

Roots® Turf Food

granular fertilizers

- Outstanding and consistent color response
- Improves turf density and root mass
- Minimal roller and mower pickup
- Low soluble salts minimize any burn potential



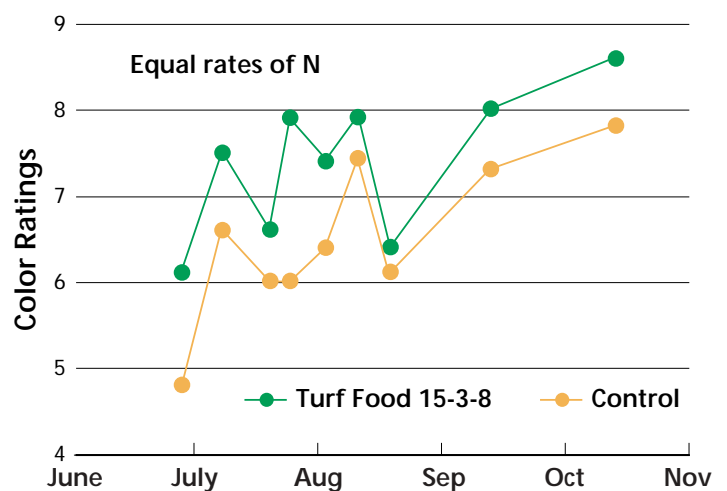
SPECIFICATIONS

ROOTS® Turf Food is a proprietary all-in-one nutrient delivery system designed to feed the plant, and to enhance the biological life of the soil and plant ecosystem. The Roots Turf Food formulation is the unique combination of three component technologies which provide a synergistic benefit to plant health. They are:

- **Premium Organic-Based Components** – selectively formulated from the finest animal meals. All-organic bone, blood and feather meals form the basis for Turf Food's ability to feed and enhance soil microbial activity while providing a balanced fertility base for turf nutrition. Over 50% of the contents by weight are amino acids – which are excellent biological stimulants and food for microbes. In addition, a complex of macro and micro-nutrients and carbohydrates are provided in a more natural form than synthetic fertilizers. The ROOTS manufacturing process also provides a product which degrades easily – minimizing roller and mower pickup common to manure-based products.
- **ROOTS® Biostimulant Complex** – pioneering work in the development of biostimulants has placed ROOTS in a leadership position in the industry. Our package of stress reducing compounds has been proven over the course of many years on professional turf worldwide. The ROOTS package is a proprietary formulation of amino acids, vitamins, humic acids, sea kelp extracts and other ingredients.
- **Novozymes' Beneficial Microbes** – specific, naturally-occurring microbial strains have been selected for their individual contribution to plant performance. Each strain is grown under the exacting quality regimen of the ISO 9001:2000 Quality Management System to assure purity and repeatability of results. Novozymes has been awarded a U.S. Patent on these strains given their novel and synergistic benefits when combined.

• <i>Bacillus amyloliquefaciens</i> SB3002	Produces hydrolytic enzymes that release nutrients in soil
• <i>Bacillus pasteurii</i> SB3003	Effective at low soil oxygen levels, produces hydrolytic enzymes that release nutrients in soil
• <i>Bacillus cereus</i> SB3124	Produces natural chelate that enhances nutrient uptake
• <i>Bacillus laevolacticus</i> SB3006	Breaks down organic matter to release nutrients
• <i>Bacillus licheniformis</i> DA-33	Effective at higher soil temperatures
• <i>Paenibacillus azotofixans</i> SB3154	Converts atmospheric nitrogen into a form useable by plants

University of Wisconsin 1999 USGA Spec Bentgrass Turf Color Study



Significantly better color on 7 out of 9 dates during stress period vs comparable organic fertilizer at 3/4 lb N.

When integrated, these technologies provide an exclusive microbial biofertilizer with key benefits for plants, including outstanding and consistent color response, improved root density and root mass, maximum nutrient uptake and low soluble salts to minimize burn potential.





- Golf & Sports Turf
- Lawn Care, Sod & Hydroseeding
- Arborist & Landscape
- Nursery & Greenhouse*

*8-2-6 only

ROOTS® Turf Food



ROOTS TURF FOOD

	8-2-6	12-2-12	14-3-5	15-3-8	20-2-8
Fine Grade (100 SGN)	•	•	•	•	
Coarse Grade (200 SGN)	•	•	•	•	•
Bag Coverage (0.7#N/1,000 sq. ft.)	5,700	8,570	9,525	10,700	14,520
lbs. product per 1,000 sq. ft.*	8.7	5.85	5.25	4.5	3.4
lbs. product per acre*	380	255	230	200	150
Bags per acre	7.6	5.1	4.6	4	3
Nitrogen Breakdown	Total Nitrogen (N) 8.00%	Total Nitrogen (N) 12.00%	Total Nitrogen (N) 14.00%	Total Nitrogen (N) 15.00%	Total Nitrogen (N) 20.00%
	7.00% Water Insoluble N 1.00% Slowly Available Water Soluble N	0.20% Ammonical N 6.00% Water Insoluble N 2.30 Urea N 0.50% Water Soluble Organic N 3.00% Slowly Available Water Soluble N	3.50% Ammonical N 4.00% Water Insoluble N 6.00% Urea N 0.50% Slowly Available Water Soluble N	0.75% Ammonical N 7.00% Water Insoluble N 1.75% Urea N 2.00% Water Soluble Organic N 3.50% Slowly Available Water Soluble N	0.90% Ammonical N 6.80% Water Insoluble N 3.00% Urea N 3.00% Water Soluble Organic N 5.00% Slowly Available Water Soluble N
Calcium (Ca)	1.0%	1.0%	1.0%	1.0%	2.0%
Magnesium (Mg)	0.5%	0.5%	0.5%	0.5%	1.2%
Sulfur (S)	1.0%	2.0%	4.0%	1.0%	2.0%
Iron (Fe)	1.0%	1.0%	4.0%	1.0%	2.0%
Manganese (Mn)	0.1%	0.1%	0.1%	0.1%	0.2%
Zinc (Zn)	0.1%	0.1%	0.1%	0.1%	0.2%
Copper (Cu)	0.1%	0.1%		0.1%	0.2%
Sodium (Na)		0.1%		0.1%	0.1%

*Basis: 0.70 # N/1000 sq. ft.



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