

Residential and Commercial Turf and Ornamental Products



LebanonTurf's advanced fertilizers, bionutritional products and grass seed have been helping turf professionals produce healthy turf for 75 years. LebanonTurf is the only company that offers both microbiological components along with advanced controlled release fertilizer products.



LebanonTurf.com | 1-800-233-0628



LebanonTurf Brands

LebanonTurf provides innovative and high performance products to the landscape industries and is an industry leader in producing advanced technology fertilizers and biological products. Lawn care operators and professional landscapers count on LebanonTurf brands to make them successful in their endeavors to create and maintain the best quality flowers, trees and shrubs. LebanonTurf stands out as the only company in the industry offering both microbiological components along with advanced controlled release fertilizer products delivered as part of an integrated systems approach to plant care needs.

ProScape[®]

ProScape fertilizers and fertilizer combination products offer Turf Managers a wide selection of fertilizer products, along with easily and accurately applied fertilizer combination weed and insect controls. In the ProScape brand of products you'll find the exclusive technologies Meth-Ex, a high efficiency methylene urea, MESA, a specially formulated nitrogen known for delivering brilliant color response and MESA-XP, a unique nitrogen source that optimizes turf performance while minimizing environmental impact.

Lebanon[®] **Pro**

The Lebanon Pro brand delivers cost-effective blended fertilizers and fertilizer control combination products. Lebanon Pro provides a practical and economical approach to performance and convenience in a wide range of lawn, landscape and general turf situations.

E-Blend

The E-Blend[®] brand provides premium ecological straight fertilizers bringing together the best synthetic nutrients and sources of organic matter for faster green-up and sustainable long-term lawn health. Made with no limestone filler - E-Blend is all nutrients!





Turf Nurture is an all natural fertilizer made from the premium Organic Feather, Meat and Bone Meal with no manure. This granular fertilizer is 92% slow release making it safe to apply spring summer or fall without the risk of burning the turf. Turf Nurture promotes increased root growth and vigor.

The ROOTS brand of biologically enhanced nutrients merge nature and technology to offer leading-edge solutions for turf and plant care. ROOTS products provide an all-in-one nutrient delivery system that feeds the plant while enhancing the biological life of the soil and plant ecosystem.

The Woodace® product line offers a range of premium fertilizers and control products for trees, shrubs, annual flowers and ground covers. Woodace® products provide the ultimate complement to the professional care of landscape beds and ornamentals.

Lebanon Specialty control products are a group of pesticides that are in an easy to use granular form. They include pre-emergent and post-emergent herbicides, insecticides and fungicides.

LebanonTurf's wide selection of award-winning seed varieties deliver quality and performance. LebanonTurf's varieties exhibit traits that resist disease and insects, improve durability and enhance color.

PennMulch is a pelleted seeding mulch uniquely formulated to include starter fertilizer to support quick grass seed germination and establish new or repaired turf. PennMulch stores moisture critical for successful germination and with the Hydrobond™ tackifier it holds seed in place for consistent establishment.

LebanonTurf Technologies and Amendments

LebanonTurf continues to explore and develop the industry's most advanced turf management technologies to deliver the ultimate in efficient, cost effective products to Residential and Commercial Turf Managers. Our technologies are recognized by turf managers as proven applications of science and experience at work.

The logo for METH-EX, featuring the text "METH-EX" in white, bold, sans-serif font inside a dark teal rounded rectangle with a white border.

Meth-Ex is a high activity methylene urea nitrogen source that provides extended turf feeding without the need for coatings. Microbial release allows Meth-Ex to release nitrogen when the turf needs it the most. The result is a quick color response with no surge growth and a consistent and reliable long-term feeding schedule. *Meth-Ex technology is found in our ProScape® brand.*

The logo for MESA, featuring the text "MESA" in a large, bold, blue, sans-serif font.

MESA is our unique nitrogen source that gives you exceptional results with improved environmental sustainability. The homogeneous particle is a combination of ammonium sulfate and methylene urea which provides consistent, dark green color without surge growth. MESA has extremely low volatilization, provides nitrogen to plants when they need it most and doesn't lose its properties when cracked, chipped, crushed or broken. *MESA technology is found in our ProScape® and E-Blend brands.*

The logo for MESA-XP, featuring the text "MESA" in a large, bold, blue, sans-serif font with a white outline, and "XP" in a smaller, bold, blue, sans-serif font to the right.

MESA-XP is our cutting-edge advancement in nutrient sources designed to optimize performance while minimizing environmental impact. Homogeneous granules from MESA-XP provide a unique combination of nitrogen in two distinct forms, delivered through three separate mechanisms, and includes a controlled-release potassium source. By incorporating potassium sulfate into the granule, MESA-XP ensures superior nutrient distribution, improved plant uptake and significantly reduced leaching loss. The results are nothing short of remarkable: rapid green-up, sustained and prolonged nitrogen and potassium feeding, and minimal environmental impact. *MESA-XP technology is found in our ProScape® brand.*

The logo for expo POTASSIUM SULFATE, featuring the text "expo" in a large, bold, black, sans-serif font, with "POTASSIUM SULFATE" in a smaller, bold, black, sans-serif font below it.

Expo is LebanonTurf's patented, single-particle, extended release potassium sulfate technology. Expo is designed to deliver potassium to the turf in a reliable and predictable rate over a longer period of time, well beyond that of the standard potassium sulfate found in most fertilizers. Additionally, Expo delivers controlled release nitrogen. *Expo is found in our ProScape® brand.*

U-FORM

CHELATION TECHNOLOGY



MICROBIAL TECHNOLOGY



MYCORRHIZAL TECHNOLOGY



BIOSTIMULANTS



U-Form® is a uniform granule of urea formaldehyde that provides predictable long term feeding. Nitrogen from U-Form is released by microbial activity that mirrors a plant's need for nutrition, and delivers consistent release of nutrients for up to 26 weeks. *U-Form technology is found in our Woodace brand.*

Micronutrients are essential to the overall health of the plant, but are oftentimes tied up due to the pH of the soil or water being used to apply the product. Several ROOTS products are manufactured using chelation, a process that allows micronutrients to stay soluble for an extended period of time and thus allow for plant uptake. *Chelation Technology is found in our ROOTS® brand.*

Forest soils are teeming with beneficial microbes, which contribute to the growth, health, and nutrition of forest plants. Unfortunately, many soils often lack this biological diversity. Several ROOTS products deliver various species of beneficial bacteria selected for their ability to enhance soil fertility and plant nutrition therefore improving soil structure. In natural forest soils and constructed turf areas, microbes are not just beneficial; they're essential to healthy plant growth. *Microbial Technology is found in our ROOTS brand.*

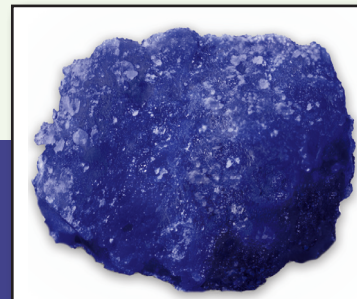
Mycorrhizal fungi expand the root zone and allow plants the ability to take in necessary water, nutrients and micronutrients that would otherwise not be available. Plant survival and performance can be improved by incorporating a diverse population of mycorrhizal fungi at planting and transplanting time. *Mycorrhizal Technology is found in our ROOTS brand.*

Sea plant extracts are natural amendments for increasing the organic content of soil and improving overall stress tolerance. Seaweed products are completely biodegradable and provide an excellent nutrient source for beneficial rhizosphere bacteria to multiply and become established in the root zone. Humic acids are powerful organic chelators that solubilize important minerals needed by plants. Humic acids help release bound mineral nutrients and hold them in soluble form where they are readily available for uptake by plant roots. *Biostimulants are found in our ROOTS brand.*

Nutrient Sources

MESA^{XP}

MESA-XP is our cutting-edge advancement in nutrient sources designed to optimize performance while minimizing environmental impact. Homogeneous granules from MESA-XP provide a unique combination of nitrogen in two distinct forms, delivered through three separate mechanisms, and includes a controlled-release potassium source. By incorporating potassium sulfate into the granule, MESA-XP ensures superior nutrient distribution, improved plant uptake and significantly reduced leaching loss. The results are nothing short of remarkable: rapid green-up, sustained and prolonged nitrogen and potassium feeding, and minimal environmental impact.



Healthier Turf

MESA-XP delivers multiple benefits to the turfgrass plant, including more nitrogen stored in the crown and no surge growth. Controlled release potassium also provides environmental stress resistance, reduced disease incidence and expedited turf recovery from damage and stress.

Excellent Longevity

MESA-XP provides up to 16 weeks of controlled release nitrogen and potassium in addition to quick and slow-release forms of nitrogen for quick green-up and long-term consistent feeding.

Superior Nutrient Distribution

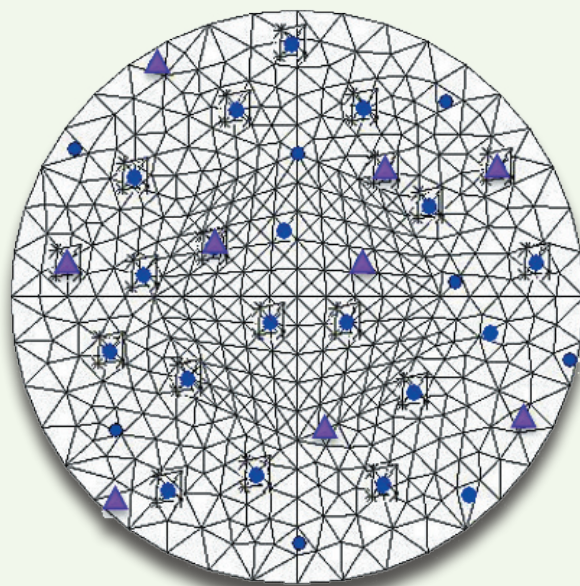
MESA-XP's homogeneous granules ensure nutrients are applied consistently and cohesively to the soil surrounding the turfgrass plant.

Easy to Spread

The distinctive indigo color of MESA-XP is easy to see, as it is visible both in the air as the product is being spread and while it's on the ground.

Environmental Impact

Unlike urea, MESA-XP does not contribute to greenhouse gas emissions as it strictly limits volatilization and therefore minimizes gaseous nitrogen loss to the atmosphere. While standard potassium sources tend to leach quickly into the soil profile, MESA-XP's predictable potassium release rate extends the turf's uptake window ensuring improved plant nutrient retention with minimal loss and impact on the environment.



The **blue dots** represent ammonium sulfate granules and the purple triangles represent the **potassium sulfate** trapped in the polymer mesh of METH-EX.

Nutrient Sources



U-FORM

39-0-0

U-Form technology is a slow-release fertilizer that is made by combining urea and formaldehyde. Urea when combined with formaldehyde creates a resin that can slow down the release of nitrogen over time. This slow-release nature means that fertilizers containing U-Form can provide a steady supply of nutrients to plants for up to 26 weeks.

- 89% of nitrogen is slow release (26% W.I.N. and 9% O.W.I.N.)
- Provides nitrogen to plants and energy rich carbon for soil microbial populations
- Nitrogen released by microbial activity which mirrors a plant's need for nutrition while actively growing
- Homogenous granules in both Standard grade and SGN 150

Turf Maintenance and Care

ProScape®		Approx. Bag Coverage (Sq.Ft.)	Lbs. Product /1000 Sq. Ft.	Lbs Product /Acre	Nutrients Lbs per 1,000 sq. ft.		
Item Description					N	P	K
Straight Fertilizer 50 lb. Bag Standard Grade							
2253962	6 1 11 75% MESA 7% Fe SOP	10,000	5.00	218	0.30	0.05	0.55
2154489	12 25 12 Homogeneous AM MOP**	12,500	4.00	174	0.48	1.00	0.48
2253844	15 2 8 Organic Base 30% MESA	8,300	6.00	261	0.90	0.12	0.48
2253648	16 25 12 25% MESA*	12,500	4.00	174	0.64	1.00	0.48
2254017	18 0 5 55% MESA-XP	10,000	5.00	217	0.90	0.00	0.25
2253621	19 0 19 62% MESA 3% Fe SOP*	10,600	4.72	206	0.90	0.00	0.90
2254316	20 0 5 30% MESA 1% Fe	11,100	4.50	196	0.90	0.00	0.23
2129307	Greenskeeper 20 0 8 57% Meth-Ex	11,100	4.50	196	0.90	0.00	0.36
2253606	20 0 10 40% MESA 1% Fe SOP	11,100	4.50	196	0.90	0.00	0.45
2154242	20 0 25 100% EXPO SOP	12,500	4.50	175	0.80	0.00	1.00
2254318	25 0 5 51% MESA 1% Fe	13,900	3.60	157	0.90	0.00	0.18
2254020	25 0 6 50% MESA-XP	13,900	3.60	157	0.90	0.00	0.22
2153903	25 0 10 50% MESA 100% EXPO	13,900	3.60	157	0.90	0.00	0.36
2154015	25 0 12 100% MESA-XP	13,900	3.60	157	0.90	0.00	0.43
2154257	30 0 0 100% MESA	16,700	3.00	131	0.90	0.00	0.00
2254324	32 0 6 30% MESA	17,800	2.80	122	0.90	0.00	0.17
2154276	40 0 0 100% Meth-Ex 40*	20,000	2.50	109	1.00	0.00	0.00
Fertilizer with Acelepryn Insecticide + Dlmension Pre-emergent Herbicide 50 lb. Bag Standard Grade							
2254802	13 0 5 50% MESA 100% EXPO* .067% Acel .167% Dim	14,535	3.44	150	0.45	0.00	0.17
2253874	17 0 5 30% PCU MOP .067% Acel .167% Dim	14,535	3.44	150	0.59	0.00	0.17
2254814	19 0 9 50% MESA 100% EXPO .067% Acel .253% Dim	14,535	3.44	150	0.65	0.00	0.31
2253933	24 0 8 40% PCU .067% Acel .167% Dim	14,535	3.44	150	0.83	0.00	0.28
2254804	25 0 5 51% MESA 100% EXPO* .067% Acel .167% Dim*	14,535	3.44	150	0.86	0.00	0.17

For Better, More Sustainable Turf - Use Better Ingredients

MESA

Long term feeding

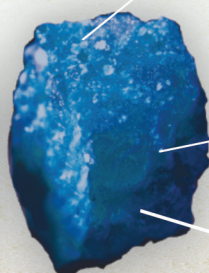
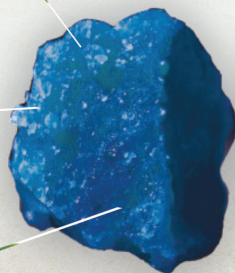
Fewer clippings

Faster green-Up

Dark green color

Half a piece of MESA is still MESA

Available in ProScape and E-Blend brands





Item #	Item Description	Approx. Bag Coverage (Sq.Ft.)	Lbs. Product /1000 Sq. Ft.	Lbs Product /Acre	Nutrients Lbs per 1,000 sq. ft.			Lbs. Act. Ingredient / Acre
					N	P	K	
Fertilizer with Pre + Post-emergent Herbicide 40 lb. Bag Standard Grade								
2253703	19 0 6 .17% Dimension/LockUp 40% MESA	11,400	3.50	150	0.67	0.00	0.21	Dimension .17 LockUp 1.695
2253986	19 0 6 .145% Dimension/Confront® 3 40% MESA	11,400	3.50	150	0.67	0.00	0.21	Dimension .218 Confront 3 1.949
Fertilizer with Pre-emergent Herbicide 50 lb. Bag Standard Grade								
2254326	16 0 8 43% MESA .38% Barricade®	12,800	3.90	170	0.62	0.00	0.31	0.65
2254269	16 0 8 43% MESA .43% Barricade	14,700	3.40	148	0.54	0.00	0.27	0.56
2253602	18 0 5 25% MESA .09% Dimension	15,600	3.20	139	0.58	0.00	0.16	0.13
2253837	15 0 5 40% MESA .15% Dimension	13,200	3.80	165	0.57	0.00	0.19	0.25
2253841	20 0 8 40% MESA .15% Dimension	13,200	3.80	165	0.76	0.00	0.30	0.25
2253839	22 0 6 40% MESA .15% Dimension	13,200	3.80	165	0.84	0.00	0.23	0.25
2253996	15 0 5 40% MESA .17% Dimension	14,700	3.40	148	0.52	0.00	0.00	0.25
2254273	16 0 8 43% MESA .19 % Dimension	16,700	3.00	131	0.48	0.00	0.24	0.25
2253853	16 0 8 43% MESA .86% Team® Pro	12,500	4.00	174	0.64	0.00	0.32	1.50
2153867	21 22 4 Starter .08% Mesotrione (SGN 125) **	9,300	4.30	187	0.90	0.95	0.17	0.15
Fertilizer + Post-Emergent Herbicide SGN 150 Standard Grade								
2254361	19 0 6 33% MESA with LockUp	11,600	3.44	150	0.65	0.00	0.21	1.70
2253991	19 0 7 40% MESA .68% Confront	11,000	3.60	157	0.68	0.00	0.25	1.07
2253597	20 0 7 25% Meth Ex 40 Trimec	10,000	4.00	174	0.80	0.00	0.28	1.26
2253989	19 0 7 40% MESA + Trimec**	12,500	3.20	160	0.64	0.00	0.26	1.26
Fertilizer with Insect Control 50 lb. Bag Standard Grade								
2253714	16 0 8 30% MESA .225% Allectus™	13,600	3.67	160	0.59	0.00	0.29	0.36
2254686	15 0 5 40% MESA .2% Merit *	14,300	3.50	152	0.53	0.00	0.18	0.31
2254314	20 0 5 30% MESA .2% Merit	14,300	3.50	152	0.70	0.00	0.18	0.31
2254304	16 0 8 43% MESA .069% Bifenthrin®	15,000	3.33	145	0.53	0.00	0.27	0.10
2253751	15 0 5 40% MESA .067% Acelepryn*	14,500	3.44	150	0.52	0.00	0.17	0.10
2253753	20 0 5 30% MESA .067% Acelepryn	14,500	3.44	150	0.69	0.00	0.17	0.10
2253958	25 0 5 51% MESA .067% Acelepryn	14,500	3.44	150	0.86	0.00	0.17	0.40

* Available in 1,000 or 2,000 lb. tote | ** Available in 40 lb. bag

NOTE: Coverages based on typical usage. Please visit our website at www.LebanonTurf.com for label / SDS and product information

Turf Maintenance and Care

Lebanon® Pro		Approx. Bag Coverage (Sq.Ft.)	Lbs. Product /1000 Sq. Ft.	Lbs Product /Acre	Nutrients Lbs per 1,000 sq. ft.			Lbs. Act. Ingredient / Acre
Item #	Item Description				N	P	K	
Straight Fertilizer 40 lb. Bag Standard Grade								
2240147	10 20 5 All Mineral 1% Fe Biosolids	8,000	5.00	218	0.50	1.00	0.25	NA
2240446	10 20 15 1% Fe Starter	8,000	5.00	218	0.50	1.00	0.75	NA
2240408	18 24 12 25% PCU (50 Lb Bag)	12,000	4.20	183	0.76	1.00	0.50	NA
Fertilizer with PCU 50 lb. Bag Standard Grade								
2240840	13 0 4 30% PCU HiCal	13,100	3.80	165	0.50	0.00	0.15	NA
2240410	18 0 3 40% PCU 2% Fe Biosolids	10,000	4.90	213	0.90	0.00	0.15	NA
2240564	21 0 3 20% PCU 1% Fe	10,500	4375	207	1.00	0.00	0.15	NA
2240564	24 0 5 40% PCU 2% Fe	13,300	3.75	163	0.90	0.00	0.18	NA
2240412	25 0 6 30% PCU 2% Fe Biosolids	13,500	3.60	156	0.90	0.00	0.22	NA
2240579	25 0- 6 50% PCU 5% Fe Biosolids	13,500	360	156	0.90	0.00	0.22	NA
2240990	25 0 10 40% PCU 2% Fe	13,500	3.60	157	0.90	0.00	0.36	NA
2240534	28 0 3 20% PCU 2% Fe	16,100	3.10	135	0.86	0.00	0.90	NA
Fertilizer with Pre-emergent Herbicide 50 lb. Bag Standard Grade								
2240162	0 0 7 .38% Prodiamine	16,750	3.00	132	0.00	0.00	0.21	0.50
2240178	13 0 4 50% LSN .38% Prodiamine	16,750	3.00	132	0.39	0.00	0.12	0.50
2240158	16 0 5 50% LSN .43% Prodiamine	9,500	5.30	230	0.85	0.00	0.20	0.99
2241029	17 0 0 20% PCU .38% Prodiamine	16,750	3.00	132	0.51	0.00	0.00	0.50
2241024	18 0 4 25% PCU .38% Prodiamine	9,500	5.30	225	0.93	0.00	0.21	0.86
2240424	18 0 4 25% PCU .43% Prodiamine	9,500	5.30	230	0.93	0.00	0.21	0.99
2240630	18 0 3 30% PCU .58% Prodiamine	12,500	4.00	175	0.72	0.00	0.12	1.01
2240401	0 0 7 .15% Dimension®	13,000	3.80	164	0.00	0.00	0.27	0.25
2241039	13 0 5 30% PCU .15% Dimension	13,000	3.80	164	0.49	0.00	0.19	0.25
2240396	15 0 0 100% LSN .15% Dimension	13,000	3.80	164	0.57	0.00	0.00	0.25
2240388	16 0 5 50% LSN .15% Dimension	13,000	3.80	164	0.61	0.00	0.19	0.25
2240992	17 0 0 25% PCU .15% Dimension	13,000	3.80	164	0.65	0.00	0.00	0.25
2242292	17 0 0 25% PCU .17% Dimension	14,700	3.40	148	0.60	0.00	0.00	0.25
2241043	20 0 3 50% PCU .19% Dimension	16,750	3.00	132	0.60	0.00	0.09	0.25
2240311	13 0 5 25% LSN .86% Pendimethalin	9,400	5.30	233	0.70	0.00	0.27	2.00
2240309	20 0 4 30% LSN .86% Pendimethalin	9,400	5.30	233	1.07	0.00	0.21	2.00
2241045	22 0 6 40% PCU .86% Team® Pro	12,500	4.00	175	0.88	0.00	0.24	1.50
2241047	15 0 5 30% PCU 1.15% Team	12,500	4.00	175	0.60	0.00	0.20	2.00
Fertilizer with Post-emergent Herbicide 50 lb. Bag Standard Grade								
2241011	25 0 8 40% PCU Trimec®	15,500	3.23	140	0.80	0.00	0.26	1.40
2240752	18 0 4 25% PCU LockUp®	14,500	3.40	150	0.62	0.00	0.14	1.58

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Lebanon® Pro		Approx. Bag Coverage (Sq.Ft.)	Lbs. Product /1000 Sq. Ft.	Lbs Product /Acre	Nutrients Lbs per 1,000 sq. ft.			Lbs. Act. Ingredient / Acre
Item #	Item Description				N	P	K	
Fertilizer with Insect Control 50 lb bag Standard Grade								
2240265	0 0 7 AM .225% Allectus™ MOP	13,500	3.68	160	0.00	0.00	0.28	0.36
2241017	17 0 3 40% PCU 2% Fe .225% Allectus	13,500	3.67	160	0.62	0.00	0.11	0.36
2241041	20 0 5 30% PCU .225% Allectus	13,500	3.67	160	0.74	0.00	0.18	0.36
2240279	0 0 7 .067% Acelepryn® MOP	14,500	3.44	150	0.0	0.00	0.24	0.10
2241054	17 0 3 40% PCU 2% Fe .067% Acelepryn	14,500	3.44	150	0.59	0.00	0.10	0.10
2242515	0 0 7 .2% Merit® MOP	14,250	3.50	150	0.00	0.00	0.24	0.30
2240527	14 0 3 35% PCU .2% Merit	14,250	3.50	150	0.49	0.00	0.10	0.30
2240257	17 0 3 100% LSN .2% Merit	11,000	3.50	150	0.65	0.00	0.10	0.30
2240931	0 0 7 .069% Bifenthrin	15,000	3.30	145	0.00	0.00	0.21	0.10
2241036	17 0 5 30% PCU .069% Bifenthin	15,000	3.30	145	0.57	0.00	0.17	0.10
2240511	0 0 7 Imidacloprid + Lambda	10,800	4.60	200	0.00	0.00	0.32	0.40/0.08
2240513	17 0 3 40% PCU 3% Fe Imidacloprid+ Lambda	10,800	4.60	200	0.78	0.00	0.13	0.40/0.08



Designed specifically for the lawn care industry, E-Blend brings together the best synthetic nutrients and sources of organic matter for faster green-up AND long-term health of the lawn.

- E-Blend products contain MESA®, a premier slow-release nitrogen source that is a combination of ammonium sulfate and methylene urea in a single particle.
- Biosolids provide a source of slow-release nitrogen, a small amount of phosphorus and organic matter that won't leach through the soil profile.
- The fast-acting urea and ammonium sulfate provides dark green color immediately.
- More sustainable formulation with only nutrients - no limestone filler



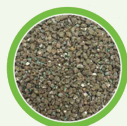
E-Blend uses biosolids to recycle valuable sources of organic material and nutrients back into the soil keeping turf thick and healthy.

E-Blend Restoration Fertilizer improves physical, chemical and biological health of the soil with humic acids and recycled organic nutrients; formulated specifically for new lawns and lawns that have struggled with poor soil conditions.



Item #	Item Description	Approx. Bag Coverage (Sq.Ft.)	Lbs. Product /1000 Sq. Ft.	Lbs Product /Acre	Nutrients Lbs per 1,000 sq. ft.		
					N	P	K
Straight Fertilizer 50 lb. Bag Standard Grade							
2218626	16-2-3 60% MESA 50% Biosolids	7,100	5.60	244	0.90	0.11	0.16
2218627	26 0 3 55% MESA 23% Biosolids	11,400	3.50	152	0.90	0.00	0.11
2253975	21-0-5 Restoration 30% MESA 21% Biosolids	8,900	4.30	187	0.90	0.00	0.22
2253977	12-20-12 Restoration 25% MESA 10.5% Biosilids	8,000	5.00	217	0.60	1.00	0.60

Turf Maintenance and Care



Rich in Natural & Organic Nutrients



Promotes Increased Root Growth & Vigor



Can be Applied Spring, Summer or Fall



Turf Nurture® 8-0-6 is a homogeneous organic fertilizer made from the best natural components (no manure). This granular fertilizer is 92% slow release making it safe to apply spring summer or fall without the risk of burning the turf.

Item #	Item Description	Approx. Bag Coverage (Sq.Ft.)	Lbs. Product /1000 Sq. Ft.	Lbs Product /Acre	Nutrients Lbs per 1,000 sq. ft.		
					N	P	K
Straight Fertilizer 50 lb. Bag Standard Grade							
2756731	Turf Nurture 8 0 6 All Natural	8,000	6.30	272	0.50	0.00	0.38



Item #	Item Description	Approx. Bag Coverage (Sq.Ft.)	Lbs. Product /1000 Sq. Ft.	Lbs Product /Acre	Nutrients Lbs per 1,000 sq. ft.			Lbs. Act. Ingredient / Acre
					N	P	K	
Granular Weed Control Products								
2440764	Balan® 2.5G HDG	28,900	1.38	60	0.00	0.00	0.00	1.51
2440836	Balan 2.5GB BIODAC®	28,900	1.38	60	0.00	0.00	0.00	1.51
2442407	Dimension .27 G BIODAC	17,300	2.30	101	0.00	0.00	0.00	0.27
2439101	Team 2G HDG	22,800	1.80	76	0.00	0.00	0.00	1.53
2439100	Team 2G BIODAC	22,800	1.80	76	0.00	0.00	0.00	1.53
2440283	Prodiamine .58G BIODAC	20,000	2.00	87	0.00	0.00	0.00	0.51
2435799	Trimec Broadleaf Weed Contro	10,000	2.00	87	0.00	0.00	0.00	1.58
Granular Insect Control Products								
2442409	Bifenthrin .1G HDG	25,000	1.20	52	0.00	0.00	0.00	0.05
1418587	Dylox® 6.2 G Insecticide	10,000	3.00	131	0.00	0.00	0.00	8.70
Granular Disease Control Products								
2442059	Eagle® .62 Fungicide	10,000	2.50	109	0.00	0.00	0.00	0.68
2446687	PPZ .72G Fungicide	10,000	2.50	109	0.00	0.00	0.00	.078

The BIODAC® trademark and logo are owned by Kadant Grantek Inc.

Lebanon PPZ .72 Granular Fungicide - A new granular fungicide based on propiconazole and using an SGN 100 dispersible granular carrier.

Key product benefits of PPZ .72 Granular Fungicide:

- A granular disease control product
- For general turf use
- Utilizes Propiconazole at .72%

NOTE: Coverages based on typical usage. Please visit our website at www.LebanonTurf.com for label / SDS and product information



Grass Seed and Establishment



LebanonTurf
Grass Seed



Alliance for Low Input
Sustainable Turf

LebanonTurf Grass Seed was developed with one result in mind -- beautiful turf. Our mixes and blends utilize many top rated seed varieties produced by the industry's best growers.

LebanonTurf is pleased to offer A-LIST approved Trifecta GLSR Perennial Rye Blend and, WinningColors Tall Fescue Blend. A-LIST is a non-profit industry initiative with a mission to foster development of turfgrass varieties that perform under reduced inputs and levels of management, and also exhibit additional traits such as drought and heat tolerance, leading to a more sustainable environment. A-LIST list approved varieties have been through a rigorous set of tests under reduced input trials. A-LIST approved mixes and blends must contain a minimum of 65% A-LIST approved varieties to carry the A-LIST tag.

Blends	Seed Varieties	Feature / Approximate Germination (days)	Application Rate per 1,000 Sq. Ft.
 WINNINGCOLORS <small>TURF TYPE TALL FESCUE BLEND</small> A-LIST Approved Winning Colors Tall Fescue Blend 50# - 28-54852	40% Degas Fescue* 20% O'Keefe Fescue* 20% Michelangelo Tall Fescue* 20% Rockwell Tall Fescue* * A-LIST approved	"Best of the Best" tall fescue varieties all in one bag Approximate Germination: 10-14	New seeding: 8 lbs. Overseeding: 4 lbs.
 TRIFECTA <small>PERENNIAL RYEGRASS BLEND</small> <small>Great Leaf Spot Resistant</small> A-LIST Trifecta GLSR Perennial Rye Blend 50# - 28-54858	35% Seabiscuit Perennial Ryegrass* 35% Man O' War Perennial Ryegrass 30% Furlong GLCS Perennial Ryegrass* * A-LIST approved	Drought and heat tolerant Disease resistant A-LIST approved rye blend Approximate Germination: 7-12	New seeding: 8 lbs. Overseeding: 3-4 lbs.



PennMulch Seed Accelerator is the only seed establishment product containing patented Moisture Cell Technology. Comprised of super-absorbent polymers, Moisture Cell Technology can absorb up to 400 percent its weight in water, which causes the pellets to expand and absorb water. As the seed bed dries, the microscopic polymer crystals release water back into the soil, providing the new seedlings with the moisture they need to grow healthy and strong. Though there are look-alike products on the market, university testing shows that none can match the results of PennMulch Seed Accelerator.

PennMulch formula comes with Hydrobond™ tackifier to hold seed, soil and mulch in place. Rest assured that your grass seed will stay where it is planted.

Straw and hay often contain perennial grass weeds like Orchard grass and Timothy that cannot be selectively controlled once new turf is established. PennMulch Seed Accelerator contains no weed seeds. Don't waste your time, labor, and premium seed only to have it ruined by weeds.



Straw

PennMulch

Item# 2396104 | 40 Lb. Bag | 50 bags per pallet

Plant Establishment Products

ROOTS Healthy Start Advanced



ROOTS Healthy Start Advanced 3-4-3 is formulated for general use applications. It contains NPK fertility derived from natural sources, and includes beneficial rhizosphere bacteria to boost biological soil fertility. It also contains humic acids, which may aid in the uptake of mineral nutrients by plants. Roots Healthy Start Advanced 3-4-3 is manufactured as an insoluble granular fertilizer that releases nutrients as it biodegrades. It is used to provide rich organic matter and active rhizosphere bacteria to depleted soils.



Key product benefits of Healthy Start Advanced:

- Restores natural fertility to disturbed soils
- Slowly releases nutrients as it biodegrades
- Adds rich organic matter to soil
- Introduces beneficial bacteria for sustained fertility throughout the growing season
- Manure, sewage and sludge free

How to Apply: Granular fertilizer - Planting or mix with soil

Available in: 25 lb. bag / 40 bags per pallet - #27-56716

ROOTS Healthy Start Advanced MRT



ROOTS Healthy Start Advanced MRT 3-4-3 is formulated for general use applications. It is a natural fertilizer combined with beneficial rhizosphere bacteria and mycorrhizal fungi to boost biological soil fertility. The mycorrhizae become a living extension of the plant's roots, increasing the amount of water and nutrients available to the plant. Roots Healthy Start Advanced MRT 3-4-3 is manufactured as an insoluble granular fertilizer that releases nutrients as it biodegrades. It is used to provide rich organic matter and beneficial microbes to depleted soils.



Key product benefits of Healthy Start Advanced MRT:

- Restores natural fertility to disturbed soils
- Slowly releases nutrients as it biodegrades
- Adds rich organic matter to soil
- Manure, sewage and sludge free
- Enhances root system with mycorrhizae fungi

How to Apply: Granular fertilizer - Planting or mix with soil

Available in: 25 lb. bag / 40 bags per pallet - #27-56718



ROOTS Tree Saver

Tree Saver is specifically designed to reduce transplant stress while improving soil hydration and fertility. It's applied to the root zone of trees and shrubs at planting. Five species of mycorrhizal fungi and six species of beneficial bacteria are packed into this formula to improve plant nutrition and provide sustainable soil fertility.



Key product benefits of Tree Saver:

- *Helps reduce transplant shock and loss rates.*
- *Helps plants mitigate adverse environmental stresses such as drought, salinity and extremes of soil pH*
- *Mycorrhizal fungi can improve absorption of water and minerals from the soil*

How to Apply: Mix with backfill at planting

Available in: 150 3 oz. packs / 24 pails per pallet
- #27-56658
Additional package size available

ROOTS Plant Saver

Plant Saver is a combination product used for potted plants and planters. Plant Saver is designed to improve soil fertility and address the long-term mineral requirements common to many plants.



Key product benefits of Plant Saver:

- *Increases absorption of water and soluble nutrients*
- *Provides beneficial bacteria and mycorrhizal fungi that promote sustainable soil fertility*
- *Provides basic fertilizers and micronutrients necessary for active plant development*

How to Apply: Mix with backfill at planting

Available in: 42 lb. pail / 24 pails per pallet -
#27-56641 Additional package size available

ROOTS Palm Saver 6-3-6 Saver

Palm Saver 6-3-6 is used in establishing or maintaining palms and tropical plants. Palm Saver is designed to restore soil fertility and address the mineral requirements common to palms and other tropical plants.



Key product benefits of Palm Saver:

- *Provides a sustainable supply of nitrogen, phosphorus and other basic minerals necessary for continuing active plant development*
- *Adds microbes for increased plant performance*
- *Increases absorption and transfer of water and mineral nutrients from the soil*

How to Apply: Mix with backfill at planting

Available in: 100x 3 oz. packs / 32 pails per pallet -
#27-56727
Additional package size available

ROOTS Terra-Sorb

Terra-Sorb is a potassium-based copolymer gel that significantly increases the water-holding capacity of soil. It absorbs up to 150 times its weight in water and slowly releases it to nearby plant roots. Terra-Sorb will repeatedly absorb and release water for several years, until it biodegrades naturally. By gelling with dilute solutions of fertilizer, Terra-Sorb can also act as a fertilizer carrier.



Key product benefits of Terra-Sorb:

- *Significantly increases water-holding capacity of soil*
- *Slowly releases water into the root zone*
- *Can prevent plant loss due to dry soil*

How to Apply: Mix with soil at planting

Available in: Medium Grade 10 lb. bag - #27-24644
Fine Grade 10 lb. bag - 27-24645
Additional package size available

Plant Maintenance Products

ROOTS Fertilizer for Trees



ROOTS Fertilizer for Trees is a water-dispersible chemical and biological fertility product. The chemically-based elements meet trees' nutrient needs quickly, while the beneficial microbes sustain fertility over the long term. Slow-release nitrogen is milled so that ROOTS Fertilizer for Trees will not clog equipment. An advanced surfactant helps the product to readily penetrate the soil.



Key product benefits of ROOTS Fertilizer for Trees:

- Chemically-based elements address trees' immediate nutritional needs
- Beneficial microbes sustain fertility over the long-term

How to Apply: Water soluble - drench or injection

Available in three different formulations:

27-9-9 with 50% slow-release nitrogen

8 lb. bag / 5 bags per case / 30 cases per pallet - #27-56620

11-22-22 SRN with 50% slow-release nitrogen

8 lb. bag / 5 bags per case / 30 cases per pallet - #27-56632

11-22-22 with 100% fully-soluble nitrogen

8 lb. bag / 5 bags per case / 30 cases per pallet - #27-56636

Also available in 40 lb. bags

ROOTS Fe 8 Iron Chelate



Fe 8 Iron Chelate provides quick visual response without rapid growth. The unique chelated iron formulation will not stain surfaces, including concrete. It provides long lasting green-up. For use on greens, tees, fairways, sports turf, during sod installation, and for deep root feeding of trees and shrubs.



Key product benefits of ROOTS Fe 8 Iron Chelate:

- Quick visual response without rapid growth
- Will not stain surfaces - including concrete
- Long lasting green-up

How to Apply: Soil drench

Available in: 2/2.5 gal. containers / 36 cases per pallet - #37-56986

ROOTS Injectable for Trees



Injectable for Trees is a combination inoculant containing mycorrhizal fungi (both Ecto- and VAM) and beneficial rhizosphere bacteria. It is formulated for application to existing trees and shrubs using standard soil injection equipment.



Key product benefits of Injectable for Trees:

- Contains long-lasting mycorrhizal fungi spores
- Helps improve absorption of water and minerals from the soil
- Helps plants mitigate adverse environmental stresses such as drought, salinity and extremes of soil pH
- Special packaging ensures extended viability

How to Apply: Water Soluble - soil injection

Available in: 7 x 8 oz. co-packets per bag / 5 bags per case / 36 cases per pallet - #27-56649

ROOTS Concentrate Rooting Stimulant



ROOTS concentrate is an advanced plant supplement that promotes rapid root growth and regeneration for seedlings, cuttings, installation, and transplanting. For use on greens, tees, sports turf, lawns, fairways, new seeding, overseeding, hydroseeding, trees, shrubs, ornamental plants, flower beds, nursery, greenhouse and vegetables.



Key product benefits of ROOTS Concentrate Rooting Stimulant:

- Promotes rapid root growth
- Quicker regeneration for seedlings, cuttings and transplants
- Helps assure successful transplantings

How to Apply: Foliar spray or Soil drench

Available in: 2/2.5 gal. containers / 36 cases per pallet - #27-56945

ROOTS BioPak Plus 3-0-20



BioPak Plus is a dry, water-soluble micronutrient treatment that includes beneficial rhizosphere bacteria and 3-0-20 N-P-K fertilizer. BioPak Plus can be applied Spring, Summer & Fall! **Spring:** Helps plants recover from winter stress. Provides minerals needed for new root growth. **Summer:** Maintains vigorous plant growth and green color. **Fall:** Prepares plants for winter stresses from cold, desiccating wind, lack of moisture and frozen ground.



Key product benefits of BioPak Plus 3-0-20 :

- Contains 7% chelated iron & includes Mg, S, B, Mn, & Zn
- Promotes quick recovery from stress
- Reverses mineral deficiencies that cause chlorosis and necrosis
- Improves root function without stimulating excessive top growth
- Provides soluble nutrients in acidic, neutral and alkaline soils

How to Apply: Water Soluble - Spray, drench or injection

Available in: 5 x 1 lb. foil packets per bag / 5 bags per case / 36 cases per pallet - #27-56656

Additional package size available

ROOTS Healthy Start Macro Tabs



Healthy Start Tablets are unique biological fertilizing tablets that contain nitrogen-fixing and phosphorus-solubilizing bacteria, natural humates, and slow-release organic nutrients for sustainable plant growth to condition the soil while fertilizing the plant to achieve healthy, sustainable growth.



Key product benefits of Healthy Start Macro Tab:

- Includes an iron form that is not susceptible to leaching
- Includes humic acids often lacking in managed settings
- Up to 18 to 24 month slow release

How to Apply: In planting hole or with dibble bar

Available in: 25 lb. box / 80 boxes per pallet - #27-24466

ROOTS Plant Food 7-7-7 Organic Based Fertilizer



ROOTS® Plant Food 7-7-7 SGN 200 provides a total feeding solution for healthy trees, beds and shrubs. Each bag contains a unique combination: organic based fertilizer, organic based ingredients, and microbes. For use with garden and bedding plants, trees, shrubs, containers, and in potting and seeding mixes.



Key product benefits of Plant Food 7-7-7:

- Biostimulant complex stimulates root growth
- Adds microbes for increased plant performance
- Controlled release feeding

How to Apply: Granular fertilizer - Topdressing

Available in: 40 lb. bag / 50 bags per pallet - #27-56898

ROOTS Mycorrhiza Soluble



ROOTS Mycorrhiza Soluble is a water-soluble inoculant of biostimulants and mycorrhizal fungi. This combination improves nutrient and water uptake in a broad range of plants. It also increases drought and stress tolerance.



Key product benefits of ROOTS Mycorrhiza Soluble:

- A water soluble inoculant containing beneficial bacteria and mycorrhizal fungi
- For soil injection programs for trees and shrubs
- Contains beneficial rhizosphere bacteria, mycorrhizae and humic acids to improve soil and plant health

How to Apply: Water Soluble - drench or injection

Available in: 1 lb. packages / 24 per case \ 48 cases per pallet - #27-56656

Additional package size available

NOTE: Coverages based on typical usage. Please visit our website www.LebanonTurf.com for labels/ SDS sheets and product information.

Plant Maintenance Products

Woodace 18-5-10 Longterm

Woodace 18-5-10 fertilizer is designed to feed landscape plants, trees and shrubs all season with a single application. The low salt index allows for higher application rates without burning. U-Form provides slow-release nitrogen that lasts up to 6 months and Expo provides slow-release potassium.



Key product benefits of Woodace 18-5-10 Longterm:

- 79% Slow-release Nitrogen from U-Form® urea formaldehyde
- Slow-release potassium from Expo®
- Feeds up to 6 months

How to Apply: Granular fertilizer - Topdressing

Available in: 40 lb. bag / 50 bags per pallet - #22-53999

Woodace 12-3-6 A.C.R.E

Woodace A.C.R.E is designed for maintaining foundation plantings, shrubs, ground covers, and trees that prefer a slightly acidic soil environment. Woodace A.C.R.E 12-3-6 is also ideal for fertilizer plants where micronutrient availability is limited by high soil pH.



Key product benefits of Woodace 12-3-6 A.C.R.E.:

- Increases sulfur content to lower soil pH
- 59% Slow-release nitrogen from MESA® and biosolids
- Iron and Manganese to address immediate micronutrient deficiencies

How to Apply: Granular fertilizer - Topdressing

Available in: 50 lb. bag / 45 bags per pallet - #22-56323

Woodace Preen Plus

Woodace Preen Plus is a preemergent fertilizer for annual grass and broadleaf weeds in ornamental and ground covers.



Key product benefits of Woodace Preen Plus:

- A premium weed control product for flower and shrub beds
- For maintenance of existing shrubs and flowers
- A combination of trifluralin and isoxaben for extended pre-emergent control of crabgrass and other weeds in shrub beds.

How to Apply: Granular pesticide - Topdressing

Available in: 20 lb. bag / 30 bags per pallet - #24-56320



NOTE: Coverages based on typical usage. Please visit our website www.LebanonTurf.com for labels/ SDS sheets and product information.

Woodace 14-14-14 with Micros

Woodace 14-14-14 is a premium fertilizer for flower and shrub beds with an NPK of 14-14-14. Ideal for ornamental landscape plants such as foundation plantings, trees, shrubs, and flowers. It contains 75% Meth-Ex methylene urea for long term feeding.

Key product benefits of Woodace 14-14-14 with Micros:

- A premium fertilizer for flower and shrub beds with NPK of 14-14-14
- For maintenance of existing trees, shrubs and flowers
- Potassium sulfate for immediate availability of the potassium with added benefits of a small amount of sulfur.
- A combination of 1% Fe (Iron) and .5% Mn (Manganese) and 1% Mg (Magnesium) to address micronutrient deficiencies.

How to Apply: Granular fertilizer - Topdressing

Available in: 40 lb. bag / 50 bags per pallet - #22-556355



Lebanon Treflan 5G Herbicide

Lebanon Treflan is a granular weed control product and is used in flower beds and around existing trees, shrubs and flowers.

Key product benefits of Lebanon Treflan 5G Herbicide:

- Treflan at 5% for pre-emergent control of annual grasses and broadleaf weeds
- For maintenance of existing trees, shrubs, and flowers

How to Apply: Granular pesticide - Topdressing

Available in:

HDG - 40 lb. bag / 56 bags per pallet - #24-366830
BIODAC - 40 lb. bag / 40 bags per pallet - #24-40436



Easy to Use Products for the Perfect Flower Beds

Our Selection of Woodace® products offer a range of premium fertilizers and control products for trees, shrubs, annual flowers and ground covers - delivering quality and performance for any need. Easy to use and high quality, this product line provides the ultimate complement to the professional care of landscape beds and ornamentals.

Flower Bed Maintenance

When caring for an existing flower bed it is important to know what the particular needs of the flowers are. This is where a soil test will come in handy. For general fertilization using a balanced NPK, [Woodace 14-14-14 for Flowers](#) is recommended.

There are cases where special requirements need to be met so that the plants can thrive. As an example, azaleas and rhododendrons prefer acidic soil. [Woodace 12-3-6](#) which has a higher sulfur content will help lower the soil pH.

Weed control is also important. As mentioned previously, a generous layer of mulch helps prevent weeds. In addition it is beneficial to use a pre-emergent weed control like [Woodace Preen Plus](#), which is designed for flower and shrub beds and prevents a lengthy list of weeds from growing.



The Woodace line is formulated specifically for use with flowers. Scan the code for specific product information.





LEARN MORE



GO BLUE. GET GREEN.



Fertilizer powered by MESA® technology stores more nitrogen in the plant and minimizes gaseous nitrogen loss. This gives you the nitrogen needed to support growth for green, healthy turf. Learn more at LebanonTurf.com or call **1-800-233-0628**.

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