flagship product that contains a high quality, concentrated pigment and provides a natural green color for up to one month. It also reflects potentially harmful near infrared light, which may improve turf quality and vigor. It is recommended for general use and the low application rate provides great value.

Do NOT apply to dormant or semi-dormant turfgrass.

GRIGG GreenPig Ultra

This formulation offers the same benefits as GRIGG GreenPig, but provides a darker green color for up to one month. It is recommended for turf that has lost its color, including dormant turf.

Approved for use on dormant and semi-dormant turfgrass.

GRIGG GreenPig UV

This formulation provides the benefits as GRIGG GreenPig, plus a proprietary compound that helps reduce turf exposure to ultraviolet light. It provides a natural green color for up to one month. The added UV protection may improve turf quality, increase energy capture and reduce oxidative stress.

Do NOT apply to dormant or semi-dormant turfgrass. Do NOT use on drought stressed turf grass.

Application and Use

GRIGG GreenPig / GRIGG GreenPig Ultra

Maintenance Rate: Apply with 50-100 gallons of water [190-380 L of water]

Golf Course Putting Greens: 12-24 fl oz per acre [660 mL-1 .5L per hectare]

Golf Course Fairways: 18-32 fl oz per acre [1.25-2.25 L per hectare].

Sports Fields: 24-34 fl oz per acre [1.5-2.5 per hectare].

GRIGG GreenPig UV

Maintenance Rate: Apply with 50-100 gallons of water [190-380 L of water]

Golf Course Putting Greens: 2-4 fl oz per 1,000 sq ft [7-13 L per hectare].

Please see BRANDT catalog for spray indicator products.

LIQUID NUTRIENT ANALYSIS

				Nutrient Content											
Proven Foliar Nutrients	Specific Gravity	lbs per 100 gal	pH	N	P ₂ O ₅	K ₂ O	B	Ca	Co	Cu	Fe	Mg	Mn	Mo	Zn
GRIGG A-O-K	1.260 lbs of Nutrient per gal:	10.515	7.60	2.0% 0.2103		24.0% 2.5237									
GRIGG Fairphyte	1.480 lbs of Nutrient per gal:	12.351	6.70	1.0% 0.1235		25.0% 3.080									
GRIGG Gary's Green	1.290 lbs of Nutrient per gal:	10.766	2.90	18.0% 1.9378	3.0% 0.3230	4.0% 0.4306				0.12% 0.0129	1.0% 0.1077	0.5% 0.0538	0.1% 0.0108		0.1% 0.0108
GRIGG Gary's Green Ultra	1.280 lbs of Nutrient per gal:	10.682	3.70	14.0% 1.495	2.0% 0.2136	3.0% 0.3205	0.02% 0.002			0.12% 0.0128	1.4% 0.1495	0.5% 0.0534	0.2% 0.0214		0.2% 0.0214
GRIGG Iron Combo 1-0-2	1.430 lbs of Nutrient per gal:	11.934	2.70	1.0% 0.1193		2.0% 0.2387	0.16% 0.0191			0.13% 0.0155	4.0% 0.4774		1.0% 0.1193		0.8% 0.095
GRIGG Kelplex	1.100 lbs of Nutrient per gal:	9.180	4.54	1.0% 0.0918	2.0% 0.1836	2.0% 0.1836					0.1% 0.01				
GRIGG Magnesium Complex	1.230 lbs of Nutrient per gal:	10.265	0.60									5.0% 0.5132			
GRIGG Manganese Combo	1.350 lbs of Nutrient per gal:	11.266	2.38							0.4% 0.0451		1.2% 0.1352	5.0% 0.5633		1.0% 0.1127
GRIGG Micro Burst	1.330 lbs of Nutrient per gal:	11.099	2.00			1.0% 0.1110	0.04% 0.0044			0.05% 0.0055	3.4% 0.3774	0.3% 0.0333	2.4% 0.2664	0.01% 0.0011	1.0% 0.111
GRIGG Nutra Green	1.370 lbs of Nutrient per gal:	11.433	2.50	5.0% 0.5717	10.0% 1.1433	5.0% 0.5717	0.12% 0.0137			0.1% 0.0114	1.0% 0.1143	1.0% 0.1143	0.5% 0.0572		0.1% 0.0114
GRIGG P-K Plus	1.370 lbs of Nutrient per gal:	11.433	7.05	3.0% 0.3430	5.0% 0.571	17.0% 1.943	0.02% 0.0023		0.01% 0.0011					0.001% 0.0001	
GRIGG Sili-Kal B	1.470 lbs of Nutrient per gal:	12.268	1.50	8.0% 0.9814		4.0% 0.4907	0.05% 0.0061	10.0% 1.2268							
GRIGG Suprema	1.310 lbs of Nutrient per gal:	10.932	6.30	12.0% 1.3119		12.0% 1.3119					1.0% 0.1093		0.05% 0.0055		0.05% 0.0055
GRIGG Tuff Turf	1.310 lbs of Nutrient per gal:	10.932	4.30	1.0% 0.1093		14.0% 1.5305					0.5% 0.0547	0.5% 0.0547			
GRIGG Ultraplex	1.280 lbs of Nutrient per gal:	10.682	2.90	4.0% 0.4273		3.0% 0.3205	0.05% 0.0053			0.05% 0.0053	1.95% 0.208	0.5% 0.0534	0.4% 0.0427		0.4% 0.0427

Soil Specialty Fertilizers	Specific Gravity	lbs per 100 gal	pH	N	P ₂ O ₅	K ₂ O	B	Ca	Co	Cu	Fe	Mg	Mn	Mo	Zn
GRIGG Iron 12-0-0	1.290 lbs of Nutrient per gal:	10.766	2.50	12.0% 1.2919							5.0% 0.5383		0.5% 0.0538		0.5% 0.0538
GRIGG Bi Blend	1.320 lbs of Nutrient per gal:	11.016	1.00	10.0% 1.1016				5.0% 0.5508							
GRIGG Burley Green	1.480 lbs of Nutrient per gal:	1.190	8.80	18.0% 1.7876	2.0% 0.1986	3.0% 0.2979									
GRIGG Displace	1.480 lbs of Nutrient per gal:	12.350	0.75	9.0% 1.112				12.0% 1.4820							
GRIGG Rhizonify	1.280 lbs of Nutrient per gal:	10.682	3.74	6.0% 0.6409	4.0% 0.4273	4.0% 0.4273					0.2% 0.107		0.05% 0.0053		0.05% 0.0053

GRIGG APPLICATION GUIDELINES

Fundamental Instructions for Applications and Programs

Very Important

Most liquid products are designed to be foliar absorbed. For maximum performance, apply early in the morning or late in the evening with 1-2 gallons of water per 1,000 sq ft [300-600 L/Ha]. Allow the application to dry on plant 3-6 hours before watering.

Surfactants

GRIGG Ultraplex is a foliar nutrition product that contains a non-ionic surfactant (*Yucca schidigera*), which reduces water surface tension to improve foliar application wetting and absorption. No additional surfactant is necessary when using this product. GRIGG Ultraplex is a critical foundation product and should be the first thing added to the water of your spray tank mix. The recommended rate is 3 fl oz per 1000 sq ft [10 L/Ha].

Compatibility

GRIGG Proven Foliar nutrients are compatible with each other and most fungicides, herbicides, and pesticides when tank mixed at recommended rates. A jar test is always recommended as a part of standard operating procedure. The high degree of compatibility of the Proven Foliar line includes the ability to be mixed with other foliar applied fungicides, insecticides and herbicides that do not need to be watered in. When mixing with herbicides, consider using the lowest label rate as GRIGG products may enhance the uptake of the herbicide.

Rates

To convert 14 day programs to 7 day programs lower rates by one half (1/2) or two thirds (2/3) of original rate.

Minors

GRIGG straight chelated nutrients or any other Proven Foliar nutrient can be added to any program as indicated by soil and tissue test results. Typical rates for adding individual micronutrients range between 1-3 fl oz per 1,000 sq ft [3-10 L/Ha]. For severe deficiencies, as much as 6 fl oz per 1,000 sq ft [20 L/Ha].

Soil Specialty Nutrition Program

For sand based greens, use 1 gallon per acre [10 L/Ha] of GRIGG Bi Blend and 4 gallons per acre [40 L/Ha] of GRIGG Rhizonify applied monthly and lightly watered in. For soil based greens use 1/2 gallon per acre [5 L/Ha] of GRIGG Bi Blend and 2 1/2 gallons per acre [25 L/Ha] of GRIGG Rhizonify.

Program Balance

GRIGG Proven Foliar nutrients are an effective method of providing nutrients to the plant. However, we also recommend supplementing with GRIGG GreenSpec granular nutrients year round as determined by soil testing to complete a total program.

Intervals

Unless otherwise stated, GRIGG nutrition programs should typically be applied every 7-14 days. There is flexibility to accommodate differing management styles and between 1 to 3 weeks is acceptable if rates are adjusted accordingly.

Expertise

If you want to create site-specific programs that are tailored to the individual needs and unique factor of a site, contact your distributor or GRIGG technical representative today.

Research

GRIGG is committed to participating in ongoing independent university research trials. Our agronomists adjust recommended rates and other application guidelines in accordance with the most recent research findings. Visit grigg.co to find the latest program recommendations

BERMUDA GRASS

Nutrition Programs

Southern

Every spray:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green	3-6	9-20
GRIGG Ultraplex	3	10
GRIGG Manganese Combo	2	6
Plus, every other spray:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG P-K Plus	6	20

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared.

Low Desert

Early Spring:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	3	10
GRIGG Nutra Green	3	10
GRIGG Micro Burst	2	6
GRIGG Sili-Kal B	3	10
Late Spring transition:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	7	30
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	9	30
GRIGG Tuff Turf	3	10
Summer:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green	9	30
Late Summer/early Fall:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG A-O-K	6	20
GRIGG Sili-Kal B	3	10
Low desert overseeding:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	8-12	30-50
1-2 weeks following granular application, apply on 14 day rotation:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	3-9	10-30
<i>(Rate should start a 3 fl oz and increase as turf matures)</i>		
GRIGG P-K Plus	6	20
GRIGG Nutra Green	6	20
Winter:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	3	10
GRIGG Nutra Green	3	10
GRIGG Micro Burst	2	6

DESERT

Nutrition Programs

Overseeding

At planting and/or after the 2nd or 3rd mowing of the seedling turf:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40

1-2 weeks later:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG P-K Plus	6	20
GRIGG Gary's Green Ultra	6	20

1-2 months later, every 7-10 days:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG P-K Plus	6	20
GRIGG Gary's Green Ultra	6-9	20-30

Rate should start at 6 fl oz [20 L/Ha] and increase as the turf matures.

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Low/High Desert Bentgrass

Early Spring:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG Nutra Green	4	15
GRIGG Sili-Kal B	4	15
GRIGG Tuff Turf	4	15

Late Spring:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG P-K Plus	6	20
GRIGG Kelplex	2	6

Summer:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG P-K Plus	6	20
GRIGG Kelplex	2	6
GRIGG Tuff Turf	3	10

Fall:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG P-K Plus	6	20
GRIGG Tuff Turf	4	15
GRIGG Manganese Combo	2	6

Winter:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG Manganese Combo	2	6
GRIGG Nutra Green	4	15
GRIGG Sili-Kal B	4	15

FLOWER FOLIAR FERTILITY

Nutrition Program

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Annual flowers: rotate products, drench every 7 days with one or the other

GRIGG Proven Foliar	fl oz/gallon	L/Ha
GRIGG Nutra Green	1	4
GRIGG P-K Plus	1	4

Annual flowers: drench every 14 days

GRIGG Proven Foliar	fl oz/gallon	L/Ha
GRIGG Nutra Green	0.5	4
GRIGG P-K Plus	0.5	4

GREAT LAKES REGION

Nutrition Programs

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Spring aeration: 5-7 days prior to aeration		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40

Spring: Mar-Apr every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Nutra Green	6	20
GRIGG Ultraplex	6	20

Late Spring: Apr-May every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6-9	20-30
GRIGG P-K Plus	6	20

Summer: June-Aug every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6-9	20-30
GRIGG P-K Plus	6	20
GRIGG Kelpex	2	6

Fall: Sept-Nov every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	3	10
GRIGG P-K Plus or GRIGG Tuff Turf	6	20
GRIGG Rhizonify	6	20

Fall aeration: 5-7 days prior to aeration		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40

MID-ATLANTIC REGION

Foliar and Granular Nutrition Programs

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

3-5 days prior to aeration and the week of aeration:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Nutra Green	6	20
GRIGG Gary's Green Ultra	12	40

One day after aeration and topdressing:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40

Late Spring/early Fall: every 7-10 days

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG Nutra Green	3	10
GRIGG Sili-Kal B	3	10

Summer:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG Tuff Turf or GRIGG A-O-K	3	10
GRIGG P-K Plus	6	20
GRIGG Manganese Combo	3	10

Applied in the "off" weeks:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Rhizonify	6	20
GRIGG Kelplex	2	6

Late Fall/Winter: mid-October to mid-November every 7-10 days

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6	20
GRIGG Tuff Turf	6	20
GRIGG Rhizonify	6	20

NEW ENGLAND

Nutrition Programs

Newer Generation Creeping Bentgrass Swards

Spring Green Up/Root Generation: (after 2nd mowing)		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Nutra Green	6	20
GRIGG Gary's Green Ultra	6	20
If using in combination with *Trimmit [®] add:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Micro Burst	2	6
5 days prior to aeration:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40
Mid-Spring and into Summer:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Nutra Green	6	20
(P for energy transfer)		
GRIGG P-K Plus	6	20
GRIGG Sili-Kal B	4	15
GRIGG Gary's Green Ultra	12	40
Early Fall:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Turf Rally	6.25	25
(1 lb N)		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Tuff Turf	6	20
GRIGG Nutra Green	6	20
GRIGG P-K Plus	6	20
GRIGG Gary's Green Ultra	9	30
Late Fall until just prior to dormancy:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Tuff Turf	6	20
GRIGG Gary's Green Ultra	6	20

*Trimmit[®] is a registered trademark of the Syngenta[®] Corporation

Annual Bluegrass and Creeping Bentgrass Swards

Spring green up/root generation: (after 2nd mowing)		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Nutra Green	6	20
GRIGG Gary's Green Ultra	9	30
If using in combination with PGR's for seed head suppression or Primo add:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Micro Burst	1	3
5 days prior to aeration:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40
Mid-Spring and into Summer:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Tuff Turf	4	15
GRIGG P-K Plus	6	20
GRIGG Gary's Green Ultra	12	40
Early Fall:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Endurance	10	40
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Tuff Turf	6	20
GRIGG Nutra Green	6	20
GRIGG P-K Plus	6	20
GRIGG Gary's Green Ultra	9	30
Late Fall until just prior to dormancy:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Tuff Turf	6	20
GRIGG Gary's Green Ultra	6	20

Any program can be adjusted to your specific needs, and your micro climate.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

NO PHOSPHOROUS SOLUTIONS

Nutrition Program

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Spring:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	4	15
GRIGG Suprema	12	40
GRIGG A-O-K	6	20
GRIGG Manganese Combo	2	6

At aeration:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Zerophos	10	40
Or as needed per N requirements		

Summer:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	4	15
GRIGG Suprema	9	30
GRIGG Fairphyte	3	10
GRIGG Sili-Kal B	4	12

Monthly		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG CK-Balance or GRIGG SK-Balance	3	15

Fall:		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	4	15
GRIGG Suprema	12	40
GRIGG Tuff Turf	6	20

At aeration:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Zerophos	10	40

PACIFIC NORTHWEST/UK, IRELAND

Nutrition Program

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Spring - Feb-Apr: every 10-21 days

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	9	30
GRIGG Nutra Green	6	20
GRIGG P-K Plus	6	20

At Aeration:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40

Summer - May-Sept: every 10-21 days

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	9	30
GRIGG P-K Plus	6	20
GRIGG Sili-Kal B	3	10
GRIGG Micro Burst	1	4

Late May:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven iron	12	45

Late June:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG 10-2-4	7	30

Fall - Sept-Nov: every 14-21 days

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	9	30
GRIGG P-K Plus	6	20
GRIGG Tuff Turf	3	10

At aeration:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10-15	40-60

Winter:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	3	10

ROCKY MOUNTAIN REGION

Nutrition Program

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Spring: every 7-10 days

2-4 apps depending on turf conditions:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6-12	20-40
GRIGG Nutra Green	6-12	20-40

Late Spring: every 10-14 days

2-3 apps:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green	9	30
GRIGG Nutra Green	6	20
GRIGG Manganese Combo	2	6

At aeration: every 7-10 days:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40
(0.7 lb N)		

Summer: every 10-14 days:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	9	30
GRIGG P-K Plus	6	20
GRIGG Sili-Kal B	3	10

Late June:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	7-10	30-40

Fall: every 14 days:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Ultraplex	6	20
GRIGG Tuff Turf	3	10
GRIGG P-K Plus	3	20
GRIGG Manganese Combo	2	6

Late Aug-Sept:

GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	15	60

SPORTS TURF

Nutrition Program

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Spring foliar starter: every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Nutra Green	4-6	15-20
GRIGG P-K Plus	6	20
GRIGG Ultraplex	4-6	15-20

Cool season maintenance: every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green Ultra	6-9	20-30
GRIGG P-K Plus	6	20
GRIGG Tuff Turf	4-6	15-20
GRIGG Sili-Kal B	4-6	15-20

Warm season maintenance: every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Suprema	6-12	20-40
GRIGG Ultraplex	3-6	10-20
GRIGG P-K Plus	6	20
GRIGG Tuff Turf	3-6	10-20
GRIGG Kelpex	1-3	3-10

Cool and warm soil conditioning: every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Rhizonify	12	40
GRIGG Bi Blend	3	10

Lightly water in or apply at 132-176 gal/acre

TOURNAMENT

Proven Foliar Nutrition Program

Shorter Grass, Shorter Roots

To produce faster greens during tournament preparation, turf is continually cut to lower heights. It is challenging to maintain tournament conditions, whether for a special event or year around. Superintendents must promote density and quality while producing fast greens.

As mowing heights are lowered, root growth decreases and there is less leaf surface to photosynthesize. Current tournament mowing heights are typically below 1/8 inch [3-4 mm] on both cool and warm season turf. During a special event, greens are often double cut in the morning and cut again in the afternoon or evening.

Maintaining Nutrient Level and Health

In an ordinary situation a turf plant will store half of all the carbohydrates produced in the root and utilize half for sustaining life functions.

Today's putting green mowed at 1/8 inch [3 mm] or less, regardless of season, simply cannot photosynthesize enough to ensure adequate carbohydrate reserves and storage. The turf is trying to survive and needs to utilize all the carbohydrates available to do it. Therefore the plant does a poor job of storing any carbohydrate reserve in the root.

Good management practices will help turf survive and thrive even when it is being mowed so low. One important practice is maintaining the nutrient level of the plant tissue.

In addition to C, H and O₂, which are provided by water and carbon dioxide, there are 13 essential nutrients required by all higher plants. Plant health, growth, and development are dependent on all of these elements being present at optimum concentrations. Many scientists believe that these 13 elements are critical to plant growth and survival during periods of stress.

To initiate your tournament program, spray the following recommended products and rates every 7 days:

GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green	6	20
GRIGG Ultraplex	3	10
GRIGG Sili-Kal B	3	10
Plus, every other spray:		
GRIGG P-K Plus	6	20

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

GRIGG chelated straight nutrients or any other Proven Foliar nutrients can be added to this program as indicated by soil and tissue test results. We also recommend the addition of GRIGG GreenSpec fertilizer in the spring and again in the fall as determined by soil testing to complete a total program.

TRANSITION ZONE

Bentgrass Nutrition Program

Any program can be adjusted to your specific needs, and your micro climate.

All foliar rates below are expressed as fluid ounces per 1,000 sq ft with liters per hectare [L/Ha] equivalents unless otherwise noted.

All GRIGG GreenSpec granular nutrient rates are expressed in lbs per 1,000 sq ft with grams per meter squared [g/m²].

Coming out of winter: Mar-Apr every 7-10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Nutra Green	3	10
GRIGG Sili-Kal B	3	10
GRIGG Ultraplex	3	10
One week prior to aeration: Apr - May		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green	9	30
GRIGG Ultraplex	3	10
GRIGG Sili-Kal B	6	20
At aeration: Apr-May		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40
One week after aeration: Apr-May		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green	9	30
Late Spring/Summer: Jun-Oct every 10 days		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Gary's Green	6	20
GRIGG P-K Plus	3	10
GRIGG Tuff Turf	3	10
GRIGG Manganese Combo	2	6
GRIGG Kelplex	1	3
Fall: Oct-Nov		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Tuff Turf or GRIGG A-O-K	3	10
GRIGG Nutra Green	3	10
GRIGG Ultraplex	3	10
GRIGG Sili-Kal B	3	10
Fall:		
GRIGG GreenSpec	lbs/1,000 ft ²	g/m ²
GRIGG Seven Iron	10	40
Late Fall/Winter: Dec-Feb (weather permitting)		
GRIGG Proven Foliar	fl oz/1,000 ft ²	L/Ha
GRIGG Tuff Turf	3	10
GRIGG Ultraplex	3	10

AGRONOMISTS AND TECHNICAL SUPPORT

Dr. Gordon Kauffman III **Technical Manager**

Dr. Kauffman has been working in the turfgrass industry for over 20 years. He oversees all turf research and product development for GRIGG and BRANDT. He holds Ph.D. and M.S. degrees in agronomy and has a B.S. degree in Turfgrass Management from Penn State University.

Brian Haschemeyer **Director of Discovery and Innovation**

Brian oversees all new formulation research, development and field testing at BRANDT. He oversees formulation development and quality control testing at BRANDT's seven laboratories and manages a team of research agronomists. Brian has nearly two decades of research agronomists. Brian has nearly two decades of formulation experience and holds a B.S. degree in Chemistry from Western Illinois University.

Gary Grigg, CGCS, MG **Agronomist**

GRIGG co-founder, Gary Grigg, lead the company's product development and research for over 25 years. He continues to play a key role in customer agronomic education, support and consulting. Gary has over 50 years of turf and golf course management experience. He has a B.S. degree in Agriculture and Entomology and an M.S. degree in Agronomy.

GRIGG TURF RESEARCH

GRIGG is dedicated to providing customers with the highest quality turf nutrition products in the industry, backed by plant nutrition science and research.

The company has conducted hundreds of university and independent turf product trials, with a focus on new product field testing. This research, along with plant science, drives all GRIGG fertility and IPM agronomic solutions, product recommendations and nutrition program.

To see a full list of GRIGG research trials and reports, visit grigg.co.

These products may only be sold in states where registered or where registration is not required. For information regarding product availability in your area, please contact Brandt Consolidated, Inc.

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