



Fisher & Son

RESOURCE MANUAL

Delivering the highest quality agronomic solutions to the green industry since 1928.

LETTER FROM THE OWNERS

Dear Professional,

Preparing for a new business year requires we review the past years successes and challenges while surveying the marketplace and looking for ways to improve our value to our clients. The past year certainly was an improvement over the previous year, though supply chain issues continued to rise to the surface. Thankfully it appears that most of our supplier network has now resolved their logistical issues, with just a couple of exceptions.

While we long for the “good old days” of being able to place an order from one of our suppliers and receive it within a week or two, we know that our clients can’t wait that long in season for us to turn their orders. So, we ask our sales professionals to work with our clients in proactively estimating needs, then apply analytics to ensure that we have the products in the right place at the right time at the right price. It’s a classic blend of art and science, with a good dose of luck thrown in for the unforeseen circumstances.

We see strong signs of the U.S. economy ignoring the recession fears of 2023, which is great news for everyone, but especially for our industry. Inflation is slowing and if the prognosticators are correct we will see the Fed deliver some interest rate reductions. All in all, very positive news for everyone and a great way to kick off 2024. Once again, we thank you for all of your support. We wouldn’t be here if it weren’t for you and we plan to work even harder than ever to earn your business.

Sincerely,



Michael Fisher
President, CEO



Sarah St. John
Vice President, Director of Operations



Mission Statement

To market superior products to turf and horticulture specialists with customer-centric services, leading-edge technologies, dedicated people and innovation.



SUSTAINABILITY

Now in its 96th year, Fisher & Son Company, Inc. is a fifth-generation, family owned and operated corporation providing goods and services to turf and horticulture professionals throughout the Mid- Atlantic region. The Exton, Pennsylvania based organization serves customers throughout NY-PA- NJ-DE-MD-VA- DC. Together, our team brings many years of business experience in sales, marketing and financial management to FSC.

ADAPTABILITY

Established in 1928, Fisher & Son Company originally operated as a flour and animal feed mill. They provided services and product to clients throughout Southeastern Pennsylvania. As the surrounding rural, agricultural based economy and landscape transformed into a major East Coast commerce and residential corridor, the company adapted and grew. The family operated business redirected its focus to meet the demands of emerging turf and horticultural markets created by this evolution. What began as a small town, family run agricultural mill has grown to become one of the Mid-Atlantic region's leading distributors of professional turf and horticultural products and services.

LONGEVITY

From 1928 to 2006, Fisher & Son was headquartered in the Philadelphia suburb of Malvern, Pennsylvania. In 2007, the corporate headquarters were relocated to a larger, more contemporary office and warehouse facility in nearby Exton, PA.

RESPONSIBILITY

Fisher & Son has earned the reputation for stewardship of the quality products and services we supply to Green Industry professionals to maintain healthy green spaces. Education of our clients is a key element in our stewardship role, provided through various media, educational seminars and on site consultation. In addition, we support our industry through active membership and participation in over 30 industry associations and organizations.

INTEGRITY

The Fisher & Son team represents the core values that were integral in the establishment, adaptability and sustained growth of the business. Successful and sustainable businesses see change as opportunity. The principals and values that formed the company and saw it through economic and cultural shifts are deeply held by our entire team. We work together to create best business practices and strategies to successfully guide and direct the company. At the heart of Fisher & Son is our customer. For nearly a century, our focus has been on providing exemplary service which begins with the initial contact. With countless years of combined “Green Industry” experience, our team of highly educated and experienced professionals is here to assist you in developing programs and finding solutions to your most challenging turf and horticultural issues.

SERVING ‘GREEN INDUSTRY’ PROFESSIONALS SINCE 1928

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Always read label & follow directions before using any product.

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Get Door to Door Directions at: fisherandson.com

NEW PRODUCTS



Resilia Root Health Solution is an all-in-one fungicide and nematicide which protects your roots from destructive soilborne diseases and suppresses harmful nematode populations. With its broad-spectrum control of soil-borne pathogens, Resilia allows your roots to stay healthy and reach their full potential—plus keeps your turf playable all season long. From Envu



Tuque exoGEM combines SOLATENOL® technology and fludioxonil, a contact fungicide with translaminar activity, in an advanced formulation to provide guaranteed snow mold control. The exoGEM formulation is engineered to deliver greater uptake, distribution, rainfastness and retention to quickly protect turf from damaging diseases including anthracnose, gray leaf spot and brown ring patch. From Syngenta



Acelepryn Xtra is powered by two active ingredients and modes of action to deliver long-lasting, broad-spectrum insect control, including season-long control of grubs, billbugs and caterpillars, plus enhanced chinch bug control with at least three months of guaranteed control of southern chinch bugs in the lawncare market. It also offers control of ants and early curative control of grubs through the second instar, leading to greater flexibility and fewer applications. From Syngenta



Arkon™ Herbicide Liquid delivers post-emergence control of sedges and kyllingas, and listed broadleaf weeds on cool and warm-season turfgrass across a wide variety of use sites. And Arkon is proven to reduce the number and viability of nutsedge tubers. Labeled for use on Golf Course Greens, Fairways, Tees, Roughs and aprons as well as in Residential, Sports Turf, Commercial and other turfgrass sites. From PBI Gordon



XTREME GREEN 16-0-3. A unique granular fertilizer formula combining the benefits of a quick greenup with long lasting color retention. Soil-building carbon sources from Earthworks foster microbial populations and soil nutrient uptake while slow release nitrogen and micronutrients deliver the results your clients want. From FSC.

BE SURE TO VISIT US ON SOCIAL!



FERTILIZERS

Fisher & Son Company | RESOURCE MANUAL



ReGENERATE Complete

18-3-6 (50% SRN) with chelated minors

ReGenerate Complete is a specialty foliar fertilizer derived from a low salt index slow release polymer which delivers quick yet sustained color response. Chelated minors are added to enhance growth and to correct nutritional deficiencies.

Rate: 3–6 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Total Nitrogen (N)	18.0 %
Urea Nitrogen	9%
Other water-soluble nitrogen*	9%
Available Phosphate (P ₂ O ₅)	3.0%
Soluble potash (K ₂ O)	6.0%
Iron (Fe)	0.1%
Manganese (Mn)	0.1%
Zinc (Zn)	0.1%
<i>Derived from urea-triazone, potassium phosphate, potassium carbonate, Iron EDTA, Manganese EDTA, Zinc EDTA</i>	

* Contains 9.0% slowly available nitrogen from urea-triazone

ReGENERATE Plus

18-0-6 (60% SRN) + 3% Phosphite + Amino Acids

A 60% SRN comprehensive foliar turf fertilizer with 3% phosphite (not shown on the label) potassium acetate, and 3% amino acids. Potassium acetate has up to five times the foliar absorption over traditional forms of potassium. The plant-derived amino acid package contains oligosaccharides which stimulate the plant's defense system, initiate Systemic Acquired Resistance, and enhance root development. Seven ounces per 1,000 (2.5 gal per acre) provides 0.104 lbs of nitrogen.

Rate: 3–6 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Total nitrogen	18.0%
Urea nitrogen	7.2%
Other water-soluble nitrogen*	10.8%
(slow-release urea-triazone)	
Soluble potash (K ₂ O)	6.0%

* Derived from: urea-triazone, potassium phosphite, potassium acetate, plant extract.

** Derived from potassium phosphite.

ReGENERATE

18-3-6 Fast Release

ReGenerate 18-3-6 Fast Release is a specialty fertilizer that provides rapid delivery of nutrients to plants with a classic total analysis. ReGenerate Fast Release is suitable for foliar and root applications

Rate: 4-8 oz / 1000 sq ft

GUARANTEED ANALYSIS

Nitrogen	18.0%
Phosphorus	3.0%
Potassium	6.0%

Derived from: urea, di-potassium phosphate

ReGENAGREEN-EM

Chelated Micronutrients with Kelp Extracts

ReGenagreen-EM is a comprehensive minors package developed specifically to correct nutritional deficiencies and enhance resistance to stress. ReGenagreen-EM is fortified with 15% kelp extracts to improve turfgrass quality during periods of stress. ReGenagreen-EM is formulated with South African kelp from the species Ecklonia maxima which possesses a 300:1 ratio of auxins to cytokinins. Auxins stimulate root development which is more appropriate for summer turf applications.

Rate: 3-9 oz / 1000 sq ft

GUARANTEED ANALYSIS

Guaranteed Analysis	
Total Nitrogen (N)	4.0%
Magnesium (Mg)	0.54%
Iron (Fe)	2.0%
Manganese (Mn)	0.60%
Zinc (Zn)	0.5%

Derived from: urea, magnesium sulfate, iron sulfate manganese nitrate, zinc sulfate. Complexed with organic acids.

ReGENEX-SQ

Calcium Nutrition and Sodium Remediation

ReGenex-SQ is a revolutionary combination of nutritional calcium with lignosulfonic acid and proprietary surfactants. It is designed to provide nutritional calcium in a rapidly available form. In addition to these nutritional and physiological benefits, Calcium also supersedes sodium on the soil colloid, therefore, applications of calcium can help "knock" sodium off the soil colloid. Lignosulfonic acid in Regenex-SQ helps to further sequester soil sodium.

Rate: 6-8 oz / 1000 sq ft

GUARANTEED ANALYSIS

Calcium	7.0%
Sulfur	2.0%

Derived from: calcium nitrate, calcium lignosulfonate

Also Contains A Non-Plant Food Ingredient:

2.5% Proprietary Surfactant

NUTRIENTS



A valuable addition to our product line. ReGenerate MAN-Up is a high manganese supplemental micronutrient designed to enhance green color response, correct nutritional deficiencies, and enhance turfgrass quality. Complexed with organic acids. Foliar or soil applications will enhance green color response and turf vigor. Low stain risk and amine-based herbicide compatible.

Rate: Turf- 2 to 8 oz per 1000 sq ft (Do not exceed 5 oz per 1000 sq ft on bentgrass)

Ornamentals- 1 to 2 qts per 100 gl

GUARANTEED ANALYSIS

Magnesium (Mg)	1.0%
Iron (Fe)	3.0%
Manganese (Mn)	4.0%

**Derived from: ferrous sulfate, manganese sulfate, magnesium sulfate*



ReGeneCal-C is a highly advanced form of complexed foliar calcium formulated from calcium acetate, calcium nitrate and soluble kelp extracts. Highly efficient chelated calcium fertilizer with translocation aids for maximum nutrient delivery. Auxin-rich kelp extracts are added to aid in stress mitigation, enhanced root development and a means to remediate excess soil sodium.

Rate: 3-4 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Total nitrogen (N)*	5.0%
Calcium	8.0%

** Derived from calcium acetate, calcium nitrate, extract of Ecklonia maxima, blackstrap molasses.*



Xtreme Fe is a urea and ferrous sulfate based liquid fertilizer designed to achieve rapid green-up and correction of iron deficiencies through foliar applications. This formulation is complexed with citric acid to enhance nutrient uptake, increase compatibility with amine-based pesticides, and to reduce staining.

Rate: 2-8 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Total nitrogen	15.0%
Urea nitrogen	15.0%
Iron (Fe)	6.0%



A micronutrient package containing Fe (3%), Mn (1%), Mg (1%), Zn (0.25%), B (0.02%), Cu (0.1%). The carrier is combination of highly plant-available potassium acetate and a proprietary, tank mix compatible silica package. Organic acids and amino acids are added to enhance uptake and nutrient availability. Silica is added to enhance stress resistance, physical strength, and drought resistance.

Rate: 1-3 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Soluble potash (K ₂ O)	1.0%
Magnesium (Mg)	1.0%
Boron (B)	0.02%
Copper (Cu)	0.05%
Iron (Fe)	3.0%
Manganese (Mn)	1.0%
Zinc (Zn)	0.25%

Derived from: potassium acetate, potassium silicate, ferrous sulfate, manganese sulfate, magnesium sulfate, boric acid, zinc sulfate

Also contains a non-plant-food ingredient:

Silica (from potassium silicate).....0.5%



Derived from urea triazone, this 60% SRN foliar fertilizer provides rapid and sustained green-up. The slowly-available polymer nitrogen provides a more consistent color response and holds color longer than traditional forms of nitrogen. Xtreme N has a low salt index and because of the efficient nitrogen delivery of the urea triazone polymer, it does not stimulate excessive canopy growth. Suitable for foliar and root zone applications, 4 oz per 1,000 provides 0.1 lbs of N.

Rate: 4-6 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Total nitrogen	30.0%
Urea nitrogen	12.0%
Other water-soluble nitrogen	18.0%
(slow-release methylene ureas and urea-triazone)	



Xtreme K is a highly foliar available form of potassium derived from potassium acetate. Potassium acetate is a revolutionary source of foliar potassium with a near neutral pH. This is a tank mix compatible potassium that has up to 5 times the foliar absorption availability of traditional potassium sources with an extremely low risk of phytotoxicity.

Rate: 2-3 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Soluble potash (K ₂ O)	29.0%
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** Derived from potassium acetate.*

ACIDIFIED NITROGEN



UNipHY 18 is a low pH, urea and sulfuric acid formulation with a comprehensive micronutrient package. This product can be used to correct nitrogen, sulfur, magnesium, iron and or manganese deficiencies. UNipHY 18 may outperform other nitrogen products, as it is protected from volatilization and functions as a stabilized nitrogen.

Rates: UNipHY 18 is intended for spray application or fertigation/injection application through drip, overhead and micro-jet irrigation systems.

USE RATE: 1.0 to 10.0 gal. per acre. Use a minimum of 50 gallons of water per acre. Best results are obtained when watered in following application.

GUARANTEED ANALYSIS

Total Nitrogen (N)	18.0%
18.0% Urea nitrogen	
Sulfur (S)	7.0%
Magnesium (Mg)	0.30%
0.3% Water soluble Magnesium (Mg)	
Iron (Fe)	0.90%
0.9% Water soluble Iron (Fe)	
Manganese (Mn)	1.2%
1.2% Water soluble Manganese (Mn)	
5% Alcohol ethoxylate surfactant	
Derived from: Dicarbamide dihydrogen sulfate, magnesium sulfate, ferrous sulfate, manganese sulfate.	



RE-pHORM 28 is a superior form of nitrogen for fertigation and soil applications. It has synergistic impacts with other applied fertilizers and residual soil nutrients due to its capability to liberate nutrients bound to the soil colloid. The acidity in RE-pHORM 28 is stable in irrigation water and releases in the soil solution to mitigate impacts of alkalinity, bi-carbonate and sodium.

- 28% Stabilized Urea Nitrogen with 27% Sulfuric Acid Equivalent to reduce bicarbonates & sodium and 9% Sulfur for plant uptake
- Carbon to optimize C:N ratio and Hydrogen to reduce alkalinity
- Oxygen to enhance aerobic soil functions and drive ammonium metabolism
- ORP activity driving redox and converting minerals to oxidized, plant available forms

Rates: RE-pHORM 28 is intended for fertigation/injection application through drip, overhead and micro-jet irrigation systems.

NUTRIENT CHART

Gal/Acre	Lbs. N / 1,000 Ft ²	Lbs. N / Acre
0.50	0.038	1.65
1.00	0.076	3.30
1.30	0.100	4.30

PHOSPHITES



ReGenePhite is a combination of ammoniacal nitrogen and phosphoric acid from ammonium polyphosphate and potassium phosphite added for enhanced stress resistance and vigor. The combination of nutritional phosphate with plant strengthening phosphite fuels root growth and development while combating stress and decline. The analysis is 3-26-15 (16% phosphite plus 10% phosphate) but labels will read 3-10-15 because the phosphite component cannot be claimed on the label.

Rate: 6-8 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Total nitrogen (N)*	3.0%
Available phosphate (P ₂ O ₅)	10.0%
Soluble potash (K ₂ O)	15.0%
<i>Derived from ammoniacal nitrogen, ammonium polyphosphate, potassium phosphite, autolyzed yeast extract.</i>	



A high purity potassium phosphite which provides 3.17 pounds of phosphorous acid per gallon combined with a proprietary, tank-mix compatible silica package. While the phosphite increases plant metabolism, vigor, and stress resistance, the silica deposits in cell tissues increasing physical strength, rigidity, resistance to stress, and drought resistance. The label will read 0-0-24 for states which do not recognize potassium phosphite as a source of available phosphate.

Rate: 3-4 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Soluble potash (K ₂ O)	24.0%
<i>* Derived from potassium phosphite.</i>	
Also contains a non-plant-food ingredient:	
Silica (from potassium silicate)	1.0%



Immuniphite is a high purity potassium phosphite which contains 3.47 lbs of phosphorous acid per gallon. Immuniphite assists in improving turf quality and vigor while enhancing resistance to stress factors contributing to turf decline. The label will read 0-0-26 in those states where potassium phosphite is not recognized as a source of available phosphorous.

Rates: Turf: 3-4 oz / 1000 sq ft

GUARANTEED ANALYSIS

Soluble potash (K ₂ O)	26.0%
<i>Derived from potassium phosphite.</i>	



Immuniphite 40 is a more concentrated solution of phosphite containing 5.84 pounds of phosphorous acid per gallon, designed to maximize the phosphorous acid delivery to the plant. Immuniphite 40 has a low use rate of 1-4 pints per acre. The target rate for turf is typically 3.5 lb PO₃ per acre. To deliver this rate apply 2 oz per 1000 sq ft.

Rate: 2-3 oz./1000 sq. ft.

GUARANTEED ANALYSIS

Total nitrogen (N)*	2.0%
Soluble potash (K ₂ O)	16.0%
<i>Derived from potassium phosphite.</i>	



ReGEN-A / MEND BIOCHAR

ReGen-A/MEND BioChar is a soil-health technology designed to optimize the vitality of the root zone in all types of soil. The organic, 100% bio-based material utilizes physical, chemical, and biological mechanisms to unlock the potential of the soil. ReGen-a/MEND BioChar builds lasting soil structure to optimize water and nutrient retention in the root zone, provides a habitat for beneficial microbial growth, enhances chemical properties of the rhizosphere, and sequesters atmospheric CO₂.

GUARANTEED ANALYSIS

Carbon (dry wt %)	85%
Surface area (sq m/g)	200
Porosity (volume%)	65%
Particle size (mm)	0.5 – 3mm
Moisture (dry wt%)	12 - 15%
Anionic Exchange Capacity (millieql/l)	20 – 40
Cationic Exchange Capacity (millieql/l)	25 – 45
pH	7.0

APPLICATION RATES

TURF: New Sod - Apply 1-2 cubic feet per 1000 sq ft uniformly on soil surface prior to laying sod.
TURF: New Seeding - Apply 1-2 cubic feet per 1000 sq ft uniformly on soil surface, seed, then incorporate in top half inch of soil
TURF: Aeration - Aerate then apply 1-2 cubic feet per 1000 sq ft uniformly on turf, top dress then drag material into aeration holes
LANDSCAPE: Apply 1 cubic foot to 300 sq ft of planting area then incorporate into top 4 inches of soil.

Derived from: Sustainably sourced softwood

ReGEN-A / MEND 0-0-7 + MICROS

A valuable addition to the professional turf professional's toolbox, the ReGen-Amend 0-0-7 + Micros is versatile enough to use in all seasons as a potassium and micronutrient source. Contains amino acids from protein hydrolysates. This unique homogeneous formula has a uniform granule sized at SGN 125 for use in all turf types and mowing heights, applied either over the top with minimal roller pickup or dragged into holes during aeration.

Rate: 7.2 lb./1000 sq. ft. = 1/2 lb. K/1000 sq. ft.

GUARANTEED ANALYSIS

Soluble potash (K ₂ O)	7.0%
Calcium (Ca)	20.0%
Magnesium (Mg)	3.6%
1.0% Water Soluble Magnesium (Mg)	
Sulfur (S)	12.0%
12.0% Combined Sulfur (S)	
Copper (Cu)	0.03 %
0.03% Water Soluble Copper (Cu)	
Iron (Fe)	0.5%
0.21% Water Soluble Iron (Fe)	

Manganese (Mn)	0.2%
0.2% Water Soluble Manganese (Mn)	
Zinc (Zn)	0.05%
0.05% Water Soluble Zinc (Zn)	

Derived from Sulfate of Potash, Sulfate of Potash Magnesia, Calcium Sulfate, Calcium Carbonate, Magnesium Sulfate, Iron Sulfate, Iron Sucrate, Manganese Sulfate, Zinc Sulfate, Copper Sulfate, Protein Hydrolysate, and Molasses.*

** Contains Amino Acids from Protein Hydrolysate.*

LIQUID FOLIAR FERTILIZERS – GRIGG BROTHERS



Grigg specifically designs products for ease of application and foliar absorption. They contain ‘facilitators’ which aid penetration into plant cells, effectively translocates to sites of action and provides all or most of the nutrients needed by plants to chelate minerals. The facilitators are mineral specific, i.e. no two formulas are alike and are optimal for that mineral. In addition to special facilitators, Grigg Brothers products contain an organic base, consisting of natural organic compounds which function metabolically and are found naturally in the plant.

PRODUCT	U/M	DESCRIPTION	RATE
iHammer Advantage 5-0-1 + B, Mn, Mo, Zn	2.5 gal 55 gal	ADVANTAGE is a liquid foliar fertilizer that builds vibrant turf and adds vigor to all plants by supplying the right amount of macro and micronutrients	3 - 6 oz / 1000 sq ft
iHammer Upplause 10-0-0	2.5 gal 55 gal	A stable source of nitrogen that resists soil tie up. Formulation stays suspended in tank mix for even, no fuss applications. May help with green speed management	3 - 6 oz / 1000 sq ft
iHammer Megalex 3-0-0	2.5 gal 55 gal	Sequential applications of MEGALEX improves turfgrass quality and performance in low light shade conditions	3 - 9 oz / 1000 sq ft
Gary's Green 18-3-4 + Fe	2.5 gal. 30 gal. 55 gal.	Turf formulation. Chelated naturally with amino acids found in plants and soil. Biodegradable chelates enhance nutrient uptake and use 3 forms of Nitrogen (N) for quick and sustained green up. High N and Fe ensure high chlorophyll content and color. Micros include: Cu, Fe, Mn, Zn.	4 - 8 oz./ 1000 sq. ft. Up to 8-12 oz. on stressed turf.
Gary's Green Ultra 13-2-3 + Fe	2.5 gal. 55 gal.	Contains 15 bio-stimulants. No additional surfactant needed. Each gallon of product contains 2/3 Gary's Green™ and 1/3 Ultraplex™. Micros include: Cu, Fe, Mn, Zn. weekly or bi-weekly as needed. Refer to label for other rates and uses.	6 - 9 oz./ 1000 sq. ft. 8-12 oz. on stressed turf.
Green Pig	2 x 2.5 gal. case	A premium pigment additive specifically formulated for golf courses and sports turf facilities to enhance and extend aesthetic turf appearance. Green Pig will enhance turf color during the growing season as well as mask dormant turfgrass in the winter months. University research shows that tank mixing Green Pig with Grigg Bros Fairphyte can improve turf performance and quality during times of summer stress.	Cool Season Putting Greens: 10 - 14 oz./acre Cool Season Fairways: 14 - 18 oz./acre Warm Season Grasses: 14 - 18 oz./acre
Sili-Kal B 8-0-4 10% Ca + Si + B	2.5 gal. 55 gal.	A unique mix of N, K, B, Ca, and Si (Silicon) to improve cell strength, turf rigidity and disease resistance. High Ca and B work with Si to provide ideal conditions necessary for low cut greens – the Si enhances resistance to traffic. Micros include, B, Cu, Fe, Mn, Zn.	3 - 6 oz./1000 sq. ft.
Tuff Turf 1-0-14 + Micros & Silicon	2.5 gal. 55 gal.	Greens formulation. Improves color, turf blade hardening & rigidity, to realize quick traffic recovery, quick ball mark, cold weather tolerance and increased green speed,. Micros include: Fe, Mg, Mn, Si (Silicon) 30/55/275 gallon available via special order (NS 65101, NS 651011, NS 651012)	3 oz./1000 sq. ft.
PK Plus 3-7-18 +14% Phosphite	2.5 gal. 30 gal. 55 gal. 275 gal.	Provides Phosphorous (in the form of phosphoric acid – P_2O_5) for plant health and root development, Potassium (in the form of potash - K_2O) for cell strength and rigidity and micros (B, Fe, Mn, Zn). Formulation plays a role in the prevention of soil borne diseases and overall plant health. Use with Gary's Green Ultra to combat Summer Stress Syndrome.	1 - 4 oz./1000 sq. ft.
Ultra-Plex 4-0-3 + 2% Fe and micros *New & Improved	2.5 gal. 55 gal.	A sophisticated proprietary combination of macro and micro nutrients, plant and root promoting stimulators. Contains Iron Combo Chelate™ 40%, Aminoplex™ 30%, and INTAKE™ 30%. Micros include: B, Cu, Fe, Mn, and Zn. 2.5 gal (NS65102, 275 gal. (NS 6510212) via special order.	3 - 6 oz./1000 sq. ft.
Nutra- Green 5-10-5 + Fe	2.5 gal 55 gal	An all around product useful in regular feeding programs or as a nutrient source for landscape plants and flowers. Contains micros Mg, B, Cu, Fe, Mn, Zn	Turf: 4 - 6 oz / 1000 sq ft. Trees, Shrubs, Flowers: 50 oz / 100 gl

Redox utilizes state of the art manufacturing processes that maximize nutrient extraction from raw materials. Doing so allows them to create products that are highly efficient and economical at the same time. Products are in an ionic format that allows nutrients to be immediately available to the plant. Amino and organic acids maintain and facilitate nutrient availability and assimilation to your turf for extended accessibility.



PRODUCT	UOM	DESCRIPTION	RATE
TurfRx K+ Microcrystal (0-31-50)	10 lbs	A reacted plant nutrient high in potassium and phosphate unique in its ability to promote phenolic compound production. Use K+ Micro Crystal to reduce oxidative stress and to increase turf quality.	2 to 6 lbs / Acre
TurfRx C 85 (0-1-6)	2.5 gl	A reacted plant nutrient high in soluble carbon that increases soil microbial activity due to short, medium, and long chain carbon content. Application of C-85 results in increased beneficial soil microbial activity and dramatic improvements in fertilizer efficiency.	0.5 gal to 2 gal / Acre
TurfRx Ca (20% Ca)	2.5 gl	A reacted plant nutrient high in calcium that improves plant calcium nutrition due to high plant absorption and utilization due to microencapsulation.	0.25 gl to 5 gl / Acre
TurfRx Fairway + (0-7-12)	2.5 gl	Reduces oxidative stress and improves soil microbial activity due to short, medium, and long chain carbon content while promoting very efficient plant response due to chelation and complexing technology.	1 gl to 3 gl / Acre
TurfRx Green (1-5-5+Micros)	2.5 gl	Green facilitates nitrogen metabolism, improves soil microbial activity, and stimulates root growth while providing very efficient plant response due to chelation and complexing technology.	0.5 gl to 3 gl / Acre
TurfRx PeneCal (10% Ca)	2.5 gl	A reacted plant nutrient product high in surfactant and calcium. PeneCal reduces water surface tension and delivers calcium to the root zone.	0.25 gl to 1.5 gl / Acre
TurfRx Si (10% Ca, 22% Si)	2.5 gl	A reacted plant nutrient high in calcium and silicon, which strengthens cell walls and reduces environmental oxidative stress.	0.25 gl to 5 gl / Acre
TurfRx Supreme (0-5-4+Micros)	2.5 gl	A reacted plant nutrient product containing key plant elements as well as soluble carbon compounds derived from a proprietary fermentation process improving plant nitrogen metabolism.	0.25 gl to 1 gl / Acre
TurfRx OxyCal	20 lbs	TurfRx OxyCal contains proprietary soluble carbon compounds that improve antioxidant production and accelerate photosynthetic activity. Antioxidant production and accelerated photosynthetic activity improve Abiotic Stress Defense for playing surface recovery.	3lbs to 10lbs / Acre
TurfRx NatureCur	2.5 gal	TurfRx NatureCur is a botanical extract product that contains 5% potassium. TurfRx NatureCur contains proprietary soluble carbon compounds that improve antioxidant production and stimulate root growth & metabolism. TurfRx NatureCur reduces abiotic stress by increasing root quality and quantity, resulting in improved soil health.	0.5 gl to 7.5 gl / Acre



Trilogy Total Bio-Stimulant

This unique blend of over thirty raw materials provides a baseline program for plant, root and microbial stimulation. Macro and micro nutrients plus humic and fulvic acids promote a healthy and active microbial population resulting in stronger plants and healthier soils to survive the rigors of today's golf, sports turf and ornamental plant environments. Contains three forms of soil surfactants and penetrants; Humic and Fulvic Acids; North Atlantic Kelp Extract; Ocean Fish; Complexed Carbohydrates; Trace Minerals; Phosphoric Acid; Potassium Hydroxide; Magnesium Sulfate, Vitamin Complex and Bio-Net.

Rates & Programs:

Greens & Tees - 4 - 6 oz./1000 sq. ft. every two weeks.
Fairways - 2.5 - 3.5 gals./A per month.
Sports Turf - 2 - 3 gals./A per month.
Ornamentals - 8 oz./2 gals. as a drench.
Transplants - 10 oz./2 gals. as a drench.

Cal-Vantage Calcium Complex

Breakthrough Calcium formulation combining Ca, N, S and B, with carbon supplies from kelp and humic acids. A highly bio-active nutritional formula that moves readily into and through the plant. Formulated with the highest quality raw materials and soil conditioning additives provide a Ca and B response that provides greater plant tolerance to environmental stress. It supplies the enhancement capability of mobile nutrients, trace elements and organics in a complex that builds plant health.

Rates: Turf Maintenance 2 - 4 oz./1000 sq. ft. weekly.

For Sodium removal or serious Calcium deficiencies increase the rate to as high as 8 - 10 oz./1000 sq. ft. Always try to mix the product into 2 - 3 gal. of water/1000 sq. ft.

Ornamentals: 4 - 6 oz./2 gal.

Mag Vantage

Mag Vantage is a carbon based magnesium complex designed to help build chlorophyll development in the plant to improve color and vigor. It is formulated using multiple forms of magnesium to maximize uptake in all kinds of soil and environmental conditions. Carbon ingredients improve nutrient uptake and soil conditions. Mag Vantage can help any plant in any environment be stronger and recover more quickly while improving color and vigor.

Rate: Greens & Tees: 5 oz / 1000 sq ft every 2 weeks. On sandy soils apply weekly at half rate. Increase rates to 8-10 oz / 1000 sq ft on sites with poor vigor and color, or in areas with limited sunlight. Fairways: 1 gallon /acre once per month or as needed.

Sports Fields: 1.5 gallons / acre once per month or as needed.

Ornamentals: 4 oz / 2 gallons of water drenched into root zone.

BioVantage

BioVantage combines biological inoculants with a liquid carbon based food supply formulated with two distinctive nutrient rich microbial food sources: fish and kelp meal. They're designed to enhance the activity of the Rhizobacteria package. Rhizobacteria has been extensively researched and has been shown to produce metabolites that regulate both microbial and plant processes. These polymicrobial PGPR's are extremely stable, extending BioVantage's performance and shelf life. Active Ingredients include: *Bacillus amyloliquefaciens*, *Bacillus licheniformis*, *Bacillus megaterium*, *Bacillus methylotrophicus* and *Bacillus subtilis*

Rates: Apply 3-5 ounces per 1000 sq. ft. every two weeks. Rates and frequencies can increase depending of stress conditions.

Kick – Soil Conditioner

The ultimate soil conditioner. A blend of non-ionic wetting agent, humic acids, cultured living micro-organisms, sea kelp, chelated iron and complex carbohydrates. Provides food for microbes, stabilizes soil moisture and opens tight soils. Improves soil texture, root stimulation, soil microbial activity and nutrient availability. Giving your plants the ability to "thrive and survive."

Rate: New Seeding: 6 oz./1000 sq. ft. at seeding and monthly after establishment. Maintenance: 2 - 4 oz. /1000 sq. ft. in 2 gal. of water every 6 - 8 weeks throughout the growing season.

Protein Plus (14-2-5 + trace elements)

Complete nutrition with 6 nitrogen sources plus trace elements (B, Cu, Fe, Mn, Mo, Zn). Also contain microbial stimulant, humic acids and proprietary chelates that greatly enhance the production of plant proteins. Improves plant color, vigor and stress tolerance. 8 oz./1000 sq. ft. provides 1/10 lb. of N.

Rate: 6 oz./1000 sq. ft. For sports turf use 6-8 oz in 2 gallons of water every one or two weeks.

Sea 3 (1-3-5+1% MG)

Designed for Fairway use, Sea 3 is a unique nutrient source combining trace elements derived from desalinized, nutrient rich, sea water; Carbon sources derived from North Atlantic Kelp, North Pacific Fish and Vermicompost Tea; and Soil conditioners derived from HumaCarb, Dyna-Sol and Fulvic Acid Leachate. Reduces heat stress, provides complete fertility and contains powerful biostimulant.

Rate: One gallon per acre monthly but can be used more frequently in times of turf stress. Can be used in fertigation systems

Fisher & Son fully supports soil building strategies utilizing quality carbon based fertility. Natural organic carbon and carbohydrate fertilizer inputs help the soil become a more dynamic substrate. The use of natural organic fertilizers and a strategy that balances the soil chemically, biologically and physically will create a dynamic, healthy soil for producing quality turf and ornamentals.



The EarthWorks strategy helps the soil become a more dynamic substrate for producing quality turf and ornamentals. A Soil First approach, focuses on balancing the soil chemically, biologically and physically. By providing an optimum environment for the proliferation of beneficial microbes, the soil increases its ability to mobilize nutrients, buffer chemical soil reactions and create a system of “checks and balances” for disease suppression.

Replenish 5-4-5 All

Purpose Fertilizer

Feeds plants and soil. Provides 10 lbs. of carbohydrates (½ lb. N /1000 sq. ft.). 50-50 blend of poultry digest compost/ rock minerals/humic acids with simple carbohydrates and beneficial soil bacteria. Bag covers 10,000 sq. ft.

RATE: 10 lbs./1000 sq. ft (1/2 lb N)

» 50 lb. bag, standard grade

» 50 lb. bag, greens grade

Replenish 10-2-5 Ammonium Sulfate Fortified Fertilizer

Soluble Ammonium Sulfate and bio-active organic material that acidifies soil for use in early spring when soils are cold and nutrient mobility is weak. Bag covers 5000 sq. ft.

RATE: 5 lbs./1000 sq. ft (1/2 lb N)

» 50 lb. bag, standard grade

» 50 lb. bag, greens grade

Replenish 3-4-3

Economical, rich organic matter is ideal for dormant and fairway feed programs. Rich bio-active nutrient source high in Ca and other minerals. Stimulates microbial populations and reduces overall N usage. Bag covers 3000 sq. ft.

RATE: 16.5 lbs./1000 sq. ft (1/2 lb N)

» 50 lb. bag, standard grade

Replenish Min-Phos

Blended hard and soft rock phosphate based biologically active nutrient source with dry humic acids and blended with Replenish compost. Prilled to create a high phosphorous product that is easy to use and spread. Apply when aerifying turf and when planting trees, shrubs and flowers.

RATE: Turf –10 lbs./1000 sq. ft.

Plants – 1-2 lbs. in planting hole
or 1-2 lbs./1000 sq. ft. of beds.

» Min-Phos 50 lb., standard grade

Replenish 8-2-2

Economical blend of ammonia sulfate and Replenish compost for use on fairways, roughs and sports fields. Unpasteurized so it is very biologically active to feed the plant and the soil.

RATE: 7-14 lbs./1000 sq. ft.

» 2-1000 lb. saks, standard grade

» 50 lb. bag, standard grade

Replenish 16-0-5 Slow Release Turf Fertilizer

EarthWorks Replenish 16-0-5 is a low phosphorous slow release nitrogen carbon based product designed for maximum performance while still providing the proven soil building value that the EarthWorks Replenish products are know for.

Formulated with high quality methylene urea for long lasting color and growth, ammonium sulfate for a quick response and the EarthWorks Replenish compost to build soils and balance carbon levels that allow the nitrogen products to work even better.

The combination of nitrogen sources assures that the Replenish 16-0-5 will provide a long lasting color and growth pattern designed for golf course fairways and roughs, sports fields and landscapes of all kinds. The low phosphorous is ideal in environmentally sensitive areas, however, phosphorous is very important to the overall health of the plant and the phosphate in the Replenish 16-0-5 is coming exclusively from carbon based organic composts.

RATE: 3-6 lbs./1000 sq. ft.

» 50 lb. bag, standard grade

» 4 x 500 lb. sacks, standard grade

Myco-Replenish 3-3-3 with Mycorrhizae

Myco-Replenish 3-3-3 combines the high quality of EarthWorks Replenish natural organic fertilizers with root stimulating endo and ecto mycorrhizae fungi. Myco-Replenish is ideal for any landscape planting situation, establishment of grass seed or sod and will enhance all soil aerification practices. An extensive amount of Mycorrhizae fungi in combination with the known value of the Replenish compost fertilizer will help to promote extensive root growth, reduce heat and drought stress, improves water and nutrient uptake and can eliminate transplant shock.

The word “mycorrhizae” literally means “fungus-roots” and defines the close mutually beneficial relationship between specialized soil fungi (mycorrhizal fungi) and plant roots. About 95% of the world’s land plants form the mycorrhizal relationship in their native habitats. It is estimated that mycorrhizal fungi filaments explore hundreds to thousands more soil volume compared to roots alone.

RATE:

Aerification – 10-15 lbs./1000 sq. ft.

Sod/Seed – 10-15 lbs./1000 sq. ft.

» 40 lb. bag, standard grade

Replenish™

GRANULAR FERTILIZERS

Synthetic

Greens Grade

Analysis	SGN	N Source	K Source	UOM	LBS/ 1000 sq ft	lb N/ 1000 sq ft
11-7-21, 2% Fe, 1% Mg, 1% Mn (Lebanon CCMD)	80	60% Meth-Ex	SOP	40 lb	2.4	0.26
12-0-24, 1% Fe, 0.5% Mg, 0.5% Mn (Lebanon CCMD)	80	65% Meth-Ex	SOP	40 lb	2.1	0.25
12-24-8 (Lebanon CCMD)	80	40% Meth-Ex	SOP	40 lb	2.1	0.25
12-3-12, 0.5% Mg, 0.3% Fe, 0.5% Mn (Contec)	75	50% MU-Tech	SOP	40 lb	2.1	0.25
13-0-26 (Contec)	75	100% MU-Tech	SOP	40 lb	1.9	0.25
14-7-14, 2% Fe, 1.5% Mg, 1% Mn (Lebanon CCMD)	80	70% Meth-Ex	SOP	40 lb	3.5	0.50
16-0-8 Amm. 1% Fe, 1% Mg, 0.5% Mn (Lebanon CCMD)	80	Amm. Sulfate	SOP	40 lb	3.1	0.50
17-0-17, 0.5% Fe, 0.25% Mn (Contec)	75	50% MU-Tech 31% Ammoniacal	SOP	40 lb	1.5	0.25
18-0-18, 1.6% Fe, 0.5% Mg, 0.5% Mn (Lebanon CCMD)	80	64% Meth-Ex	SOP	40 lb	2.8	0.50
18-3-18, 1.5% Fe, 0.65% Mg, 0.5% Mn (Lebanon CCMD)	80	78% Meth-Ex	SOP	40 lb	2.8	0.50
18-9-18, 0.28% Fe, 0.14% Mn (Contec)	75	60% MU-Tech	SOP	40 lb	1.5	0.25
22-0-16, 1.6% Fe, 0.7% Mg, 0.8% Mn (Lebanon CCMD)	80	64% Meth-Ex	SOP	40 lb	4.0	0.90

Country Club[®] MD
Maximum Dispersion

Synthetic
Fairway Grade

Analysis	SGN	N Source	K Source	UOM	LBS /1000 sq ft	lb N /1000 sq ft
8-4-24 w/ 11.6% Humic Max (Lebanon)	145/150	65% MESA	SOP	50 lb.	5.6	0.56
10-18-18 + Fe/Mg/Mn (Lebanon)	145/150	55% MESA	SOP	50 lb.	5.6	0.56
16-4-8 + 1% Fe (Lebanon)	145/150	100% Ammoniacal	SOP	50 lb.	3.1	0.50
17-0-17 (Lebanon)	145/150	100% Meth-Ex	EXPO	50 lb.	5.3	0.90
20-0-16 (Contec)	145/150	100% MU-Tech	SOP	50 lb.	4.5	0.90
20-0-25 (Lebanon)	145/150	100% Meth-Ex	EXPO	50 lb.	4.5	0.90
21-0-21 (FSC)	145/150	75% XCU	MOP/SOP	50 lb.	4.20	0.90
22-0-10 (FSC)	145/150	75% Nutralene	SOP	50 lb.	4.0	0.90
27-0-5 (Lebanon)	145/150	100% MESA-XP	EXPO	50 lb.	3.3	0.90
24-0-10 (Contec)	145/150	90% MU-Tech	SOP	50 lb.	3.7	0.90



Fisher & Son Company

GRANULAR FERTILIZERS



Synthetic Standard Grade

Analysis	SGN	N Source	K Source	UOM	LBS/1000 sq ft	N/1000sq ft
10-10-10 (FSC)	220	50% XCU 50% Ocean Gro	MOP	50 lb.	5.0	0.50
10-20-15 + 2% Fe (FSC)	220	20% XCU,	MOP	50 lb.	5.0	0.50
15-0-4, + NutriLife, 2% Fe (Spring Valley)	220	100% REGAIN	MOP	50 lb.	5.0	0.75
XTREME GREEN 16-0-3 (FSC)	220	45% PCXCU 5%EW,12% OG, 1% FE	SOP	50 lb.	8.8	0.90
16-8-8 (FSC)	220	100% Amm. Sulfate	MOP	50 lb.	4.3	0.70
18-0-3 + 2% Fe (FSC)	220	40% UFlexx	MOP	50 lb.	5.0	0.90
18-2-4 (FSC)	220	25% XCU, 50% Ocean Gro	MOP	50 lb.	5.0	0.90
18-2-5 (FSC)	220	50% UFlexx, 50% Ocean Gro	MOP	50 lb.	5.0	0.90
19-0-19 + 3% Fe (Lebanon)	220	62% MESA	SOP	50 lb.	5.2	0.90
20-0-5 + 1% Fe (Lebanon)	220	30% MESA	MOP	50 lb.	4.5	0.90
20-10-10 (FSC)	220	50% UFlexx	SOP	50 lb.	4.5	0.90
22-0-4 , + NutriLife and DDP Iron (Spring Valley)	220	50% TTRU 45	MOP	50 lb.	3.4	0.75
24-2-5 + 2% Fe (FSC)	220	40% UFlexx, 40% Ocean Gro,	MOP	50 lb.	3.7	0.90
25-0-5 + 1% Fe (Lebanon)	220	51% MESA,	MOP	50 lb.	3.5	0.90
32-0-5 (FSC)	220	50% UFlexx	MOP	50 lb.	2.8	0.90
32-0-6 (Lebanon)	220	30% MESA	MOP	50 lb.	2.8	0.90
35-0-10 (FSC)	220	SIFI 95% TTRU	MOP	50 lb.	2.5	0.90

Granular Fertilizer with Herbicides

Synthetic

Standard and Fairway Grade

Dimension

Product Name/Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
0-0-7 + .17 Dimension (Growmark)	220	-	50 lb.	4 - 5	0	0.3 - 0.37
12-0-2 + .15 Dimension (Spring Valley)	220	100% Regain	50 lb.	4 - 5	0.54 - 0.6	0.26 - 0.33
12-0-5 + .17 Dimension (Growmark)	220	50% UFlexx	50 lb.	4 - 5	0.54 - 0.6	0.3 - 0.37
15-0-5 + .15 Dimension (Lebanon)	220	40% MESA	50 lb.	4 - 5	0.6 - 0.75	0.26 - 0.33
16-0-8 + .19 Dimension (Lebanon)	220	43% MESA	50 lb.	4 - 5	0.64 - 0.8	0.33 - 0.42
17-0-0 + .15 Dimension (Lebanon)	220	25% SCU	50 lb.	4 - 5	0.6 - 0.75	0.26 - 0.33
37-0-5 + .15 Dimension (Growmark)	220	95% TTRU SIFI	50 lb.	2.4	0.90	0.16

Dimension + Acelepryn

Product Name/Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
13-0-5 + .167 Dimension, .067 Acelepryn (Lebanon)	220	50% MESA	50 lb.	3.4 - 6.8	0.44 - 0.88	DIM: 0.25-0.5 ACEL: 0.1-0.2
19-0-9 + .253 Dimension, .067 Acelepryn (Lebanon)	220	50% MESA	50 lb.	3.4 - 4.55	0.65 - 0.86	DIM: 0.37-0.5 ACEL: 0.1-0.13
25-0-5 + .167 Dimension, .067 Acelepryn (Lebanon)	150 / 195	51% MESA	50 lb.	3.4	0.85	DIM: 0.25 ACEL: 0.1
30-0-10 + .253 Dimension, .067 Acelepryn (Lebanon)	150	100% Meth- Ex	50 lb.	3.0	0.90	DIM: 0.33 ACEL: 0.088
38-0-0 + .253 Dimension, .067 Acelepryn (Lebanon)	150	100% Meth- Ex	50 lb.	2.3	0.90	DIM: 0.25 ACEL: 0.067



GRANULAR FERTILIZER WITH HERBICIDES

Synthetic

Standard and Fairway Grade

Dimension + Herbicides

Product Name/Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
19-0-6 + .17 Dimension, LockUp (Lebanon)	220	33% MESA	40 lb.	3.5 - 4	0.66 - 0.76	DIM: 0.25 - 0.3
19-0-6 + .145 Dimension, Confront 3 (Lebanon)	220	33% MESA	40 lb.	3.5 - 5	0.66 - 0.90	DIM: 0.25 - 0.3

Barricade/Prodiamine

Product Name/Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
0-0-7 + .42 Prodiamine (Spring Valley)	220	-	50 lb.	4	0	0.74
13-0-5 + .43 Prodiamine (Lebanon)	220	100% LSN	50 lb.	4	0.52	0.75
16-0-5 + .43 Prodiamine (Lebanon)	220	50% LSN	50 lb.	4	0.64	0.75
16-0-8 + .43 Barricade (Lebanon)	220	43% MESA	50 lb.	4	0.64	0.75
18-0-4 + .43 Prodiamine (Lebanon)	220	25% PCU	50 lb.	4	0.72	0.75

Other Herbicides

Product Name/Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
0-0-7 + LockUp (Lebanon)	145		40 lb.	4	0	See label
19-0-6 + LockUp (Lebanon)	220	33% MESA	40 lb.	4	0.66	See label
19-0-7 + Confront (Lebanon)	220	64% MESA	50 lb.	3.5	0.66	See label
20-0-8 + 1.0 Ronstar (Lebanon)	220	40% MESA	50 lb.	4.5	0.9	2
21-22-4 + .08 Mesotrione (Lebanon)	125	35% MESA	40 lb.	4.3	0.9	0.15

GRANULAR FERTILIZER WITH INSECTICIDES

Synthetic Standard Grade

Acelepryn

Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
0 0 7 + .067 Acelepryn (Lebanon)	220	-	50 lb	3.4 - 6.8	0	0.1 - 0.2
17-0-3 + .067 Acelepryn 2% Fe (Lebanon)	220	40% SCU	50 lb	3.4 - 6.8	.58 - 1.16	0.1 - 0.2

Allectus

Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
17-0-3 + .225 Allectus 3% Fe (Lebanon)	220	40% SCU	50 lb	2.6 - 3.7	.44 - .63	0.26 - 0.37

Protego

Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
0-0-7 Protego (Spring Valley)	220	-	50 lb	3.4 - 4.5	0	0.36 - 0.48
16-0-3 Protego (Spring Valley)	220	60% Duration 45	50 lb	3.4 - 4.5	.54 - .72	0.36 - 0.48

Bifenthrin

Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
0-0-7 + .069 Bifenthrin (Lebanon)	220	-	50 lb	3.3 - 6.6	0	0.1 - 0.2
17-0-5 .069 Bifenthrin (Lebanon)	220	30% SCU	50 lb	3.3 - 6.6	.56 - 1.12	0.1 - 0.2

Merit

Analysis	SGN	N Source	UOM	LBS/1000 sq ft	N/1000 sq ft	AI / Acre
0-0-7, MOP, .2 Merit (Lebanon)	220	-	50 lb	3.5 - 4.5	0	0.3 - 0.4
15-0-5 .2 Merit (Lebanon)	220	40% MESA	50 lb	3.5 - 4.5	.52 - .68	0.3 - 0.4



A dynamic partnership for over 20 years!

We are believers in the potential of your soil.

With the collaboration of Fisher & Son and an EarthWorks carbon based fertility program you'll achieve true sustainability.

For you, it means greater freedom from the whims of nature as well as greater cost predictability over the long term. For your community, it means a legacy of beautiful, healthy, natural green spaces and playing surfaces.

Together, we promote a deeper respect for the soil, the spaces and the people.

That respect goes deeper than any fertilizer.



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CONTROL PRODUCTS

TURF FUNGICIDES

Fisher & Son Company | RESOURCE MANUAL



Fisher & Son Company

SPRAYABLE TURF FUNGICIDES

PRODUCT	U/M	DESCRIPTION	RATE
26/36	2.5 gal.	<u>Contains 19.5% iprodione and 19.5% thiophanate-methyl</u> Preventative and curative broad spectrum fungicide. At a 2 oz. rate it delivers the equivalent amount of active ingredient as 2 oz. of Chipco GT and 1 oz. of Cleary's 3336. Controls Dollar Spot, Brown Patch, Anthracnose, Snow Mold and Leaf Spot.	2–4 oz./ 1000 sq. ft.
26019 Flo	2 gal.	<u>Contains 23.3% iprodione.</u> Superior broad spectrum control of many turf and ornamental diseases.	1.5–4 oz./ 1000 sq. ft.
Affirm WDG	2.4 lb	<u>Contains 11.3% polyoxind zinc salt.</u> This is a concentrated, easy-to-mix water dispersible granule formulation that delivers excellent disease control through foliar and translaminar systemic activity. Labeled for Foliar and basal anthracnose, Brown patch, Fairy ring, Waitea patch and more	.87 oz / 1000 sq ft
Appeal II	2.5 gal.	<u>Contains 49.41% potassium phosphite.</u> Controls important diseases including Pythium and anthracnose, while enhancing color, turf quality and stress tolerance	3 - 8 oz./ 1000 sq. ft.
Armada	2 lb	<u>Contains 41.67% triadimefon and 8.3% tri. oxystrobin.</u> The active ingredients in Compass and Bayleton for superior broad spectrum control of certain stem, foliar and root diseases of turfgrass and ornamentals.	0.6–1.2 oz./ 1000 sq. ft.
Ascernity	1 gal	<u>Contains 2.24% benzovindiflupyr and 7.8% difenoconazole.</u> Ascernity® is a combination of Solatenol® (benzovindiflupyr) – an advanced SDHI technology in golf on large patch, brown patch and anthracnose – and difenoconazole, the proven cooling DMI, to prevent and control more than 20 diseases in cool and warm-season turf with no heat restrictions.	0.6–1.2 oz./ 1000 sq. ft.
Banner MAXX	1 gal 10 gal.	<u>Contains 14.3% propiconazole.</u> A microencapsulated concentrate formulation, not an EC. No odor and stable for extended periods of time. Controls: Dollar Spot, Anthracnose, Brown Patch and more.	0.5– 4 oz. / 1000 sq. ft.
Banol	1 gal 2.5 gal	<u>Contains 66.5% propamocarb hydroxide.</u> Systemic control of Pythium Blight and Phytophthora. For use on turf and ornamentals.	1.33 – 4 oz./ 1000 sq ft
Bayleton Flo	2.5 gal.	<u>Contains 43% triademefonin.</u> A water-based suspension concentrate of a systemic (acropetal penetrant) fungicide that is absorbed by the shoots and roots. Provides effective preventative control of dollar spot and fairy ring and many other pathogens . Labeled for ornamental plants.	0.25–2 oz / 1000 sq. ft.
Briskway	1 gal	<u>Contains 18.2% azoxystrobin and 11.4% difenoconazole.</u> Briskway® fungicide combines a cooling DMI (Demethylation Inhibitor) with a proven strobilurin to control over 20 turf diseases. Briskway can be used throughout the season as part of an agronomic program, including during high heat and humidity with no heat restrictions or negative growth regulation.	0.3 - 0.73 oz. / 1000 sq. ft.
Chipco 26 GT	2.5 gal.	<u>Contains 23.3% iprodione.</u> Controls Dollar Spot, Brown Patch, Leaf Spot, Fusarium, Gray and Pink Snow Mold.	3–8 oz./ 1000 sq. ft.
Civitas Turf Defense	5 gal	<u>Contains 98% mineral oil.</u> Unique fungicide that controls disease and activates plants natural immune responses in golf and sports turf. Controls Anthracnose, Dollar spot, and other troublesome diseases. Suppresses numerous insects (Sod Webworm, ABW, and Cutworm). No risk of resistance, virtually non-toxic, readily bio-degradable. Reduced risk product.	See Labels for rates



SPRAYABLE TURF FUNGICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Cleary 3336	2.5 gal	Contains 41.25% thiophanate-methyl. 3336® F is a broad-spectrum fungicide with preventive and curative properties. Its systemic mode of action is particularly effective on a wide range of diseases in turf and ornamental settings.	2 - 6 fl oz./ 1000 sq. ft.
Compass	1 lb.	Contains 50% tri oxystrobin. Control of a wide range of turf and ornamental pathogens. Highly effective in controlling spore germination. Arrests fungal growth at later stages of the disease cycle.	0.1 – 0.25 oz./ 1000 sq. ft.
Concert II	2.5 gal.	Contains 2.9% propiconazole (Banner AI) and 38.5% chlorothalonil (Daconil AI). Dual ingredient pre-mix controls most turf diseases.	1.5 – 8.5 fl oz./ 1000 sq. ft.
Daconil Ultrex	5 lbs.	Contains 82.5% chlorothalonil. Contains water dispersible granules that are effective in programs that attempt to minimize disease resistance in fungicides. Has a multi-site mode of fungicidal action.	1 - 5.3 oz./ 1000 sq. ft.
Daconil Weatherstik	2.5 gal.	Contains 54% chlorothalonil. 6.0 lbs. AI chlorothalonil owable fungicide with a large broad-spectrum of control. The WEATHER STIK guarantees the product will stick to the plant and stay between sprays.	2.5 – 5.5 fl oz./ 1000 sq. ft.
Daconil Zn	2.5 gal.	Contains 38.5% chlorothalonil and Zinc Liquid formulation registered to control 13 turf diseases and algae in turf. For use to control turf diseases on golf courses, on lawns around commercial (nonresidential) and industrial buildings, and on professional and collegiate athletic fields.	1.5 - 8 fl oz/ 1000 sq ft
Daconil Action	2.5 gal.	Contains 53.94% Chlorothalonil and 0.11% Acibenzolar. The unique properties of acibenzolar, combined with the trusted performance of Daconil, enhances disease control and improves turf quality. Acibenzolar provides a boost of pathogenesis-related proteins that activate the turf's natural defense mechanisms and help it combat stress.	1 - 5.4 fl oz./ 1000 sq. ft.
Densicor	51 Fl oz	Contains 41% prothioconazole. A powerful DMI fungicide that provides next-level control of dollar spot, brown patch, anthracnose, gray leaf spot, snow mold and other harmful diseases with an excellent turf safety profile, a single ultra-low use rate and convenient packaging.	0.195 fl oz / 1000 sq ft
Eagle 20 EW	1 gal	Contains 19.1% myclobutanil. A systemic, protectant and curative fungicide for disease control in established turfgrass. DMI with low growth regulatory properties. Controls anthracnose, dollar spot, brown patch and more.	0.5 - 2.4 fl oz / 1000 sq ft
Emerald	0.49 lb. 10 /case	Contains 70% boscalid. A unique mode of action that delivers up to 28 days protection or use at lower rates with other fungicides to get broad-spectrum performance. Also controls Bentgrass Dead Spot.	0.13 – 0.18oz / 1000 sq. ft.
Encartis	2.5 gal	Contains 2.2% boscalid and 54.14% chlorothalonil. Pairs the strength of Emerald with chlorothalonil in the perfect ratio to provide preventive and curative activity on warm- and cool-season turf. Up to 28 days dollar spot control	3 – 4 fl oz / 1000 sq. ft.
Exteris Stressgard	2.5 gal	Contains 1.19% fluopyram and 1.92% trifloxystrobin. Exteris Stressgard is a next-generation foliar fungicide with unique formulation enhancements that deliver preventative and curative disease control as well as improved plant health and turf quality. Controls Dollar spot, brown patch, leaf spots [2(ee) label] and Microdochium patch	1.5 - 12.6 fl oz/ 1000 sq ft

Encartis®
Fungicide

SPRAYABLE TURF FUNGICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Fame SC	16 oz 64 oz	<u>Contains 40.3% fluoxastrobin.</u> Fame™ SC Fungicide applied alone or in combination with DMI or contact fungicides is a cost-effective strobilurin foundation of affordable turf disease control. Controls brown patch and all major patch diseases.	0.18 -0.36 fl oz/ 1000 sq ft
Fame + C	2.5 gal	<u>Contains 2.44 % fluoxastrobin and 38.4% chlorothalonil.</u> The combination of Fluoxastrobin and Chlorothalonil in one product provides a built-in resistance management strategy while enhancing the activity of each active ingredient against difficult to control turf pathogens. Controls brown patch and more.	3 - 5.9 fl oz / 1000 sq ft
Fiata Stressgard	2.5 gal	<u>Contains 25.85% Mono- and Di-potassium salts of phosphorous acid.</u> Fiata Stressgard combines a high quality phosphite with Stressgard technology to control Pythium and provides a plant health component to alleviate or prevent stress from drought, solar radiation and other oxidative processes.	5 - 15 fl oz. / 1000 sq. ft.
Fore Rainshield	4 x 1.5 lb	<u>Contains 80% mancozeb.</u> An ideal choice for summertime conditions when heat, humidity and heavy irrigation combine to create the most intense disease conditions of the year. Control of brown patch, black algae and pythium, it also protects against many other troublesome diseases.	4 - 8 oz. / 1000 sq. ft.
Headway	1 gal 10 gal	<u>Contains 5.73% azoxystrobin and 9.54% propiconazole.</u> Headway® fungicide combines the power of the two active ingredients, found in Heritage™ and Banner Maxx® II fungicides, to deliver broad-spectrum disease control against dollar spot, brown patch, and other major turf diseases.	0.75 – 5.5 fl oz/ 1000 sq. ft.
Heritage	1 lb. 6/case 6 lb. 4/case	<u>Contains 50% azoxystrobin.</u> Provides excellent systemic control of a wide range of turf diseases including Brown Patch, Anthracnose, Summer Patch and Take-All-Patch. Use preventively prior to infection for best control. 1 application provides up to 28 days of control.	0.2 – 0.4 oz. / 1000 sq. ft.
Heritage Action	6 x 1 lb 4 x 6 lb	<u>Contains 50 % azoxystrobin and 1.18% acibenzolar.</u> Heritage Action™ fungicide offers hybrid technology that couples the proven disease control of Heritage™ fungicide with a boost of Acibenzolar-s-methyl (ASM) for enhanced biotic and abiotic stress management. Controls anthracnose and patch diseases.	0.2oz - 0.4oz / 1000 sq ft
Heritage TL	1 gal 10 gal	<u>Contains 8.8% azoxystrobin.</u> Superior formulation with finer mill of the active ingredient helps with distribution of the active ingredient across the plant. Expect superior efficacy with this new improved formulation.	1 – 2 fl oz / 1000 sq. ft.
Honor Intrinsic	3 lb.	<u>Contains 16.8% pyraclostrobin and 11.2% boscalid.</u> Honor Intrinsic brand fungicide is a combination of the active ingredient in Insignia® fungicide and the active ingredient in Emerald® fungicide. This pre-mix provides two modes of action and delivers unsurpassed control of dollar spot, fairy ring, anthracnose, patch diseases, leaf spots and plant health benefits	0.55 – 1.1 oz./ 1000 sq ft
Insignia Intrinsic	122 oz	<u>Contains 23.3% pyraclostrobin.</u> Insignia SC Intrinsic brand fungicide Acts as a penetrant with translaminar movement following foliar applications. Active ingredient is absorbed and held tightly in lipophilic layer and released slowly over time to provide long-term control. Active on foliar and root diseases through spray and drench applications	0.4 – 0.7 fl oz/ 1000 sq ft
Instrata Stressgard	2.5 gal.	<u>Contains 29.9% chlorothalonil, 4.7% propiconazole and 1.2% fludioxonil.</u> Instrata® fungicide combines the active ingredients found in Daconil®, Medallion® and Banner Maxx® II fungicides in a proprietary formulation.	2.75 – 11 fl oz./ 1000 sq. ft.
Interface Stressgard	2.5 gal.	<u>Contains 23.1% iprodione and 1.44% trioxystrobin</u> along with Bayer's StressGard Formulation technology. The non-DMI (DeMethylation Inhibitor) chemistry makes it effective on key diseases while addressing resistance issues and turf-thinning concerns from DMIs.	3 – 7 fl oz./ 1000 sq ft



SPRAYABLE TURF FUNGICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Kabuto	1 gal	<u>Contains 36% isofetamid.</u> Preventative and curative control of leaf spot and dollar spot, including control of carboxamide-resistant dollar spot. It inhibits all stages of development in the fungal lifecycle. Man be applied up to eight times per year with no resistance issues.	0.4 - 0.5 fl oz / 1000 sq. ft.
Kalida	64 oz	<u>Contains 20.9% fluindapyr and 20.9% flutriafol.</u> combines a novel SDHI with a next-generation DMI.. With proven turf safety, Kalida Fungicide can tackle Bipolaris Leaf Spot, Take-All Root Rot, Large Patch in warm-season turf and Anthracnose, Fairy Ring, Dollar Spot, Brown Patch in cool season turf	0.25 - 0.4 fl oz/ 1000 sq ft
Lexicon Intrinsic	21 oz.	<u>Contains 14.33% fluzapyroxad and 28.58% pyraclostrobin.</u> Lexicon controls a wide range of diseases including anthracnose, brown patch, brown ring patch, dollar spot and fairy ring.	0.34 - 0.47 fl oz/ 1000 sq ft
Maxtima	26 oz 2.5 gal	<u>Contains 34.93% mefentrifluconazole.</u> A cutting-edge DMI that can safely be sprayed at any temperature, on any turf variety. It's cost-effective for fairways and can be used anywhere on your course to help ensure disease-free playing conditions all year long. Controls Dollar spot, Spring dead spot, Anthracnose, Fairy ring, Summer patch and Take-all root rot.	0.2 - 0.8 fl oz. / 1000 sq.ft.
Medallion SC	1 gal	<u>Contains 11.8% udioxonil.</u> A liquid suspension concentrate for easier handling. Its naturally occurring active ingredient explodes fungal spores on the leaf, in the thatch and beneath the soil surface. The SC formulation delivers reliable, broad-spectrum control of several key turf diseases including snow mold, anthracnose and bentgrass deadspot.	0.75 – 2 fl oz. / 1000 sq. ft.
Mirage Stressgard	2.5 gal	<u>Contains 21.4% tebuconazole.</u> Mirage Stressgard combines Tebuconazole with Stressgard technology to control summer patch, fairy ring, spring dead spot and brown patch.	1 - 2 fl oz. / 1000 sq. ft.
Navicon	37 oz 2.5 gal	<u>Contains 17.56% mefentrifluconazole and 17.56% pyraclostrobin.</u> Navicon is a broad-spectrum DMI combined with the plant-health benefits of Intrinsic brand fungicides. This dual-action fungicide can be sprayed on any turf at any temperature, and it delivers powerful plant health from the roots up. Controls Dollar Spot, Anthracnose, Summer Patch, Fairy Ring and more.	0.7 - 0.85 fl oz/ 1000 sq. ft.
Pedigree	2.5 gal	<u>Contains 40% flutolanil.</u> Pedigree Fungicide SC gives turf professionals an easy-to-handle liquid formulation. With excellent turf safety and no use site limitations, Pedigree delivers systemic disease control of brown patch, fairy ring, red thread, pink patch, yellow patch, gray snow mold, large patch, and more.	2.2 - 6.6 fl oz./ 1000 sq. ft.
Pegasus 6L	2.5 gal.	<u>Contains 54% chlorothalonil.</u> Pegasus 6L is a commercial fungicide for use on golf course tees, greens, and fairways. Ideal for use with newer fungicides to manage their resistance and broaden their disease control spectrum. Protects turf and ornamentals from over 75 diseases.	2 - 3.6 fl oz. / 1000 sq. ft.
Pegasus DFX	5 lb	<u>Contains 82.5% chlorothalonil.</u> Pegasus DFX is an extruded granule formulation that readily disperses in the spray tank and exhibits excellent re-suspending in water. Controls over 75 diseases	1.82 - 5oz. / 1000 sq. ft
Pinpoint	60 oz	<u>Contains 43.4% mandestrobin.</u> Pinpoint™ Fungicide is formulated with a new fungicide active ingredient designed for outstanding dollar spot control. Pinpoint provides turf management professionals with an excellent fungicide program rotation partner to help manage and mitigate dollar spot resistance from SDHI, DMI, benzimidazole and dicarboximide fungicides.	0.17 - 0.31 fl oz/ 1000 sq ft
Posterity	105 oz	<u>Contains 18.3% pydiflumetofen.</u> A very active SDHI fungicide for the turf market. Provides up to 28 days of dollar spot control and delivers consistent spring dead spot control. Posterity is labeled for all golf course turf to protect cool- and warm-season turf.	0.08 - 0.32 fl oz/ 1000 sq ft



SPRAYABLE TURF FUNGICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Posterity Forte	1 gal	Contains 7% pydiflumetofen, 9.3% azoxystrobin, 11.6% propiconazole. Combines 3 different FRAC groups. Increased spring dead spot control, excellent control of dollar spot for up to 28 days, plus leaf spot, brown patch and take-all root rot control.	0.42 - 0.84 fl oz / 1000 sq ft
Posterity XT	2.5 gal	Contains 1% pydiflumetofen, 6% azoxystrobin, 10.1% propiconazole. Broad-spectrum foliar disease control, including up to 28 days of control of brown patch, dollar spot and gray leaf spot. Optimum protection against soil-borne diseases like summer patch, leaf spot, take-all patch and fairy ring.	1.5 - 3 fl oz / 1000 sq ft
Rayora	2.5 gal.	Contains 11.8% flutriafol. Unlike other DMIs, Rayora's unique molecular structure provides unparalleled uptake and translocation. Its systemic action gives curative and preventative Dollar Spot activity while protecting the newly developing turfgrass growth for 21 days.	0.7 - 1.4 fl oz / 1000 sq ft
Renown	2.5 gal.	Contains 45.0% chlorothalonil and 3% azoxystrobin. Provides contact and systemic control of brown patch, gray leaf spot, dollar spot, large patch, leaf spot and anthracnose.	2.5 - 4.5 fl oz / 1000 sq ft
Secure	2.5 gal.	Contains 40% fluazinam. A FRAC group 29 fungicide, Secure has no known resistance and as a multi-site contact, it has a low risk of future resistance. Secure provides superior protection against dollar spot and also controls 10 additional turf diseases. Controls dollar spot that is resistant to other chemistries.	0.5 fl oz. / 1000 sq. ft.
Secure Action	0.5 gal 2.5 gal	Contains 40% fluazinam and 0.6% acibenzolar-S-methyl. Improved formula provides enhanced dollar spot control up to 21 days. ASM boosts turf's natural defenses against disease. Adds suppression of bacterial wilt to the label.	0.5 fl oz / 1000 sq ft
Segway	39.2 oz.	Contains 34.5% cyamofazid. Provides excellent control of Pythium and Pythium Root Dysfunction (PRD) over a period of 7 to 28 days. The active ingredient stops spores from germinating, preventatively inhibiting all stages of Pythium fungal development.	0.45 - 0.9 fl oz / 1000 sq. ft.
Serata	35 oz	Contains 20.28% picarbutrazox. A new compound from a new class of chemistry, the tetrazoloximes. Outstanding control of pythium root rot, pythium root dysfunction and pythium blight. Labeled for golf, sports turf, lawns and landscapes.	0.6 - 0.8 oz / 1000 sq ft
Signature (Chipco)	5.5 lb	Contains 80% aluminum-tris. Signature is different from other fungicides in that it is truly systemic, traveling up the xylem and down the phloem within the plant. This product is the foundation turf fungicide for disease management and turf quality in every season. Protects turf from stresses during summer and winter decline, and it improves turf quality.	4oz - 8oz / 1000 sq ft
Signature Xtra Stressgard	8 x 5.5 lb	Contains 60% aluminum-tris. Signature XTRA Stressgard uses a new, improved formulation of fosetyl-Al. Signature™ XTRA Stressgard® is a true systemic fungicide that enhances plant health and turf quality, while minimizing stress from both abiotic and biotic sources.	2 - 6oz / 1000 sq ft
Subdue MAXX	1 gal. 10 gal.	Contains 21.3% mefenoxam. A micro-emulsion concentrate (MC) formulation of SUBDUE that requires half the rate as the original product. Fine particle size for superior coverage. Less corrosive to equipment.	0.5 - 1 fl oz / 1000 sq ft
Tartan Stressgard	2.5 gal.	Contains 20.86% triadimefon and 4.17% tri. oxystrabin + Stressgard. Contact and systemic action. Controls Anthracnose, brown patch, dollar spot, gray leaf spot, leaf spot, pink snow mold, red thread, rust and summer patch.	1 - 2 fl oz / 1000 sq ft

SPRAYABLE & GRANULAR TURF FUNGICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Tekken	2.5 gal	Contains 5.6% isofetamid and 15.18% tebuconazole. Combines an SDHI with a DMI for broad spectrum control. Controls Anthracnose, Brown Patch, Dollar Spot and more for 21–28 days.	3 fl oz / 1000 sq ft
Terrazole	6 x 2 lb.	Contains 35% etridizole. Prevents and controls Pythium blight, cottony blight, grease spot, spot blight, root rot, crown rot and damping-off.	1.5 - 3 oz / 1000 sq ft
Tourney	5 lb.	Contains 50% metconazole. Controls Anthracnose, Brown Patch, Dollar Spot and more for 14–21 days. The most active DMI on the market.	0.18 - 0.44 oz / 1000 sq ft
Traction	2.5 gal	Contains 17% fluazinam and 17.6% tebuconazole. Combines two proven fungicides for knockdown and systemic control of anthracnose, dollar spot, brown patch and snow mold.	1.3 fl oz / 1000 sq ft
Transom	2.5 gal	Contains 46.2% thiophanate-methyl. Economical fungicide for control of a wide range of turf pathogens.	2 - 5.33 fl oz / 1000 sq ft
Union	2.5 gal	Contains 5.84% cyazofamid and 3.25% azoxystrobin. Combines two powerful active ingredients to deliver exceptional performance in a single fungicide. Azoxystrobin controls 17 of the most common diseases, including brown patch and anthracnose. And cyazofamid offers unbeatable defense against Pythium blight, damping off, root dysfunction, and root rot.	2.9 - 5.75 fl oz / 1000 sq ft
Velista	22 oz	Contains 50% penthiopyrad. Velista® fungicide is the broadest spectrum and best SDHI labeled for anthracnose in the golf market. Spring and fall are ideal seasons to clean up greens, tees and fairways. Controls 14 key turf diseases, including resistant strains of dollar spot and anthracnose.	0.3 - 0.7 oz / 1000 sq ft
Xzemplar Intrinsic	4 x 3 lb case	Contains 26.55% Fluzapyroxad. Xzemplar fungicide offers quick and reliable control brown patch, large patch as well as superior, long-lasting dollar spot control.	0.16 - 0.26oz / 1000 sq ft

GRANULAR FUNGICIDES

Eagle .62G	25 lb.	Contains .62% myclobutanil. Preventative systemic and curative fungicide for turfgrass diseases	2.5lb - 5lb / 1000 sq ft
Headway G	30 lb.	Contains 0.31% azoxystrobin and 0.75% propiconazole. Controls more than 20 turf diseases. Effective against dollar spot, brown patch, anthracnose, Pythium spp., gray leaf spot, snow mold, take-all patch, leaf spot, summer patch, necrotic ring spot and more	2lb - 4lb / 1000 sq ft
Heritage G	30 lb.	Contains 0.31 azoxystrobin. DG-Lite granular systemic strobilurin that controls 21+ diseases during a 28-day window including BP, Red Thread, Pythium, Anthracnose, GLS, Snow Mold, Take-all patch, SP and NRS	2lb - 4lb / 1000 sq ft
Pillar G Intrinsic	30 lb.	Contains 0.38% pyraclostrobin and 0.43% triticonazole. Combination of two highly effective fungicides with broad disease control. Also provides improved plant health in the form of stress management.	3lb / 1000 sq ft
Subdue GR	25 lb.	Contains 1% mefanoxam. Preventive systemic fungicide for turf and ornamental diseases. Excellent for Pythium and Phytophthora Root Rot.	3oz - 25oz / 1000 sq ft



FUNGICIDE FRAC CODES

Fungicide resistance is a very real concern in turf and horticulture. As fungicide resistance continues to be reported, it becomes equally important to be aware of the FRAC code(s) of the fungicide being applied. When a fungal plant pathogen becomes resistant to a specific fungicide, then the pathogen is either less or completely insensitive to fungicides in that FRAC group. The FRAC codes group together active ingredients which demonstrate potential for cross resistance.

PRODUCT	1	2	3	4	7	9	11	12	14	19	21	28	29	33	40	41	M1	M3	M5	NC	P	U17
26/36 FUNGICIDE	x	x																				
26019 FLO		x																				
AFFIRM										x												
AGRI-FOS														x								
APPEAR II														x								
ARBORJET ARBOR-OTC																x						
ARBORJET ECO-1 40																				x		
ARBORJET PHOSPHO - JET														x								
ARBORJET PROPIZOL			x																			
ARBOTECT 20-S	x																					
ARMADA 50 WDG			x				x															
ASCERNITY					x																	
BANNER MAXX II			x																			
BANOL												x										
BAYLETON			x																			
BRISKWAY			x				x															
CAMELOT O																	x					
CHIPCO 26 GT		x																				
CIVITAS																				x		
CLEARYS 3336	x																					
COMPASS 50 WG							x															
CONCERT II			x																x			
CONTEND A+B SNOW PACK			x		x		x															
CONSYST	x																		x			
CUPRO 5000 DF																	x					
DACONIL ACTION																			x		x	
DACONIL																			x			
DENSICOR			x																			
EAGLE 20 EW			x																			
EMERALD					x														x			
ENCARTIS					x														x			
EXTERIS STRESSGARD					x		x															
FAME C							x												x			
FAME SC							x															
FIATA STRESSGARD														x								
FORE 80WP RAINSHIELD																		x				
HEADWAY			x				x															
HERITAGE ACTION							x														x	
HERITAGE							x															
HONOR INTRINSIC					x		x															
INSIGNIA SC INTRINSIC							x															
INSTRATA FUNGICIDE			x					x											x			
INTERFACE STRESSGARD		x					x															
KABUTO					x																	
KALIDA			x		x																	
LEXICON					x		x															
MANZATE MAXX																		x				

FUNGICIDE FRAC CODES

Fungicides with the same FRAC code are at risk for cross resistance because they have the same target site. The target site and mode of action of a pesticide are sometimes incorrectly used interchangeably. Mode of action refers to the biochemical pathway being targeted within the pathogen. The target site is the specific process and/or enzyme which the fungicide active ingredient is interfering with. Fungicides may have the same mode of action but different target sites which results in a different FRAC code.

PRODUCT	1	2	3	4	7	9	11	12	14	19	21	28	29	33	40	41	M1	M3	MS	NC	P	U17
MAUGET ARBOR-FOS														x								
MAUGET FUNGISOL	x																					
MAUGET MYCOJECT ULTRA																x						
MAUGET TEBUJECT			x																			
MAXTIMA			x																			
MEDALLION SC								x														
MICORA															x							
MIRAGE STRESSGARD			x																			
MURAL					x		x															
NAVICON INTRINSIC			x				x															
ORKESTRA INTRINSIC					x		x															
PAGEANT INTRINSIC					x		x															
PALLADEUM						x		x														
PEDIGREE							x															
PILLAR SC INTRINSIC			x				x															
PINPOINT							x															
POSTERITY					x																	
POSTERITY FORTE			x		x		x															
POSTERITY XT			x		x		x															
RAYORA			x																			
RELIANT														x								
RENOWN							x											x				
SECURE													x									
SECURE ACTION													x							x		
SEGWAY											x											
SERATA																						x
SIGNATURE														x								
SIGNATURE XTRA														x								
SPOTRETE FLO																		x				
STRIDER			x																			
SUBDUE MAXX				x																		
TARTAN STRESSGARD			x				x															
TEKKEN			x		x																	
TERRAZOLE 35 WP									x													
TERRIER																x						
TORQUE			x																			
TOURNEY			x																			
TRACTION			x										x									
TRANSOM 4.5F	x																					
TRIACT 70																			x			
TURFCIDE 400								x														
UNION							x				x											
VELISTA					x																	
WEDGLE SHEPHERD QC			x																			
WEDGLE WHIPPET QC														x								
XZEMPLAR					x																	

TURFGRASS DISEASE MANAGEMENT

TURFGRASS DISEASE MANAGEMENT		
Turf disease	Environmental Management	Solutions
Anthracnose (<i>Colletotrichum cereale</i>)	Avoid or alleviate physiological stress. Provide adequate fertilization and irrigation. Deficiencies of any essential plant nutrient will slow turf growth and increase anthracnose development.	Ascernity, Briskway, Daconil, Densicor, Headway, Instrata, Maxtima, Navicon, Tourney, Velista
Brown Patch (<i>Rhizoctonia solani</i>)	Poor soil drainage, lack of air movement, shade and prolonged leaf wetness increase disease severity. Avoid excessive nitrogen. Maintain levels of phosphorus and potassium	Ascernity, Densicor, Heritage, Interface, Maxtima, Navicon, Pedigree, Posterity XT, Rayora
Dollar Spot (<i>Claviceps dactyloides</i>)	Extended periods of wet, overcast weather lead to severe dollar spot epidemics. Avoid deficiencies in nutrients, especially nitrogen. Avoid drought stress, low mowing, excessive thatch accumulation.	Densicor, Encartis, Exteris, Instrata, Honor, Pinpoint, Posterity, Secure Action, Traction, Xzemplar
Fairy Ring (<i>Basidiomycetes</i>)	Regularly aerify and topdress putting greens to prevent thatch buildup and maintain soil aeration. Avoid extremes in soil moisture, ensure balanced fertility through regular soil testing.	Ascernity, Bayleton, Briskway, Densicor, Maxtima, Mirage, Pedigree, Tekken, Tourney, Velista
Gray Leaf Spot (<i>Pyricularia grisea</i>)	Choose GLS resistant varieties of turfgrass when seeding. Schedule irrigation early in the morning, before sunrise. Prune or remove trees or other barriers to increase air movement and sunlight.	Armada, Cleary 3336, Daconil, Densicor, Enclave, Headway, Spectro, Tartan
Leaf Spot (<i>Bipolaris and Drechslera spp.</i>)	Fertilize to meet the nutritional needs of the turf but avoid over-stimulation and the development of lush, succulent growth. Keep the mower blades sharp to prevent open wounds through which the fungus can enter.	Ascernity, Fame, Fore, Heritage, Interface, Secure, Traction, Union
Microdochium patch (<i>M. nivale</i>)	Do not apply nitrogen when cold weather is expected or before the first expected prolonged snow cover. Continue mowing in the fall until foliar growth stops completely.	26/36, Banner Maxx, Concert II, Densicor, Enclave, Instrata, Posterity XT, Tekken
Pythium blight (<i>Pythium aphanidermatum</i>)	Reduce prolonged leaf wetness by watering in the early morning hours, before sunrise. Avoid excessive rates of nitrogen. If necessary, install subsurface drainage to prevent wet soil conditions. Relieve compaction.	Appear II, Banol, Fore, Segway, Serata, Union
Pythium root dysfunction (<i>P. volutum and spp.</i>)	Creeping bentgrass greens should be constructed with at least 15% organic matter by volume to provide adequate water and nutrient holding capacity. Raise mowing heights above 0.125 in. during summer. Biweekly solid tine aeration	Insignia, Lexicon, Navicon, Segway, Serata, Union
Rust (<i>Puccinia spp.</i>)	Rust is most severe in turf that is growing slowly due to adverse weather conditions or inadequate management with Low light intensity, inadequate fertilization, drought stress, and infrequent mowing	Armada, Bayleton, Briskway, Concert II, Eagle, Mirage, Rayora, Tartan, Tourney
Summer Patch (<i>Magnaportheopsis poae</i>)	Maintain soil pH between 6.0 and 6.5 to minimize summer patch development. Soil pH is best reduced slowly over time through use of an acidifying nitrogen source, such as ammonium sulfate	Ascernity, Heritage Action, Honor, Navicon, Posterity XT
Take All Patch (<i>Gaeumannomyces graminis</i>)	Pathogen growth on roots occurs prior to patch symptom development in turf, control measures should be implemented well before patches become visible. Improve air and water movement and alleviate soil compaction.	Densicor, Fame, Heritage, Banner Maxx,



CONTROL PRODUCTS

TURF HERBICIDES

Fisher & Son Company | RESOURCE MANUAL



PRE-EMERGENT TURF HERBICIDES

PRODUCT	U/M	DESCRIPTION	RATE
SPRAYABLE PRE-EMERGENT HERBICIDES FOR TURF			
Barricade 4F	1 gal. 30 gal.	Contains 40.7% <u>prodiamine</u> . Selective pre-emergent provides residual control of grassy and broadleaf weeds in turf and ornamental plantings. Inhibits weed seed germination and root development with up to 26 weeks of control with one application. Excellent control of crabgrass.	10–48 oz./ ACRE
Dimension 2EW	2.5 gal. 30 gal.	Contains 24% <u>dithiopyr</u> . Dimension® specialty herbicide is the only preemergence herbicide that offers excellent early postemergence control of crabgrass. It also is proven effective for more than 45 other grassy and small-seeded broadleaf weeds.	0.37 - 0.73 fl oz/ 1000 sq ft
Dimension Ultra 40 WP	8 x 5 oz.	Contains 40% <u>dithiopyr</u> . Pre and Post emergent control of grassy and some broadleaf weeds with minimum movement in soil. Non-staining. Comes in a water soluble packet.	2 – 4 x 5 oz pouches/acre.
Gallery SC	1 lb.	Contains 45.45% <u>isoxaben</u> . Gallery® specialty herbicide provides superior preemergence broadleaf weed control with best-in-class ornamental and turf safety. Not only does Gallery minimize hand-weeding in landscape ornamentals and established turfgrass	0.3– 0.7 fl oz./ 1000 sq ft
Pendulum Aqua-Cap	2.5 gal. 15 gal 30 gal	Contains 38.7% <u>pendimethalin</u> . Pendulum AquaCap herbicide offers preemergent control of grassy and broadleaf weeds in a liquid formulation, including crabgrass, goosegrass, foxtail, barnyardgrass, fall panicum, chickweed, henbit, knotweed, spurge and others. Pendulum AquaCap herbicide encapsulates a water-based formulation	1.1–3.1 oz./ 1000 sq ft
Resolute	5 lb 1 gal	Contains <u>prodiamine</u> . Economical pre-emergent control of certain grassy and broadleaf weeds, providing season long control.	See labels
Ronstar Flo	2.5 gal.	Contains 34.1% <u>oxadiazon</u> . Ronstar is an excellent preemergence option for goosegrass control, in addition to crabgrass and other labeled annual weeds like annual sedge. Ronstar should be applied in late winter/early spring, prior to germination. Controls weeds through shoots, not roots.	1.85–2.8 fl oz./ 1000 sq ft
Specticle Flo	1 gal.	Contains 7.4% <u>indaziflam</u> . Specticle Flo is a pre-emergent weed control, providing broad spectrum control of grassy weeds including poa annua, crabgrass, goosegrass and more than 60 broadleaf weeds. For warm season grasses only.	3-10 fl oz / ACRE
Tower	.5 gal.	Contains 63.9% <u>dimethenamid-p</u> . Tower herbicide is a broad-spectrum preemergence herbicide which provides excellent control of yellow nutsedge and annual sedges along with numerous grassy and broadleaf weeds including goosegrass, crabgrass, field sandbur and spurge.	21–32 fl oz./ ACRE
GRANULAR PRE- EMERGENT HERBICIDES FOR TURF			
Crew	50 lb.	Contains 0.5% <u>isoxaben</u> and 0.25% <u>dithiopyr</u> . Using Verge granule technology, Crew™ specialty herbicide is an easy-to-use preemergence granule solution for turfgrass and landscape bed needs. With application flexibility and long-lasting results, Crew will provide broad-spectrum preemergence control of a wide variety of grassy and broadleaf weeds.	150 - 200 lb / acre
Barricade .48 DG PRO	50 lb.	Contains 0.48% <u>prodiamine</u> . Granular DG PRO formulation for use in turf and ornamental plantings. Provides 3-4 months of control of many grassy weeds. Safe for over-the-top applications in a wide range of plant material.	3–6 lb./ 1000 sq. ft.
Dimension .25 DG PRO	50 lb.	Contains 0.25% <u>dithiopyr</u> . Granular DG PRO formulation for use in turf and ornamental plantings. Provides 4–6 months of control of many grassy and broadleaf weeds. Safe for over-the-top applications in a wide range of plant material	4.5 lb./ 1000 sq. ft.
RegalStar G	50 lb.	Contains 0.2% <u>prodiamine</u> and 1.0% <u>oxadiazon</u> . A unique premixed formulation in an easy to spread granule. Provides control of grassy and broadleaf weeds in ornamental beds and turf.	4.5 lb./ 1000 sq. ft.
Specticle G	50 lb.	Contains 0.0224% <u>indaziflam</u> . Specticle G is versatile, pre-emergent herbicide that sets a new standard for residual control at the lowest use rates on the market. It helps maintain premium, weed-free turf for the entire growing season - making it one of the most effective tools in any turf manager's arsenal. For warm season grasses and ornamentals only.	2.3 - 4.6 lb./ 1000 sq. ft.
Vexis	2 lb. 15 lb.	Contains 0.025% <u>pyrimisulfan</u> . Vexis Herbicide Granular uses the proprietary new active ingredient, pyrimisulfan to deliver exceptional control of sedge and kyllinga species, plus listed broadleaf weeds.	2lbs/ 500 sq. ft.



SPRAYABLE POSTEMERGENT HERBICIDES FOR TURF

SPRAYABLE POSTEMERGENT HERBICIDES FOR TURF			
PRODUCT	U/M	DESCRIPTION	RATE
Acclaim Extra	1 gal. 2.5 gal.	<u>Contains 6.59% fenoxzprop-p.</u> Water emulsion formulation contains 0.57 lb. of active ingredient per gallon. Controls annual and perennial grassy weeds in established turfgrass and ornamentals. Foliar absorbed.	Depends on growth stage. See label
Celsius	10 oz.	<u>Contains 57.4% Dicamba, 1.90% Iodosulfuron-methyl-sodium, 8.7% Thiencarbazone-methyl.</u> Controls over 150 weed species, including many difficult to control grassy weed varieties.	.057–.113oz./ 1000 sq ft
Celero	1 lb	<u>Contains 75% imazosulfuron.</u> Celero® Herbicide is a selective, post-emergence herbicide for control of sedges including kyllinga in established residential and commercial turfgrass, golf courses and sod farms. Valent recommends the use of 0.25% v/v of non-ionic surfactant with Celero.	0.18 -0.33 oz / 1000 sq ft
Certainty 75 WDG	1.25 oz.	<u>Contains 75% sulfosulfuron.</u> Controls broadleaf weeds, sedges, Poa trivialis and kyllinga in cool and warm season grasses. Comes with its own measuring spoon.	0.25 –2oz./ ACRE
Confront (non-residential)	1 gal.	<u>Contains 33% triclopyr and 12% clopyralid.</u> Non-phenoxy herbicide controls clover, violets, dandelion, plantain and other weeds.	1–2 pints/ ACRE
Cool Power	2.5 gal.	<u>Contains 56.1% MCPA, 5% triclopyr and 3.6% dicamba.</u> Ester formulation. Provides excellent cool season control of hard to control weeds. 30 gal. (NS 58643) available via special order.	2.5–3.5 pints/ ACRE
Dismiss NXT	10 oz. 60 oz.	<u>Contains 3.53% carfentrazone and 31.77% sulfentrazone.</u> Dismiss NXT Herbicide is a next generation combination product for control of nutsedge and kyllinga. It combines two PPO-inhibiting herbicides effectively providing fast visual symptoms within 24 hours and long-term control in both cool and warm-season turf.	0.117 -0.35 oz / 1000 sq ft
Escalade 2	2.5 gal.	<u>Contains 39.5% 2, 4-D, 5.9% furoxypyr and 4.1% dicamba</u> and is registered for residential lawns and other sites. Labeled for over 240 weeds. A replacement for Millennium Ultra on residential turf.	0.75–1.1 oz./ 1000 sq. ft.
Horsepower	2.5 gal.	<u>Contains 5.59% triclopyr, 48.99% MCPA & 4.82% dicamba.</u> A premium selective post emergent for improved performance on hard to control weeds.	0.73–1.0 oz./ 1000 sq. ft.
GameOn	2.5 gal.	<u>Contains 32% 2,4-D choline, 4.3% fluoxypyr and 0.21% halauxifen-methyl.</u> GameOn, which includes new active ingredient Arylex® active and a unique formulation of 2,4-D with 2,4-D choline. GameOn delivers fast- acting systemic control of more than 100 broadleaf weeds.	1.1 - 1.5 oz / 1000 sq ft
Katana	4 oz.	<u>Contains 25% Flazasulfuron.</u> Selective post emergent herbicide for the removal of over-seeded cool season grasses as well as the control of annual and perennial grasses, sedges and broadleaf weeds. For use in warm-season grasses.	1.5–3 oz./ ACRE
Lontrel	Quart	<u>Contains 40.9% clopyralid.</u> Selective post emergence labeled for over the top application to certain woody plants and turf.	1/8–1/2 oz./ 1000 sq. ft.
Millennium Ultra 2 (non-residential)	2.5 gal.	<u>Contains 37.32% 2, 4-D, 4.65% dicamba, and 2.54% chlpyralid.</u> The unique formulation of 2,4-D, clopyralid and dicamba is one of the most effective formulations for broad-spectrum weed control available in the market today. Unparalleled clover control	0.55–1.1 oz./ 1000 sq. ft.
NativeKlean	1 gal.	<u>Contains 8.24% Triisopropanolammonium and 41.26% 2,4-D.</u> Specially designed for low maintenance, broadleaf control on more than 100 invasive weeds in naturalized areas.	19 – 34 fl. oz./ ACRE
Prograss EC	2.5 gal.	<u>Contains 19% ethofumesate.</u> For control of certain annual grasses (including Poa annua) and broadleaf weeds in Perennial Ryegrass & Kentucky Blues, whether established or to be established.	64 - 192 fl oz/ ACRE



SPRAYABLE POSTEMERGENT HERBICIDES FOR TURF

SPRAYABLE POSTEMERGENT HERBICIDES FOR TURF			
PRODUCT	U/M	DESCRIPTION	RATE
ProSedge	1.3 oz 0.9 gm	Contains <u>75% halosulfuron-methyl</u> . Selective herbicide for the control of nutsedge and other weeds in turfgrass and ornamental beds.	0.66oz – 1.25oz. / ACRE
Pylex	8 oz.	Contains <u>29.7% Topramezone</u> . Pylex herbicide is the standard for the control of Bermudagrass and goosegrass in cool-season turf. It has also shown excellent control of nimblewill, crabgrass, clover, speedwell, and others. Pylex herbicide should always be used with Microyl to improve herbicide coverage.	1.0 to 1.5 oz./ ACRE
Q4	2.5 gal.	Contains <u>5.69% quinclorac, 0.69% sulfentrazone, 12.02% 2, 4-D, and 1.38% dicamba</u> . Grassy and broadleaf weed control for more than 80 weeds including: nutsedge, crabgrass and foxtail.	7 - 8 pints/ ACRE
Quincept	2.5 gal.	Contains <u>13.24% 2, 4-D, 8.25% quinclorac, 1.38% dicamba</u> . For selective broadleaf and grassy weed control in ornamental and turf grass areas.	7–8 pints / ACRE
Quicksilver	8 oz.	Contains <u>21.3% carfentrazone</u> . Controls moss safely on putting greens. See label for additional weeds controlled.	1 - 2.1 oz / ACRE
Speedzone EW	2.5 gal. 30 gal	Contains <u>25.86% 2,4-D, 6.84% MCPP, 1.91% dicamba and 0.57% carfentrazone</u> . features an advanced emulsion in-water formulation that delivers more complete coverage of the weed surface than original SpeedZone for rapid control of 90+ broadleaf weeds, plus goosegrass and nimblewill, with a lower odor profile and lower VOC.	2 - 5 pints / ACRE
Sure Power	2.5 gal. 30 gal.	Contains <u>36.33% 2,4-D, 3.63% triclopyr, 3.63% fluoxypyr and 0.22% flumioxazin</u> . Broad-spectrum Sure Power is proven to produce excellent control of ground ivy and wild violet. Its four-way formulation manages more than 250 broadleaf weeds, making Sure Power a valued tool in the pursuit of clean cool- season turf. Apply June 15-Sept 15 when turf is hardened off.	0.73 - 1.27 fl oz / 1000 sq ft
Surge	2.5 gal.	Contains <u>6.8% mecoprop, 0.67% sulfentrazone, 18.79% 2,4-D and 3.02% dicamba</u> . Amine formulation option for control in warm weather, up to 90° F, without loss in efficacy. See results in 24-48 hours.	1.2–1.5 fl oz. / 1000 sq. ft.
Tribute Total	6 oz	Contains <u>9.9% thiencazone-methyl, 19.8% foramsulfuron and 30.8% halosulfuron</u> . Tribute Total provides broad-spectrum, post-emergent weed control in Bermudagrass and Zoysiagrass. Tribute Total is the complete solution for the most troublesome weeds including dallisgrass, sedges, crabgrass and kyllinga as well as most broadleaf weeds.	1 to 3.2 oz / ACRE
Trimec Bentgrass	2.5 gal.	Contains <u>9.92% MCPA, 6.12% 2,4-D, and 2.53% dicamba</u> . Safest, most effective product for broad spectrum broadleaf weed control on putting greens, tees and bent fairways.	<u>Fairways:</u> 3–4 pints/acre <u>Greens:</u> 1.1–1.5 oz. / 1000 sq. ft.
Triple Threat Foaming Aerosol Herbicide	20 oz can	Contains <u>MCPP, 2,4-D and 2,4-DP</u> . A powerful selective concentrated herbicide with no residual aerosol. It will not harm desired grasses and turf, making it ideal for golf courses, lawns and parks. Inverted trigger and foaming formula ensures visibility and precise application. VOC compliant and RTU.	Spray to cover center of weed
Triplet - Low Odor	2.5 gal.	Contains <u>47.33% 2, 4-D, 8.17% mecoprop op, 2.77% dicamba</u> . A unique formulation that is virtually odor free.	1.1–1.5 oz. / 1000 sq. ft.
Target MSMA 6.6	2.5 gal.	Contains <u>51% MSMA</u> with surfactant. Post-emergence controls Barnyardgrass, Chickweed, Cocklebur, Crabgrass (large & smooth), Foxtail, Goosegrass, Johnsongrass, Pigweed, Nutsedge and Sandbur.	1 oz. in 1 gal. of water Use a surfactant for optimal control.
Tzone SE	2.5 gal	Contains <u>7.72% triclopyr, 0.66% sulfentrazone, 29.32% 2,4-D ester and 2.22% dicamba</u> . TZone™ SE Broadleaf Herbicide for Tough Weeds uses the proven performance of triclopyr and precise ratios of multiple active ingredients to provide effective cool-weather weed control in a speed product. TZone SE kills the toughest broadleaf weeds on turf, including wild violet, ground ivy, oxalis, and clover.	0.75 oz to 1.5 oz / 1000 sq ft
Vessel 3- Way	2.5 gal. 55 gal.	Contains <u>30.56% 2, 4-D, 8.17% MCPP, 2.77% dicamba</u> . Economical 3 way. Like Trimec 992 & Triplet SF.	1.1–1.5 oz. / 1000 sq. ft.

PRE AND POST EMERGENT HERBICIDES

PRE AND POST EMERGENT HERBICIDES			
PRODUCT	U/M	DESCRIPTION	RATE
Drive XLR8	64 fl oz.	Contains 15.93% <u>quinclorac</u> . Improved formulation for pre and post emergent control on a broad range of annual grasses and broadleaf weeds. Provides consistent control application flexibility and turf safety to the golf and non- golf turf manager. Controls crabgrass, clover and Veronica.	1.4 oz/ 1000 sq. ft.
Echelon	1 gal.	Contains 13.6% <u>sulfentrazone</u> and 27.3% <u>prodiamine</u> . Control nutsedge, crabgrass and many other annual/biennial/perennial broadleaves.	0.184–0.862 oz/ 1000 sq. ft.
Solitare WSL	0.75 gal	Contains 1.6% <u>sulfentrazone</u> and 5% <u>quinclorac</u> . Through foliar contact and root absorption, Solitare works quickly for visible results in just 3–5 days and lasting residual. Controls or suppresses over 60 weeds including crabgrass, Sedges, white clover, ground ivy, wild violet, dollarweed, dandelion, speedwell, spurge, Star of Bethlehem and more	4 to 7.9 oz / 1000 sq ft
Tenacity	1 gal.	Contains 40% <u>mesotrione</u> . Superior control of crabgrass, goosegrass, bentgrass, nutsedge and more.	5–8 oz. acre
NON- SELECTIVE HERBICIDES			
Cheetah Pro	1 gal 2.5 gal	Contains 24.5% <u>glufosinate-ammonium</u> . Controls emerged annual and perennial grassy weeds. Works best in cooler weather.	27 - 82oz ./acre
Finale XL	2.5 gal	Contains 24.5% <u>glufosinate-ammonium</u> . Controls emerged annual and perennial grassy weeds. Works best in cooler weather.	27 - 82oz ./acre
Ranger Pro	2.5 gal 30 gal	Contains 41% <u>glyphosate</u> . Non-selective, post-emergent, systemic herbicide. No residual soil activity. Broad-spectrum control of many perennial and annual weeds, shrubs and trees. 4 lbs. AI per gal. (glyphosate isopropylamine salt) or 3 lbs. AI per gal (glyphosate acid).	3 oz./gal. 2 gal. spray covers 1000 sq. ft.
Roundup PRO Max	1.67 gal	Contains 48.7% <u>glyphosate</u> . New formulation that's rain fast in 30 minutes and improved weed control utilizing an advanced potassium salt of Glyphosate acid resulting in a quicker entry into weeds. Lower rate of 2 oz./ gal instead of 3 oz of the Roundup Pro.	2 oz./gal
Roundup Quik Pro	6.8 lbs 1.5 oz	Contains 73 % <u>glyphosate</u> and 2.9% <u>diquat</u> . Dry concentrate formulation of Roundup that readily dissolves in water.	1.5 oz./gal
Roundup Quik Pro SC TOTAL	144 oz	Contains 0.089% <u>indaziflam</u> , 0.890 <u>diquat</u> and 20.46% <u>glyphosate</u> . Kills existing weeds and grasses and prevents new weeds and grasses for up to 6 months	See label



BROADLEAF / GRASS WEED MANAGEMENT - PRE & POST-EMERGENT

		Barricade	Broadstar	Freehand	Gallery	Regalstar	Snapshot	Sureguard		Dimension	Drive XLR8	Echelon	Prodeuce	Tenacity		Acclaim Extra	Certainty	Confront
Annual Bluegrass	P R E E M E R G E N T	X	X	X		X	X	X	P R E A N D P O S T E M E R G E N T	X		X	X		P O S T E M E R G E N T		X	
Bindweed			X		X			X			X	X	X					
Black Medic					X		X				X	X						X
Buttercup													X	X			X	X
Carpetweed		X	X	X	X			X				X	X	X				
Chicory																		
Chickweed		X	X	X	X	X	X	X		X		X	X	X			X	X
Clover				X	X	X	X			X	X	X	X	X			X	X
Crabgrass		X	X	X		X	X	X		X	X	X	X	X		X		
Curly Dock					X							X	X	X				X
Dandelion			X		X		X	X			X	X	X	X			X	X
Dog Fennel			X	X	X		X	X				X						
English Daisy																		
Foxtail		X	X	X			X	X		X	X		X	X		X		
Geranium					X			X		X		X					X	
Goosegrass		X	X	X		X	X	X		X		X	X	X		X		
Ground Ivy								X			X	X		X			X	X
Healall											X			X				
Henbit		X	X	X	X			X		X			X	X			X	X
Japanese Stiltgrass																X		
Knotweed		X		X	X	X	X					X	X					
Lambsquarter		X		X	X		X	X		X		X	X	X				X
Lespedeza							X			X		X						X
Mallow			X		X		X	X				X						
Mustard			X		X		X	X				X	X				X	
Nimblewill														X				
Nutsedge				X								X	X	X			X	
Oxalis			X															
Peppergrass					X		X											X
Pigweed		X	X	X	X		X	X				X	X	X				
Plantain			X		X		X	X			X	X		X				X
Poison Ivy																		X
Purslane		X		X	X		X	X		X		X	X	X				
Ragweed					X		X	X										X
Shepards Purse		X	X	X	X		X	X		X		X	X	X			X	X
Smartweed			X	X	X		X					X	X	X				X
Sorrel			X		X		X					X	X					X
Speedwell		X		X	X		X			X	X	X	X	X				
Spurge		X	X	X	X	X	X	X		X		X	X					
Thistle			X		X		X	X					X	X				X
Veronica																		
Vetch																		X
Violet												X		X				X
Wild Garlic/Onion												X					X	
Witchgrass		X		X			X					X	X					
Yarrow																		
Yellow Wood Sorrel		X	X		X	X	X	X		X		X	X					X
Yellow Rocket			X		X		X											

BROADLEAF / GRASS WEED MANAGEMENT - POST-EMERGENT

		Defender	Dismiss NXT	Escalade 2	Horsepower	Lontrel	Millenium Ultra	Prograss	Q4 Plus	Quicksilver	ProSedge	SpeedZone	SurePower	Surge	Tzone	Velocity	Vessel
Annual Bluegrass	P O S T E M E R G E N T						X									X	
Bindweed				X	X		X		X	X		X	X	X	X		
Black Medic		X	X	X	X	X	X		X			X	X	X	X		X
Buttercup			X	X	X	X	X		X			X	X	X	X		
Carpetweed			X	X			X		X	X		X	X	X	X		
Chicory				X	X		X		X			X	X	X	X		X
Chickweed		X	X	X	X		X	X	X			X	X	X	X	X	X
Clover		X	X	X	X		X	X	X			X	X	X	X	X	X
Crabgrass			X						X								
Curly Dock			X	X	X	X	X		X			X	X	X	X		X
Dandelion		X		X	X	X	X		X			X	X	X	X	X	X
Dog Fennel				X	X		X		X			X	X	X	X		
English Daisy				X	X		X		X			X	X	X	X		
Foxtail			X						X								
Geranium			X		X				X			X	X		X		
Goosegrass			X														
Ground Ivy			X	X	X		X		X			X	X	X	X		X
Healall				X	X		X		X			X	X	X	X		X
Henbit			X	X	X		X		X			X	X	X	X	X	X
Japanese Stiltgrass																	
Knotweed		X	X	X	X		X		X			X	X	X	X		X
Lambsquarter			X	X	X		X		X	X		X	X	X	X		X
Lespedeza				X	X		X		X			X	X	X	X		X
Mallow			X	X	X		X		X			X	X	X	X		X
Mustard		X		X	X		X		X			X	X	X	X		
Nimblewill																	
Nutsedge			X								X		X	X	X	X	
Peppergrass				X	X		X		X				X	X	X		X
Pigweed			X	X	X		X	X	X	X		X	X	X	X		X
Plantain				X		X	X		X			X	X	X	X		X
Poison Ivy				X	X		X		X			X	X	X	X		X
Purslane				X	X		X	X	X	X		X	X	X	X		X
Ragweed				X	X		X		X			X	X	X	X		X
Shepards Purse		X		X	X		X		X			X	X	X	X		X
Smartweed			X	X	X	X	X		X	X		X	X		X		
Sorrel					X		X		X			X	X		X		X
Speedwell			X	X	X	X	X		X				X	X	X		X
Spurge			X	X	X		X		X			X	X	X	X		X
Thistle				X	X	X	X		X			X	X	X	X		
Veronica				X	X		X					X	X	X	X		
Vetch		X		X	X	X	X						X				
Violet			X		X								X	X	X		
Virginia Buttonweed				X		X			X			X	X	X	X		
Wild Garlic/Onion				X	X		X		X			X	X	X	X		X
Witchgrass				X			X						X				
Yarrow				X	X		X					X	X	X	X		X
Yellow Wood Sorrel			X	X	X		X		X				X			X	
Yellow Rocket				X	X		X		X			X	X	X	X		



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CONTROL PRODUCTS

TURF INSECTICIDES

Fisher & Son Company | RESOURCE MANUAL



SPRAYABLE TURF INSECTICIDES

SPRAYABLE TURF INSECTICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Acelepryn	64 oz.	<u>Contains 14.4% chlorantraniliprole.</u> Controls Turf Caterpillars, White Grubs, ABW, European Crane Fly and Billbug.	Grubs: 0.184–0.367 oz./ 1000 sq ft
Alucion 35 WG	2.375 lb	<u>Contains 28% dinotefuron and 7% alpha-cypermethrin.</u> The only non-restricted use pyrethroid labeled for golf courses. Fueled by two active ingredients, dinotefuran and alpha-cypermethrin, Alucion 35 WG insecticide delivers fast-acting control of surface feeding insects.	1.187 lb / ACRE
Arena 50 WDG	40 oz.	<u>Contains 50% clothianidin.</u> Neonicotinoid chemistry provides rapid and residual activity by pest ingestion and systemic plant uptake. Provides superior control of White Grubs, Sod Webworm, Billbug, Chinch Bug and Cutworm.	0.25 oz./ 1000 sq. ft.
Bifenthrin	1 gal. 30 gal	<u>Contains 7.4% bifenthrin.</u> Advanced pyrethroid chemistry Broad spectrum control around residential and commercial properties.	0.25–1 fl oz./ 1000 sq. ft.
Chlorpyrifos Pro 4	2.5 gal.	<u>Contains 44.7% chlorpyrifos.</u> Controls a wide range of surface feeding insects. For use on non residential sites only.	1–3 fl oz./ 1000 sq. ft.
Dylox 420 SL	2.5 gal.	<u>Contains 37.3% trichlorfon</u> For control of Cutworm Sod Webworm, Armyworm and White Grubs. Great rescue treatment for grubs breakthroughs.	4.6 - 6.9 fl oz/ 1000 sq ft
Ference	96 oz.	<u>Contains 18.66% cyantraniliprole.</u> Ference systemically controls all larval stages (1-5), so it provides superintendents greater flexibility later in the year when ABW populations are asynchronous. Ference offers a longer residual control than competitive products, and will provide increased and extended control of ABW	0.275 -0.459 fl oz/ 1000 sq ft
Matchpoint	64 oz	<u>Contains 36% spinosad.</u> MatchPoint® insecticide stops annual bluegrass weevil (ABW) feeding immediately and controls one to five instar larvae. MatchPoint works through contact and ingestion and results in quick knockdown with convenient application flexibility.	0.08 oz - 0.41 oz / 1000 sq ft
Meridian 25 WG	4 oz. 17 oz.	<u>Contains 25% thiamethoxam.</u> Meridian® insecticide is a broad-spectrum insecticide that provides preventive and curative control of grubs, billbugs, and other foliar insect pests. Unique mode of action. Low rates. Excellent control.	0.3–0.39 oz. / 1000 sq.ft.
Merit 2F	1 gal.	<u>Contains 21.4% imidacloprid.</u> The No. 1 insecticide in the turf and ornamental market. Merit has been the standard in preventative grub control for nearly 20 years and has been providing outstanding residual control of numerous ornamental pests.	0.45 - 0.6 fl oz/ 1000 sq ft
Merit 75 WSP	16 x 1.6 oz 110 x 1.6oz	<u>Contains 75% imidacloprid</u> can be used for the control of soil-inhabiting pests of turfgrass such as Northern & Southern masked chafers, European chafer, Asiatic garden beetle, May or June beetle, billbugs, Japanese beetle, annual bluegrass weevil, Green June beetle, mole crickets, European crane fly and black turfgrass aetiniuss.	1.6 oz WS pack/ 11,000 sq. ft.
Tenguard	1.25 gal.	<u>Contains 36.8% permethrin</u> (Astro AI). Controls turf and horticultural insects (Turf: Chinch bug , Cutworm and Sod Webworm. Ornamentals: Ants, Aphids, Bagworm, Leafminer, Lace bug, Beetles and Borers. An excellent replacement for chlorpyrifos products.	0.4 - 0.8 oz. / 1000 sq. ft.
Provaunt WDG	72 oz.	<u>Contains 20% indoxacarb.</u> Provaunt WDG controls European crane flies, annual bluegrass weevil (ABW) and turf caterpillars (including armyworms, cutworms and sod webworms).	0.07 – 0.41 oz./ 1000 sq ft
Scimitar GC Restricted Use	1 pint	<u>Contains 9.7% lambda-synthetic pyrethroid</u> for tough turf insects including Chinch Bugs, Sod Webworm and Cutworm. Extremely fast acting but has longer residual control due to a proprietary formulation which encapsulates the active ingredient protecting it from degradation.	5 – 10 oz./ ACRE

SPRAYABLE AND GRANULAR TURF INSECTICIDES

PRODUCT	U/M	DESCRIPTION	RATE
SPRAYABLE INSECTICIDES			
Suprado	1 gal	<u>Contains 10% novaluron.</u> This AI is available for use in turf for the first time. This introduces a new mode of action (IRAC Group 15) to the market as a valuable rotation option in the fight against insecticide resistance. Effective across multiple stages in the ABW life cycle.	2.2 - 3 fl oz / 1000 sq ft
Talstar Select	1 gal.	<u>Contains 7.9% bifenthrin.</u> Provides long-lasting residual control of a long list of turf pests, including billbugs, chinch bugs, armyworms, cutworms and webworms.	0.25-1 fl oz./ 1000 sq.ft.
Tempo SC Ultra	240 ml. 12/case	<u>Contains 11.8% cyfuthrin.</u> Synthetic Pyrethroid for a wide spectrum of pests including: Caterpillars, Lacebug, Sawfly Larvae, Aphids, Boxelder Bugs, Scales and others. Fits well into an IPM program.	0.27 -0.54 fl oz/ 1000 sq ft
Tetrino	1 gal	<u>Contains 4.07% tetraniliprole.</u> Tetrino has the flexibility to be used as a single application for season-long control against white grubs as well as the foundation of a complete program against other turf-damaging pests across the golf course, especially in an ABW control strategy.	0.367-0.735 fl oz/ 1000 sq ft
Triple Crown	1 gal.	<u>Contains 2.7% zeta-cypermethrin, 7.87% bifenthrin and 13.83% imidiclopid.</u> Triple Crown controls pests with multiple modes of action. It has been provedn to deliver fast-acting knockdown and kill of both above-and below-ground pests. Controls over 30 pests, including ants, masked chafer grubs (Northern and Southern), European chafer grubs, chinch bugs, annual bluegrass weevils, ticks, mites, billbugs .	0.23 - 0.8 fl oz/ 1000 sq. ft.
PRODUCT	U/M	DESCRIPTION	RATE
GRANULAR INSECTICIDES			
Acelepryn G	25 lb.	<u>Contains 0.2% chlorantraniliprole.</u> Controls Turf Caterpillars, White Grubs, ABW, European Craneffy and Billbug. See page 36 for 64 oz. Acelepryn for turf and ornamental spraying.	1.15-2.3 lb./ 1000 sq. ft.
Arena .25 G	30 lb.	<u>Contains 0.25% clothianidin.</u> Improved formulation for easier application and more thorough coverage. The newest neonicotinoid (clothianidin) provides long lasting systemic control of turf and ornamental insects (White Grubs, BTA, Chinch Bugs and Sod Webworm) See page 36 for Arena 50 WDG	1.84-3.67 lb. / 1000 sq. ft.
Bifenthrin Up-Star Gold G	25 lb.	<u>Contains 0.25% bifenthrin.</u> For commercial applications. Provides broad spectrum control of turf pests in lawns, and sports turf to control Armyworm, Cutworm, Cinch Bug, BTA, Fleas and more.	1.15-4.6 lb. / 1000 Sq.Ft.
Dylox 6.2 G	30 lb.	<u>Contains 6.2% trichlorfon.</u> Offers a rapid knockdown and curative control of White Grubs, Cutworm and Sod Webworm. Bag treats 10-15,000 sq. ft.	2-3 lb./1000 sq. ft.
Meridian 33 G	40 lb.	<u>Contains 0.33% thiamethoxam.</u> Broad spectrum soil pest product with season long control of Grubs, Billbug and more by contact and ingestion.	0.3-0.39 oz./ 1000 sq. ft.
Merit .5G	30 lb.	<u>Contains 0.5% imidaclopid</u> Economical preventive, broad spectrum control of soil inhabiting insects including White Grubs, Annual Bluegrass Weevil and more in turf and ornamentals.	1.4-1.8 lbs./ 1000 sq. ft.

MatchPoint®

INSECTICIDE

INSECTICIDE IRAC CODES

PRODUCT	1A	1B	2B	3A	4A	4D	5	6	7C	10A	11	13	15	16	20	22	23	28	M
ABAMECTIN		x						x											
ACE-JET		x																	
ACELEPRYN																		x	
ALLECTUS				x	x														
ALTUS						x													
ALUCION				x	x														
ARENA					x														
ASTRO				x															
AVID								x											
AVALON				x															
BIFENTHRIN UPSTAR				x															
CONSERVE							x												
CORETECT					x														
DIPEL											x								
DISTANCE									x										
DURSBAN		x																	
DYLOX		x																	
FERENCE																		x	
FIPRONIL			x																
FORBID																	x		
FLORAMITE															x				
GREYHOUND								x											
HEXYGON										x									
IMA-JET					x														
LUCID								x											
M-PEDE																			x
MAINSRING																		x	
MATCHPOINT							x												
MAVRIK AQUAFLOW				x															
MERIDIAN					x														
MERIT					x														
ONYX				x															
ORTHENE		x																	
PERMETHRIN PRO				x															
POINTER					x														
PROVAUNT																x			
PURESpray OIL																			x
PYLON												x							
SAFARI					x														
SCIMITAR				x															
SCION				x															
SEVIN	x																		
SUPRADO													x						
TALUS														x					
TALSTAR				x															
TEMPO				x															
TENGARD				x															
TETRINO																		x	
TREE-AGE								x											
TRIPLE CROWN				x															
TRISTAR					x														
ZYLAM					x														

Pine Bark Adelgid



ADELGID: Bifenthrin, Chlorpyrifos, Lucid, Horticultural Oil, IMA-jet, ACE-jet, Merit, Sevin, Zenith, Zylam.

ANT: Bifenthrin, Chlorpyrifos, Conserve, Lucid, Permethrin Pro, Scimitar, Sevin, Suspend, Tempo.

APHID: Avid, Bifenthrin, Endeavor, Lucid, Horticultural Oil, IMA-jet, ACE-jet, AzaSol, Meridian, Merit, Onyx, Orthene, Permethrin Pro, Safari, Scimitar, Sevin, Tempo, Zenith.

ARMYWORM: Bifenthrin, Conserve, Dylox, Orthene, Permethrin Pro, Provaunt, Scimitar, Sevin, Tempo.

Asian Longhorned Beetle



Asian Longhorned Beetle: Always read label!!! Bark Spray (Chlorpyrifos, Onyx); Soil Injection (Merit, Zenith), Trunk Injection (Imicide, Pointer), IMA-jet to Trunk Injection.

BAGWORM: Bifenthrin, Chlorpyrifos, Conserve, Orthene, Permethrin Pro, Provaunt, Scimitar, Sevin, Tempo, ACE-jet, TREE-äge.

BEETLE-ADULT (general): Bifenthrin, Conserve, Meridian, Onyx, Orthene, Permethrin Pro, Safari, Scimitar, Sevin, Tempo, Zenith.

BEETLE-LARVA-WHITE GRUB (general): Chlorpyrifos, Dylox, Meridian, Merit, Sevin, Zenith, IMA-jet, ACE-jet, TREE-äge.

Bluegrass Billbug



BILLBUG: Bifenthrin, Meridian, Merit, Onyx, Scimitar, Sevin, Tempo, Zenith

BLACKVINE WEEVIL: AzaSol, Bifenthrin, Chlorpyrifos, Mavrik Aquaflow, Merit, Orthene, Sevin, Zenith.

BORER (general): AzaSol, Chlorpyrifos, IMA-jet, Merit, Onyx, Permethrin Pro, Sevin, Zenith, TREE-äge.

BOXELDER BUG: AzaSol, Bifenthrin, Chlorpyrifos, Orthene; Permethrin Pro, Scimitar, Sevin, Tempo.

CATERPILLAR: ACE-jet, AzaSol, Bifenthrin, Chlorpyrifos, Conserve, Dipel Pro, Orthene, Permethrin Pro, Provaunt, Scimitar, Sevin, Tempo, TREE-äge,

CHINCH BUG: Chlorpyrifos, Dylox, Merit, Onyx, Orthene, Permethrin Pro, Scimitar, Sevin, Tempo.

CUTWORM: Chlorpyrifos, Conserve, Dylox, M-Pede, Merit, Onyx, Orthene, Provaunt, Scimitar, Sevin, Tempo, Zenith.

EARWIG: Bifenthrin, Chlorpyrifos, Conserve, Onyx, Orthene, Permethrin Pro, Scimitar, Sevin, Tempo.

Emerald Ash Borer



EMERALD ASH BORER: Always check the label!!! AzaSol, IMA-jet, Bark, Spray (Merit, Onyx, Safari); Soil Injection (Merit, Zenith), Trunk Injection (Imicide, Pointer), TREE-äge.

FLEA: (landscape & turf) Bifenthrin, Chlorpyrifos, Conserve, Mavrik, Orthene, Permethrin Pro, Scimitar, Sevin, Tempo.

LACE BUG: Bifenthrin Pro, Chlorpyrifos, Horticultural Oil, Merit, Orthene, Permethrin Pro, Scimitar, Tempo, Zenith.

LEAFHOPPER: ACE-jet, Bifenthrin, Chlorpyrifos, Horticultural Oil, IMA-jet, Merit, Meridian, Orthene, Permethrin Pro, Scimitar, Sevin, Tempo, Zenith.

Adult Locust Leafminer



LEAFMINER: ACE-jet, Avid, Bifenthrin, Chlorpyrifos, Conserve, IMA-jet, Lucid, Merit, Orthene, Scimitar, Sevin, Zenith.

MEALY BUG: ACE-jet, AzaSol, Chlorpyrifos, Horticultural Oil, IMA-jet, Meridian, Merit, Orthene, Permethrin Pro, Safari, Scimitar, Sevin, Tempo, Zenith.

MIDGE: Conserve, Orthene, Sevin.

MITE: ACE-jet, Avid, Chlorpyrifos, Conserve, Lucid, Floramite, Forbid, Hexygon, Horticultural Oil, Scimitar, TREE-äge.

MOSQUITOES: Bifenthrin, Chlorpyrifos, Mosquito Dunks, Scimitar, Sevin, Tempo.

Pine Bark Beetle Larva



PINE BARK BEETLES: Bark Spray (Merit, Onyx, Safari); Soil Injection (Merit, Zenith, Trunk Injection (Imicide, Pointer), TREE-äge.

PINE TIP MOTH LARVA: Orthene, Provaunt, Scimitar, Sevin, Tempo, TREE-äge.

SAWFLY: Conserve, Merit, Orthene, Sevin, Tempo, Zenith, TREE-äge.

SCALE: ACE-jet, AzaSol, Bifenthrin, Conserve, Horticultural Oil, IMA-jet, Merit, Orthene, Safari, Sevin, Tempo, Zenith.

SOD WEBWORM: Bifenthrin, Chlorpyrifos, Conserve, Dylox, Onyx, Orthene, Permethrin Pro, Provaunt, Scimitar, Sevin, Tempo.

Spotted Lanternfly



SPOTTED LANTERNFLY: ACE-jet, Avalon, Safari, Sevin, Zylam

TENT CATERPILLARS: ACE-jet, AzaSol, Bifenthrin, Chlorpyrifos, Conserve, Orthene, Permethrin Pro, Provaunt, Sevin, Tempo, TREE-äge.

THRIPS: ACE-jet, AzaSol, Bifenthrin, Chlorpyrifos, Conserve, IMA-jet, Lucid, Merit, Orthene, Scimitar, Sevin, Tempo, Zenith.

TICK: Chlorpyrifos, Conserve, Permethrin Pro, Scimitar, Sevin, Tempo.

WASP: Bifenthrin, Orthene, Permethrin Pro, Scimitar, Sevin, Tempo.

WEBWORM (landscape): ACE-jet, AzaSol, Bifenthrin, Conserve, Orthene, Permethrin Pro, Provaunt, Scimitar, Sevin, Tempo, TREE-äge.

Whitefly



WHITEFLY: ACE-jet, AzaSol, Avid, Chlorpyrifos, Endeavor, IMA-jet, Lucid, Merit, Orthene, Permethrin Pro, Safari, Scimitar, Tempo.



CONTROL PRODUCTS

TURF GROWTH REGULATORS

Fisher & Son Company | RESOURCE MANUAL



TURF GROWTH REGULATORS			
PRODUCT	U/M	DESCRIPTION	RATE
Anew 27.5 WDG	4 x 1.5 lb	Contains 27.5% prohexadione calcium. Labeled for cool- and warm-season turf management, Anew is a late-stage inhibitor with a novel mode of action that can be used on all managed turf areas to improve turfgrass quality, density and appearance. Anew is more active and longer lasting than other late-stage growth regulators on cool-season turf	2 oz - 24 oz / acre dependent on species
Anew EZ	64 oz 2.5 gal	Contains 10.0% prohexadione calcium. An easy to use liquid formulation of Anew PGR with all the benefits of the original.	2.2 oz. to 54 oz. / acre dependent on species
Cutless MEC	2.5 gal.	Contains 16% fupridinol. Liquid formulation of same AI in Cutless. Greater flexibility to measure specific volumes for areas of variable sizes.	12.3–49.2 oz./acre dependent on species
Cutless 50WP	8 oz. 60 per pak	Contains 5 % fupridinol. Turf: a foliar applied and root absorbed TGR that reduces internode elongation of a broad range of both monocotyledonous and dicotyledonous plants.	0.5–0.75 lb./acre dependent on species
Edgeless TGR	8 oz.	Contains 13.26% flurprimidol and 5% trinexapac-ethyl. Edgeless reduces turf growth along fencelines and curbs for up to 8 weeks, offering aesthetic improvement over total vegetation control herbicide treatments. Saves labor.	0.3–1.6 oz./gal. of spray solution
Legacy	2.5 gal.	Contains 13.26% fupridinol and 5% trinexapac-ethyl. Synergistic growth regulation, resulting from its dual sites of action and plant uptake, leads to enhanced growth suppression, improved turfgrass color and quality, extended TGR spray intervals, discouragement of Poa annua, and more uniform growth regulation in mixed turfgrass stands.	5–30 oz./acre dependent on species
Musketeer TGR	2.5 gal.	Contains 5.6% flurprimidol, 5.6% paclobutrazol and 1.4% trinexapac-ethyl. Combines 3 PGR's to uniquely and effectively regulate and enhance turfgrasses. Delivers enhanced conversion and suppression of poa annua by allowing vigorous bentgrass growth compared to formulations of paclobutrazol alone.	12–40 oz./acre dependent on species
Podium	gal.	Contains 11.3% trinexapac-ethyl. Micro-emulsion formulation that encourages stronger, healthier turf. Same AI as Primo Maxx.	See Primo Maxx.
Primo MAXX	1 gal. 10 gal.	Contains 11.3% trinexapac-ethyl. Class "A" turfgrass growth regulator that enhances turf quality, by allowing turf to continue to grow but creates shorter cells and therefore leaf blades, resulting in shorter, more dense turf that does not have to be mowed as frequently. Treated turf is thicker, denser, deeper green and more resilient to environmental extremes and traffic	See label. <u>Greens</u> : 0.125 oz./1000 sq. ft. <u>Fairways</u> : 0.025–0.5 oz./1000 sq. ft.
Proxy	2.5 gal.	Contains 21.7% ethephon. Use where slower acting results are desired. Use for poa annua seedhead reduction. Proxy takes approximately 7 days to kick in. Nearly undetectable discoloration is a key benefit. Not for residential use.	5 fl oz. /1000 sq. ft.
Trimmit 2SC	1 gal.	Contains 22.3% paclobutrazol. Turf: Class "B" turfgrass growth regulator enhances turf quality; reduces maintenance costs by reducing the need for mowing and clipping removal. Use to selectively manage poa annua in golf course situations.	6.4 oz./1000 sq. ft.





SEED, SOIL AND WATER MANAGEMENT

Fisher & Son Company | RESOURCE MANUAL



Grass Seed Blends and Mixes

Bentgrass

Product	UOM	Description	Rate
Emergent Seed Mix - Certified (50% Cr. Bentgrass, 50% Cr. Red Fescue)	25 lb	A mix of Chinook Creeping Bentgrass with Shadow 2 Creeping Red Fescue. Ideal for divot repair and overseeding of tees where rapid establishment is desired.	1 to 2 lbs / 1000 sq ft
Penn A1/A4 Bentgrass Blend - Certified (100% Cr. Bentgrass)	25 lb	A blend of A1 Creeping Bentgrass and A4 Creeping Bentgrass for use on greens and tees for dense, fast, disease resistant turf.	1 to 2 lbs / 1000 sq ft
Penntrio Bentgrass Blend - Certified (100% Cr. Bentgrass)	25 lb	PennTrio bentgrass is blend for tees, fairways, and winter overseeding uses with equal thirds of Pennncross, Penneagle II, and PennLinks II for varietal performance traits on every playing surface.	1 to 2 lbs / 1000 sq ft
Pennway Bentgrass Blend - Certified (100% Cr. Bentgrass)	25 lb	Pennway Bentgrass is a blend for use on tees, fairways and winter overseeding. Pennway is an economical blend consisting of Pennncross, PennLinks II, Penneagle II, Seaside II and Penn A-4.	1 to 2 lbs / 1000 sq ft
Progressor Bentgrass Blend - Certified (100% Cr. Bentgrass)	25 lb	An economical Bentgrass blend containing: L-93, Nightlife and Armor Creeping Bent. Available with and without Apron Seed Treatment.	1 to 2 lbs / 1000 sq ft

Fine Fescue

Product	UOM	Description	Rate
Links Fine Fescue Blend - Certified (30% Hard Fescue, 30% Chewings Fescue, 30% Cr. Red Fescue, 10% Sheeps Fescue)	50 lb	A great choice for naturalizing and low maintenance areas combining Viking H2O Hard, Ambrose Chewings, Simmons Cr. Red and Azure Sheeps Fescues. Also good in shady and poor soils.	3 to 5 lbs / 1000 sq ft
Shadow Grows Seed Mix - Certified (25% Cr. Red Fescue, 25% Chewings Fescue, 25% Hard Fescue, 25% Perennial Ryegrass)	50 lb	A high quality shade mix with quick establishment, Shadow Grows combines Silverlawn Cr. Red Fescue, Ambrose Chewings Fescue, Viking H2O Hard Fescue and Palmer III Perennial Rye	3 to 5 lbs / 1000 sq ft

Kentucky Bluegrass

Product	UOM	Description	Rate
Athletic Pro Seed Mix (50% Kentucky Bluegrass, 50% Perennial Rye)	50 lb	An economical blend of Ky Bluegrass and Perennial Ryes designed for overseeding sports turf, Athletic Pro contains Quartz Ky. Bluegrass, Rockstar Ky. Bluegrass, Palmer 3 Per Rye, Line Drive II Per Rye and Umpqua Per Rye.	2 to 4 lbs / 1000 sq ft
Competition 2 Ky. Bluegrass Blend - Certified (100% Kentucky Bluegrass)	50 lb	An elite blend of equal parts Everest, Award, NuGlade, Midnight and Jackpot Kentucky Bluegrasses. Excellent for sports field and high traffic turf. Gold Tag (sod quality) available.	1 to 3 lbs / 1000 sq ft
365ss Kentucky Bluegrass Blend - Cert (100% Kentucky Bluegrass)	50 lb	A revolutionary new bluegrass blend that offers the best of what sports turf professionals demand. 365ss is extremely fast to germinate and establish. Contains Blue Note, Bolt and Legend Kentucky Bluegrasses.	2 to 4 lbs / 1000 sq ft
Main Line Blue Mix - Certified (75% Kentucky Bluegrass, 25% Perennial Rye)	50 lb	Premium Kentucky Blues and fine bladed Perennial Ryes create a quality turf with excellent disease resistance. Contains Midnight, Jackpot, Camas and Everest Ky Blues with Caddieshack and Accent Perennial Ryes	2 to 4 lbs / 1000 sq ft
Sky Blue Blend - Certified (100% Kentucky Bluegrass)	50 lb	An aggressive, quickly establishing blend of elite Ky. Blues ideal for sports turf. Sky Blu contains Ashland, Quartz and Rockstar Kentucky Bluegrasses.	1 to 3 lbs / 1000 sq ft
Sunny Pro Blue Mix 34% Kentucky Bluegrass, 33% Perennial Rye, 33% Cr. Red Fescue	50 lb	Our good old reliable mix for areas receiving at least 50% sunlight. Contains BlueChip Kentucky Blue, Audubon Cr. Red Fescue and Top Gun Perennial Ryegrass.	2 to 5 lbs / 1000 sq ft
HGT Kentucky Bluegrass - Certified (100% Kentucky Bluegrass)	50 lb	Cutting edge blend for high traffic areas with excellent disease and insect resistance. Aggressive growth with quick establishment. Contains Barvette, Barrari, Barrister and Barimpala Ky. Blues. Available <i>Yellow Jacket</i> treated.	1 to 3 lbs / 1000 sq ft

GRASS SEED BLENDS & MIXTURES

Perennial Ryegrass			
Product	UOM	Description	Rate
Classic Perennial Ryegrass (with Coating) (50% Perennial Ryegrass/50% Nitro NP Coating)	50 lb	Elite quality and value! Elite fine-blade varieties with premium coating. Selected for Gray leaf spot resistance. Contains Deschutes, Metolius and Palmer III Per Rye	3 to 6 lbs / 1000 sq ft
RPR Regenerating Perennial Ryegrass (100% Perennial Ryegrass)	50 lb	From Barenbrug, a very wear, traffic, & drought tolerant blend that provides excellent turf quality. Contains Barbata, Bargamma and Barlibro Perennial Ryegrasses.	3 to 6 lbs / 1000 sq ft
Tournament II Perennial Ryegrass - Cert (100% Perennial Ryegrass)	50 lb	Tournament quality turfgrass with elite varieties exhibiting excellent gray leaf spot resistance. Contains Blackstone, Black Pearl and Confetti III Perennial Ryegrasses.	3 to 6 lbs / 1000 sq ft
Trifecta Perennial Ryegrass - Cert (100% Perennial Ryegrass)	50 lb	Premium selections for tournament quality turf and gray leaf spot resistance. New generation ryes for superior disease resistance. Contains Secretariat II GLSR, Exacta II GLSR and Charismatic II GLSR Perennial Ryegrass.	3 to 6 lbs / 1000 sq ft
Tall Fescue			
Product	UOM	Description	Rate
Advantage Seed Mix - Certified (80% Tall Fescue, 20% Perennial Ryegrass)	50 lb	Fine bladed, drought resistant and fast growing for superior sports turf and lawns. Contains Corbett, Renegade DT Tall Fescues with Palmer III and Umpqua Per Ryes	4 to 8 lbs / 1000 sq ft
Tempest Tall Fescue Blend (with Coating) (50% Tall Fescue, 50% Nitro NP Coating)	50 lb	A cost effective tall fescue blend utilizing Nitro NP Seed coating to enhance germination and establishment. Contains Renegade DT, Corbett and Tribute II Tall Fescue	4 to 8 lbs / 1000 sq ft
Marathon Plus Seed Mix - Certified (90% Tall Fescue, 10% Kentucky Bluegrass)	50 lb	Premium Tall Fescues with Kentucky Blue for improved density and knitting for sod harvesting. Contains Avenger III, Raptor III and Titanium 2LS Tall Fescue with Selway Kentucky Bluegrass	4 to 8 lbs / 1000 sq ft
Marathon Ultra BPR TF Blend - Certified (100% Tall Fescue)	50 lb	Elite Turf Type Tall Fescue Blend selected for Brown Patch resistance. Created for residential & commercial turf, golf and sports fields. Contains Avenger 2, Raptor 3 and Titanium 2LS Tall Fescues.	4 to 8 lbs / 1000 sq ft
Performance Seed Mix - Certified (88% Tall Fescue, 6% Kentucky Bluegrass, 6% Perennial Ryegrass)	50 lb	A superior quality, low maintenance turf for sun and shade combining durable Tall fescues with Ky Blue and Perennial Rye. Contains Renegade DT and Amity Tall Fescues with Quartz Ky Blue and Metolius PR	3 to 8 lbs / 1000 sq ft
Performance Select TWCA Seed Mix - Cert (88% Tall Fescue, 6% Kentucky Bluegrass, 6% Perennial Ryegrass)	50 lb	Selected for Reduced Water input combining durable Tall fescues with Ky Blue and Perennial Rye. Contains Falcon IV and Renegade DT Tall Fescues with Diva Ky Blue and Double Time GLS Perennial Ryegrass	3 to 8 lbs / 1000 sq ft
Triplet Tall Fescue Blend (100% Tall Fescue)	50 lb	Value priced, but without sacrificing quality, our Triplet Tall Fescue Blend fits the bill. Contains Golden Gate, Quest and Jaguar 4 Tall Fescues.	4 to 8 lbs / 1000 sq ft

Rootex Seed Treatment- Faster Turf Establishment!

Many factors influence the establishment of turfgrass seedlings. Moisture is certainly a factor but equally as important is nutrient availability. **Rootex** Seed Treatment by Redox Chemical is a proven means of supplying the nutrients needed to speed establishment of turfgrass seedlings, particularly when employed with slower establishing species like turf-type Tall Fescues. Fisher & Son stocks many of our seed mixes pre-treated with **Rootex** for convenience of application. Compare establishment times yourself with your next seeding project and you will see the difference a **Rootex** treatment makes!



GRASS SEED BLENDS AND MIXES

Quick Establishment Mixes

Product	UOM	Description	Rate
Builders Throw N' Grow Mix 44% Annual Ryegrass, 44% Perennial Ryegrass, 6% Ky. Bluegrass, 6% Creeping. Red Fescue)	50 lb	Economical Mix that is quick germinating and fast to cover. Not recommended for overseeding.	6 lbs / 1000 sq ft
Commercial Seed Mix (50% Perennial Rye, 25% Ky. Bluegrass, 15% Creeping Red Fescue, 10% Annual Rye)	50 lb	Quality quick establishment mix. Designed with the professional landscaper in mind. Creates an adaptable and quality turf under a wide range of conditions.	3 to 5 lbs / 1000 sq ft
Game Saver Mix - Certified (50% Intermediate Rye, 50% Perennial Rye)	50 lb	Quality mix for rapid establishment. Created for sports field managers! Quick germination and rapid establishment mix with excellent disease resistance. Contains Rogue Intermediate Ryegrass and Metolius Perennial Ryegrass.	4 to 6 lbs / 1000 sq ft

Specialty Mixes

Product	UOM	Description	Rate
Grass Management Pasture Mix	50 lb	Grows 24" to 30" (unmowed). Good for grazing animals or creating naturalized sites. Contains Tetraploid Ryegrass, Tall Fescue, Timothy, Orchardgrass, Festulolium grass and Ky. Bluegrass.	4 to 8 lbs / 1000 sq ft
Wildflower Seed Mixes	50 lb	We stock several colorful mixes of annual, biennial and perennial flowers. Mix with sand for even seed distribution. Seed in spring or early fall. We recommend pre-treating the seeding area with Roundup PRO MAX.	6 to 12 lbs / ACRE

Varietals

Annual Ryegrass	UOM	Description	Rate
SOS Annual Ryegrass (100% Annual Rye)	50 lb	Grass on demand, when time is running out. SOS is the ideal solution for a quick recovery of your sport field. It takes half the time to recover after overseeding and it can be used during the entire season, even when soil temperatures are low.	4 to 6 lbs / 1000 sq ft



Bentgrass	UOM	Description	Rate
007 Creeping Bentgrass - Certified (100% Creeping Bentgrass)	25 lb	007 Bentgrass is an advanced generation creeping bent developed at Rutgers. Excellent dollar spot resistance, medium bright green leaf color, no cool weather purple coloration, and a vigorous, moderately dense growth habit.	1 to 1.5 lbs / 1000 sq ft
Alpha Creeping Bentgrass - Certified (100% Creeping Bentgrass)	25 lb	Optimized for the mid-budget golf course. Ball marks, divots heal rapidly. Dollar spot resistance equal to the best. Rich green color. Makes visible gains on Poa annua each year. Great for greens, tees and fairways.	1 to 1.5 lbs / 1000 sq ft
Chinook Creeping Bentgrass - Certified (100% Creeping Bentgrass)	25 lb	A modern variety bred at Rutgers University, Chinook is unsurpassed in dollar spot resistance and summer stress tolerance. Tolerates the lowest cutting heights even in summer. Overall disease resistance is excellent.	1 to 1.5 lbs / 1000 sq ft
Coho Creeping Bentgrass - Certified (100% Creeping Bentgrass)	25 lb	A product of Rutgers University breeding program, Coho leads the pack in dollar spot and anthracnose resistance while exhibiting excellent overall turf quality and improved brown patch resistance.	1 to 1.5 lbs / 1000 sq ft
Piranha Creeping Bentgrass - Certified (100% Creeping Bentgrass)	25 lb	A new, ultra-dense creeping bentgrass variety developed to tolerate heat and other stressors. Excellent resistance to dollar spot and brown patch.	1 to 1.5 lbs / 1000 sq ft
Penn A-1 Creeping Bentgrass - Certified (100% Creeping Bentgrass)	25 lb	A-1 has a very dark green coloration, fine leaf texture, tremendous heat and cold tolerance, very high density and superior disease resistance. Very good winter color and spring green-up. A-1 provides a superb putting surface.	1 to 1.5 lbs / 1000 sq ft
Progressor Creeping Bentgrass - Certified (100% Creeping Bentgrass)	25 lb	A premium blend of creeping bentgrasses fbudget priced for tees and fairway use. Contains L-93, Kingdom and Armor Creeping Bentgrasses	1 to 1.5 lbs / 1000 sq ft

Bermudagrass	UOM	Description	Rate
Rio Bermudagrass - Certified (100% Bermudagrass)	25 lb	Rio is a top performing seeded bermudagrass that was bred for cold tolerance as well as early spring greenup. Excellent choice for the south and transition zone.	2 to 3 lbs / 1000 sq ft



HYDROMULCHING, SEED ESTABLISHMENT AND SOIL TESTING



Product	U/M	Description	Rate
SprayMatrix® Fiber Reinforced Matrix (FRM)	50 lb bale	This advanced engineered formulation is designed to provide superior erosion control and revegetation solutions for the most critical project sites up to 1:1 slopes; Easy hydraulic application maximizes time savings and installed cost effectiveness; Non-toxic, no netting and completely biodegradable.	3000 lb to 4500 lbs per acre
SprayMatt® Bonded Fiber Matrix (BFM)	50 lb bale	Environmentally safe, cost effective, high performance erosion control alternative to traditional rolled erosion control blankets; Manufactured from thermo-mechanically processed virgin wood fiber and proprietary cross-linked bonding agents.	3000 lb to 4500 lbs per acre
Hydro Mulch 100% Wood Fiber	50 lb bale	100% Wood Fiber manufactured from thermo-mechanically processed virgin wood chips; Excellent surface coverage and erosion control for slopes up to 2:1.	1500 lb to 2500 lb per acre
Hydro Mulch 70/30 Blend	50 lb bale	Combination of superior wood fiber and high quality post-consumer recycled cellulose fiber, easily mixed and applied with a standard hydro seeding machine; Improves surface coverage (up to 20%), compared to Cellulose Fiber.	1500 lb to 2500 lb per acre
Hydro Mulch Easy 50/50 Blend	50 lb bale	Loose density packaged hydraulic mulch, produced from thermo-mechanically processed virgin wood fiber and high quality post-consumer recycled cellulose fiber; Ideal performance for jet-agitated and mechanically-agitated hydro seeding machines; Easy loading, mixing and application.	1500 lb to 2500 lb per acre
Hydro Mulch 100% Cellulose	40 lb bale	Produced from 100% high quality, post-consumer recycled newsprint; it is ideal for general hydro seeding projects or as a tackifier for straw and hay mulches; Provides easy loading, mixing and spraying with all types of standard hydro seeding machines.	1500 lb to 2500 lb per acre
Hydro Mulch 70/30 Blend Plus Tackifier	50 lb bale	Combination of superior wood fiber and high quality post-consumer recycled cellulose fiber, easily mixed and applied with a standard hydro seeding machine; Improves surface coverage (up to 20%), compared to Cellulose Fiber. Pretreated with tackifier for secure application.	1500 lb to 2500 lb per acre
20-20-20 Soluble + Micros	25 lb	Soluble fertilizer ideal for hydroseeding applications. Highly concentrated with high P analysis to get grass growing faster. Humates provide stress relief for young plants.	1 lb to 6 lb per 1000 sq ft
Seed Establishment			
Environet	40" x 135' 82" x 135'	EnviroNet is created for slopes and environmentally sensitive sites where windy conditions and/or higher levels of installation stress may be encountered. EnviroNet is more aesthetically pleasing and easier to install than traditional stitch-bonded straw, and coconut and excelsior blankets. Plus, it provides 99.9% erosion control effectiveness.	40" x 135' 82" x 135'
Pennmulch Seed Accelerator	50 lb bag	LebanonTurf's PennMulch Seed Accelerator, is a pelleted seed establishment mulch comprised of recycled newsprint, starter fertilizer, and Moisture Cell Technology.	50 lb to 80 lb per 1000 sq
Strawmax Seeding Straw	22 lb Bale	Short chopped agricultural straw (straw from wheat, oat and barley production) treated with guar gum as an environmentally friendly tackifier	Bale covers ~500 sq ft
10-20-15 + 2% Iron Starter Fertilizer	50 lb	This is an ideal granular starter fertilizer for commercial and residential applications.	5 lb per 1000 sq
Soil Testing			
	The basic requirement of fertility management, rests in knowing the overall health of your soil. Good fertility programs begin with a soil analysis. The state of the art testing services we offer are the basis to develop a solid fertility and soil health program. Acidic soils, low in pH, may not have adequate amounts of Calcium, Magnesium and Phosphorus. In high pH soils, there may be excessive salts. In both situations, many nutrients can be tied up and unavailable for use by turf and ornamental plants. Re-test soil every 2-3 years.		
	Logan Labs is the premier soil testing lab in the country. They are located in Lakeview, Ohio. Logan provides analytical and consulting services to all areas of the agricultural community. They pride themselves on quick turnaround time and analytical accuracy. Logan provides customized worksheets for repeat customers. They offer many different reporting formats to fit your needs.		





Mitchell TriCure treated topdressing materials make soil more receptive to water and easier to

work. It reduces sand sticking to rollers and has less dust when handling. TriCure treated materials must be kept under cover to keep them dry. Dry mixes include Fafard compost (comprised of composted sedge grass, peat and organic matter that supplies moisture retention and nutrient exchange. Particle size and quality analysis available upon request.

TOPDRESSING SAND

Processed to USGA standards. Particles larger than 1 mm removed.

DESCRIPTION

GC-500 T: 90 - 10 Tri Cure Treated Topdressing - Sterilized

GC-350 T: Straight Sand Tri Cure Treated Topdressing - Sterilized

GC-350: Straight Sand Topdressing - Sterilized

GC-260: Fairway Topdressing Sand - USGA Spec

GC-230: 60 - 40 Divot Mix - Green Waste Compost

PREMIUM DIVOT & REPAIR MIXES

86% Sand, 12% Fafard Peat Humus + 2% Renovate™ provides a superior seed bed. Contains Sea Kelp, Sul-Po-Mag, Humic Acid, Rock Phosphate, Compost and Greensand.

DESCRIPTION

GC-820: Divot Mix - Green Waste Compost + Renovate™ (1500 lb.) Box

GC-830: Divot Mix - Green Waste Compost + Renovate™ (2500 lb.) Box

GC-835: Divot Mix - Green Waste Compost + Renovate™ (2500 lb.) Sack

SAND/SOIL MIXES

DESCRIPTION

GC-215: 85 -15 RZ Sand: Sphagnum (Root Zone/Tee Mix)

GC-240: 70 -20 -10 Tee Mix

GC 700: Screened Topsoil - High Organic

Custom Mixes Available

BUNKER SAND

DESCRIPTION

GC-450: Crushed Quartzite Bunker Sand

GC-286: Buff Bunker Sand

GC-300: White Bunker Sand

Custom Mixes Available

STONE PRODUCTS

Drainage Stone, Decorative Stone, and Cart Path mixes are available. Ask your rep for details.

Benefits of using Topdressing with TriCure

- Prevents development of water-repellent soils.
- Eliminates Localized Dry Spots .
- Reduces channeling and preferential flow.
- Prevents water loss due to run-off.
- Reduces excess water retention.
- Provides water penetration and uniform water distribution to root zone.
- Conserves irrigation water .
- Increases root mass and length .
- Reduces labor costs associated with hand watering.



Divot Mix with Renovate

» 1500 lb box

Athletic Field Topdressing

Weed free and improves soil structure, reducing soil compaction, increases aeration and moisture percolation rates. Encourages deeper rooting, increases water infiltration and water holding capacity in addition to reducing erosion and nutrient leaching. Micro and macro nutrients provide improved fertility.

These topdressings bind up certain contaminants while degrading others.

Terreplex - Carbon rich acidifier derived from lignon in trees. Natural organic polymer to reduce bicarbonate levels, converting bound minerals to plant available forms.

» 5 gal 32-64 oz / acre

Turf Soil - TurfDress compost blended with native mineral soil that is finished and screened to a fine texture.

Special order

» Bulk (25 cu. yds.)

SOIL BUILDING MATERIALS & SOIL AMENDMENTS



ReGen-A/MEND BioChar is a soil-health technology designed to optimize the vitality of the root zone in all types of soil. The organic, 100% bio-based material utilizes physical, chemical, and biological mechanisms to unlock the potential of the soil. ReGen-a/MEND BioChar builds lasting soil structure to optimize water and nutrient retention in the root zone, provides a habitat for beneficial microbial growth, enhances chemical properties of the rhizosphere, and sequesters atmospheric CO₂.

Rates: Seeding or sodding: 2 x 1 cu ft bag / 1000 sq ft
 Aeration: 2 x 1 cu ft bag / 1000 sq ft total of 4 times (2 x / yr max)
 Landscaping: Mix 5% by volume with backfill of planting
 Trees: Vertical mulching – Mix 5% by volume with backfill

SOIL AMENDMENTS

PRODUCT	U/M	DESCRIPTION
Ecolite	50 lb.	Increases infiltration, percolation and CEC as well as retention of plant available water. High in Potassium.
Gypsum	50 lb.	Standard size for higher cut turf. Provides Ca and S and mobilizes Sodium in soil
Gypsum – Greens Grade	50 lb.	Fine particle Calcium Sulfate; Provides soluble Calcium and sulfate form of Sulfur. Relieves soil compaction without changing pH.
Gypsum Plus	50 lb.	Fine particle Calcium Sulfate; Provides soluble Ca and sulfate form of Sulfur. Relieves soil compaction without changing pH. Plus 1% B & Zn, 2% Cu.
Lime Pelletized Calcitic	50 lb.	Pelletized, standard size particle. Use where Magnesium should be avoided.
Lime Pelletized Calcitic Micro – Greens Grade	50 lb.	Quality, pelletized, fine particle for use where Magnesium should be avoided.
Lime Pelletized Dolomitic	50 lb.	Pelletized, standard size particle for easy application. Quick acting.
Lime Pelletized Dolomitic Micro – Greens Grade	50 lb.	Quick acting, pelletized, fine particle for easy application.
Min Phos (EarthWorks) Hard & Soft Rock Phosphate	50 lb.	Biologically active phosphorus source of hard and soft rock phosphate plus dry humic acids. Blended with Replenish compost and then prilled.
Pro Mag 36	50 lb.	Magnesium supplement: 36% Magnesium, 6% Sulfur
Renovate Plus	50 lb.	Perfect recovery amendment during aerification. Use under sod and when establishing new seed.
Solu-Cal Plus	50 lb.	Solu-Cal Plus with INTENSIFY Soil Microbial BioCatalyst is a unique formulation of soluble calcium complexed with beneficial active microbes. 36% calcium carbonate ground to 45 microns for rapid correction of pH and calcium loading.
Sulfur 90% Granular	50 lb.	Granulated 90% active material with wetting agent for quick solubility in soil.
Sul-Po Mag 0-0-22 Greens Grade	50 lb.	SGN 90. Provides Mg, K and Sulfate form of Sulfur. Contains 22% Potash, 11% Mg and 9% S.
Sul-Po-Mag 0-0-22 Standard Grade	50 lb.	Standard grade (SGN 190) An excellent source of Magnesium, Potassium and sulfate form of Sulfur. Contains 22% Potash, 11% Magnesium and 9% Sulfur.

AQUATIC WEED MANAGEMENT			
PRODUCT	U/M	DESCRIPTION	RATE
AquaSweep Herbicide	2.5 gal	Contains 34.2% 2,4-D and 15.2% trib opy. The first liquid premix with full terrestrial and aquatic uses. AquaSweep is the perfect base for any selective weed control program interspersed with aquatic and wetland areas.	See label
Aqua-T WSP 2.0	25lb	Aqua-T pond bacteria uses a revolutionary combination of specific strains of bacteria and bacterial enzymes that reduce sludge, control foul odors and digest the excess nutrients which may cause problematic algae growth.	6 WSP / Acre Foot then 1 WSP/Acre Foot every 2 weeks
Black Out Liquid Lake & Pond Dye	1 gal	Black Out concentrated liquid lake & pond dye uses our proprietary formula to give your pond or lake a beautiful mirrored effect all year long.	1 GL / Acre at 4-6 ft of depth
Captain XTR	2.5 gal	Contains 28.2% copper ethanolamine complex. Captain XTR is optimized to increase the penetration of copper into algae cells. Impactful when targeting tough to control mat-forming, colonial and mucilaginous species.	0.6 - 3.0 gal. Acre foot
Clearcast	1 qt	Contains 12.1% ammonium salt of imazamox. The industry standard for aquatic control. Excellent choice for selective control of invasive weeds such as water hyacinth, water hyacinth and broad-spectrum control of a variety of pondweeds.	16 - 128 oz / Acre
Crystal Plex Algaecide	50 lb	Contains 19.8% copper sulfate pentahydrate. A liquid copper sulfate solution designed to kill and control algae and some aquatic plants including Hydrilla.	1.2 - 2.2 gal/Acre Foot
Eutrosorb WC	50 lb	A simple to use, next-generation phosphorus binding technology. EutroSORB WC is a proprietary aqueous blend of phosphate binding minerals for rapid and permanent inactivation of phosphorus from the water column.	Apply 10 PDUs of EutroSORB WC to inactivate 1 lb. of phosphorus from the water column
Harpoon Granular Aquatic Herbicide	40 lb	Contains 3.41% banded copper. Harpoon Granular is a banded copper herbicide that effectively controls submersed aquatic plants. Harpoon Granular may be applied to slow moving or quiet bodies of water.	40 - 240 lbs / Acre
Jet Black EZ Solupak Lake and Pond Dye	5.25 oz	A highly concentrated Black Pond dye in easy to use water soluble packets.	1-4 wsp / Acre
Komeen Herbicide	1 gal	Contains 29% copper ethanolamine complex. Komeen Aquatic Herbicide is ideal for quick targeted control of nuisance submersed and floating aquatic weeds.	1.7 - 33 gal / Acre
Muck Doctor	10 X 1 SPIKE	Specifically formulated to reduce muck and sludge around beach areas and docks. Muck Doctor contains concentrated, fast acting bacteria that gets rid of pond muck, dead leaves, odors and other organic material.	1 Box / 250 sq ft
Natural Pond Cleaner	1 gal	Consists of safe and natural bacteria that helps maintain pond muck levels, dead leaves, odors and other organic material. Helps neutralize nitrates and phosphates.	1 GL / Acre at 4-6 ft of depth
Renovate OTF Aquatic Herbicide	10lb	Contains 14% triclopyr. A dust-free, odorless easy-to-apply granule. Remove unwanted weeds along shorelines, dock, and swimming areas for one year or longer by spreading the granules over the weed infested areas.	14 to 270 lbs per Acre
Reward Herbicide	1 gal 2.5 gal	Contains 37% diquat. Reward Aquatic Herbicide is a fast-acting, non-selective herbicide that controls floating, submerged and marginal aquatic weeds even in sensitive aquatic environments.	1 - 2 quarts / Acre foot
Roundup Custom Aquatic Herbicide	2.5 gal	Contains 53.8% glyphosate. Roundup Custom Herbicide is a non-selective weed and brush killer for aquatic and terrestrial use. This is a systemic herbicide with no residual silaticity and a non-effectively control over 190 post-emergent weed.	100 gl water
Seclear Algaecide	2.5 gal	Contains 16.2% copper ethanolamine complex. Seclear is the first aquatic algaecide and water quality enhancer in one designed to replace routine algaecide treatments.	1 - 6.5 gl / Acre foot
SonarOne Herbicide	20 lb	Contains 5% fluridone. Effectively herbicide in a slow release pellet for the management of aquatic vegetation in fresh water ponds, lakes, reservoirs, potable water supplies, etc.	2.5 - 49 lb/ Acre foot
SureGuard SC Herbicide	pint 64 oz	Contains 41.4% flumioxazin. For the management of undesirable aquatic vegetation in slow moving or quiet waters. Use with aquatic surfactant.	6 - 12 oz per acre
True Blue EZ Solupak Lake and Pond Dye	5.25 oz	A highly concentrated Blue Pond dye in easy to use water soluble packets.	1-4 wsp / Acre
True Blue Liquid Lake and Pond Dye	1 gal	Proprietary blend of environmentally friendly nontoxic dyes reduce sunlight penetration and imparts a natural blue color.	1 qt per acre foot



RAPID KELP

Rapid Kelp is a proprietary soil surfactant designed to reduce LDS, enhance irrigation efficiency and reduce plant stress. Rapid Kelp contains 25% Kelp Extracts (*Ascophyllum nodosum*) to aid in stress resistance and recovery in turf and ornamental plantings. Rapid Kelp has a high degree of turf and plant safety and can be used in a variety of soil and environmental conditions as a 30-day general purpose surfactant, or a 90 to 120-day soil surfactant.

- 75% Active Ingredient with 23% Kelp Extracts, 2% Fulvic Acid
- Block Co-polymer Chemistry
 - Uniformity of Moisture, Reduce Surface Tension, Reduce LDS
- Co-polymer Construction Allows for Flexible Application Rates

Rates: Turf: 30 Day Rate 6 – 8 Ounces per 1,000 sq.ft.

90-120 Day Rate 2 Applications 14 days apart at 10.5 oz/1000sqft

Tree/shrub/flower drench: 10 oz / 100 gl solution every 4-6 weeks

RAPID COMPLETE

Rapid Complete is a multi-chemistry 30-day soil surfactant designed to reduce LDS and reduce drought stress. Rapid Complete is designed with three surface-active polymers to ensure uniform soil wetting, increased infiltration of moisture, and enhanced moisture retention. Rapid Complete has a high degree of turf safety and can be used in a variety of soil and environmental conditions as a general purpose, multifunction soil surfactant.

- Versatile & Unique Three Polymer Blend with 100% Total AI
 - Water Spreading, Water Penetration, Water Holding
- General Purpose 30-Day Work Horse Surfactant Blend
- Can Be Used on Fairways, Tee's, Greens, or Injected

Rates: 4 – 6 oz per 1,000 sq. ft. Every 30 Days

RAPID FLO

Rapid Flo is a multi-chemistry soil surfactant and water conditioner that is formulated with both traditional soil wetting polymers along with powerful negatively-charged penetrants that push excess water down. Rapid-Flo will reduce the surface tension of water and facilitate enhanced irrigation infiltration and efficiency.

Negatively-charged amino-acid-based polymers are added as a sequestering agent to mitigate cations in tank mix water.

- 26% Active Ingredient (62% More AI Than Leading Competitive Products)

- Anionic Penetrant reduces surface tension
- Enhances Lateral Movement of Water and Uniformity of Hydration

Rates: Application Rate: 20 Ounces per Acre

Inject Rate: 15 – 20 Ounces per Acre

RAPID INJECT

Rapid Inject is a multi-chemistry soil surfactant designed to enhance the effectiveness and efficiency of irrigation. Rapid Complete is designed with four surface-active polymers to enhance the wetting characteristics, infiltration, rewetting, and moisture retention of applied irrigation water.

- Four Polymer Blend
 - Penetration, Retention, Uniformity, Lateral Movement
- 30% Total Active Ingredient
- Through Irrigation/ Injection for 10 – 14 Days Longevity
- Multiple Chemistry Formulation makes Rapid Inject a very versatile soil surfactant:

**Rates: Spray App (Fairways/Tees): 2 – 4 Quarts/Acre 7 – 10 Days
Dew Suppression: 1 Gallon Per Acre**

Injection: 1 -2 Quarts Per Acre Every 7 -10 Days

RAPID TABS

Rapid Tabs contain three surfactant technologies to penetrate, move, and hold water. These 100% active ingredient tablets are longer lasting than competitive tablets and are designed for spot treatment of LDS prone areas.

- Wetting Agent for Hand Watering / Spot Treatment of LDS
- Multiple Chemistry Pellet; contains separate polymers for:
 - Water Movement
 - Infiltration and Wetting
 - Moisture Retention
- 100% Active Ingredient; no binders or inerts
- 8oz (1/2 lbs) Pellet
- Treatment Area is at least TWO Greens
- Proprietary formulation results in a longer-lasting pellet that won't fall apart or dissolve too quickly



WETTING AGENTS & MOISTURE MANAGEMENT



PRODUCT	U/M	DESCRIPTION	RATE
WETTING AGENTS			
TriCure AD	5 gal. 30 gal. 55 gal.	Advanced formulation soil surfactant for use on hydrophobic soils. Treats the widest variety of sandy soil and organic surfaces in soil profiles. Provides optimum moisture balance preventing dry, hydrophobic soils and realize successful water management.	Monthly: 4–6 oz./2 gal. water/1000 sq. ft. Use higher rate for LDS and high stress areas.
TriCure Micro	5 gal. 55 gal.	For high clay native soils with poor air & water movement. Effectively treats difficult soil conditions by reaching the smallest micro pore space. Micro (nano) size particles improve moisture movement.	Monthly: 8–12 oz./2 gal water/ 1000 sq. ft.
TriCure Granular	40 lb.	Convenient application method on slopes, bunker edges, approaches and spot treatments. After release of the chemistry, the inert carrier, Biodac quickly breaks down during rain or irrigation.	2.5 lb./1000 sq. ft.
TriCure Pellets	3 tube 12 tubes/ case	Provides fast, safe and convenient method of applying surfactant through hose-end applicators. Easy to carry tube comes with 3 pellets. Pellets dissolve quickly, (around 19 minutes) allowing fast application. Perfect for spot treating hydrophobic soils.	1 pellet treats 6000 sq. ft.



PRODUCT	U/M	DESCRIPTION	RATE
Cascade Plus Hydration And Infiltration	2.5 gal. 55 gal.	A combination of nonionic surfactants that hydrate the soil and penetrate to provide deeper, more uniform water infiltration, Cascade Plus™ is used to prevent localized dry spot (LDS), correct hydrophobic soil conditions and provide firmer, faster playing surfaces under all conditions.	16 oz. /1000 sq. ft. or 4 oz. + 1 oz. Duplex
Duplex Infiltration Surfactant	20 gal. 55 gal	Designed for irrigation injection, Duplex™ combines penetrants with a buffering agent that neutralizes hard water ions. Duplex improves the infiltration of rainfall or irrigation through thatch, moving water, plant protectants or nutrients into the soil solution.	1–2 oz./M
Magnaplex	20 gal. drum 55 gal. drum	Apply Magnaplex as a rescue treatment or as a proactive approach to water management. The infiltration surfactant in Magnaplex improves water penetration through aggressive turf and thatch, while the hydration component uniformly moves water within the root zone. Better hydration and infiltration results in improved color, quality and volumetric water content.	5 oz./1000 sq. ft./month
Vivax	2.5 gal.	Vivax is a combination of new surfactant technologies designed to manage water across a wide range of conditions. The infiltration surfactants in Vivax moves water through thatch and into tight soils. Vivax also contains two unique polymers, one that resists microbial breakdown and another that produces uniform volumetric water content throughout the turf grass root zone.	5 oz./1 gal. water /1000 sq. ft.



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LANDSCAPE, HORTICULTURE AND ARBORIST

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LANDSCAPE AND ARBOR SOLUBLE FERTILIZER

LANDSCAPE AND ARBOR SOLUBLE FERTILIZER			
PRODUCT	U/M	DESCRIPTION	RATE
Doggett XL 15-30-15 + Humic Acid & Micros	2 kg 10/cs	Flower and fruit formulation. Superior Solubility	2 kg = 4.2 lbs. Mix 2 lbs per 100 gl of solution
Grigg Bros. Nutragreen 5-10-5	2.5 gl 55 gl	Designed for turf and landscape ornamental use. A complete balanced formula with naturally chelated micronutrients. Makes a true solution that is completely absorbed by the leaf tissue for efficient use and rapid response. Micros include B, Cu, Fe, Mn and Zn,	1/2 fluid oz per gallon of spray solution
ReGenerate 18-3-6 Fast Release	2.5 gl 55 gl	ReGenerate 18-3-6 Fast Release is an economical specialty fertilizer that provides rapid delivery of nutrients to plants with the classic 6-1-2 ratio analysis. Suitable for foliar or root applications.	Foliar: 1/2 fluid oz per gallon of spray solution Soil: 3.2 oz / gallon water. Apply 5 gallons solution per inch DBH
ReGenaMIN 0-0-1 + Micros	2.5 gl 55 gl	A micronutrient package containing Fe (3%), Mn (1%), Mg (1%), Zn (0.25%), B (0.02%), Cu (0.1%). The carrier is a combination of highly plant-available potassium acetate and a proprietary, tank mix compatible silica package. Organic acids and amino acids are added to enhance uptake. and nutrient availability.	Foliar: 1/2 fluid oz per gallon of spray solution Soil: 3.2 oz / gallon water. Apply 5 gallons solution per inch DBH

LANDSCAPE AND ARBOR SOIL INJECTED FERTILIZER

PRODUCT	U/M	DESCRIPTION	RATE
Doggett XL 12-24-24 + Humic acid & Micros	30 lb	XL 12-24-24 Fall Tree Fertilizer is formulated for root growth. Root Growth continues into late fall and early winter and fertilizer applied during this period is very beneficial to the tree. The low nitrogen level reduces potential for soft top growth in fall.	15 lb per 100 gal water. Apply 5 gallons per inch DBH
Doggett XL 32-7-7 + Humic acid & Micros	30 lb	Professional arborist formulation. 58% Powder Blue Nitroform. Humic acid supplies a substrate for bacteria to thrive - improves season long Nitrogen availability. Low salt, chloride free.	15 lb per 100 gal water. Apply 5 gallons per inch DBH
Doggett XL 30-7-10 + Humic Acid and Micros.	30 lb	Professional arborist formulation designed for use on evergreen trees and plants. 38% Powder Blue Nitroform. Humic acid supplies a substrate for bacteria to thrive - Contains micronutrients (Cu, Fe, Mn, S, Zn) and acidifying components	15 lb per 100 gal water. Apply 5 gallons per inch DBH
PHC For Trees 11-22-22	8 lb	Supplies and sustains mineral nutrients for growth, vigor and health in trees. Standard fertilizer with micronutrient package, microbe- based renewable fertility system and Terra-Sorb surfactant. Promotes uniform distribution, improved solubility and reduced leaching of mineral nutrients	See label for rates
PHC For Trees 27-9-9	8 lb	50% slow release Nitrogen. Supplies and sustains mineral nutrients for growth, vigor and health in trees. A standard fertilizer with a balanced micronutrient package, microbe-based renewable fertility system and a proprietary soil surfactant to promote uniform distribution.	See label for rates

LANDSCAPE GRANULAR FERTILIZERS

Product	U/M	Description	Coverage
Woodace A.C.R.E. 12-3-6	50 lb	Woodace® A.C.R.E. 12-3-6 is specially formulated for Azaleas, Conifers, Rhododendrons, and Evergreens that thrive in acidic soil. Woodace® A.C.R.E. is also ideal for fertilizing plants where micronutrient availability is limited by high soil pH.	Broadcast for Groundcovers: 8.3 lb per 1000 sq ft Shrubs: 8"-12": 1/4 cup; 12'-18": 1/2 cup; 19"-24": 3/4 cup
Woodace 14-14-14	40 lb	Woodace Flowering Plant Special 14-14-14 is a premium homogeneous fertilizer for maintaining ornamental landscape plants such as foundation plantings, shrubs, ground covers, trees, roses, and flowers.	Broadcast for Groundcovers: 14.3 lb per 1000 sq ft Shrubs: 8"-12": 1/2 cup; 12'-18": 3/4 cup; 19"-24": 1 cup
Myco-Replenish 3-3-3	25 lb 50 lb	Myco-Replenish combines the high quality of EarthWorks Replenish natural organic fertilizers with root stimulating endo and ecto mycorrhizae fungi. Mycorrhizae fungi in combination with the known value of the Replenish compost fertilizer will help to promote extensive root growth, reduce heat and drought stress, improves water and nutrient uptake and can eliminate transplant shock.	Mix with the soil being used to fill the planting hole at the rates shown: Trees: ½ pound (1 cup) for every 1" diameter of trunk. Shrubs: For one gallon containers use ¼ pound (1/2 cup) mixed thoroughly.
Replenish 5-4-5	50 lb	Replenish 5-4-5 is at the core of the Earthworks philosophy: complete nutrition for the plant and the soil. Healthy soil supports a healthy plant. The foundation for this product is mineral rich, egg-layer poultry compost.	Broadcast for ground covers 10 lbs per 1000 sq ft: Shrubs: 1 lb per 1-4Ft of canopy.

LANDSCAPE PLANTING TABLETS

Product	U/M	Description	Coverage
Coretect	250 tabs	Contains Merit and 12-9-4 fertilizer. The systemic insecticide controls troublesome insects while the fertilizer helps make plants stronger and more resistant to environmental stressors.	2 to 3 tablets per inch trunk diameter or foot of shrub height.



LANDSCAPE AND ARBOR ORGANIC FERTILIZERS

Product	U/M	Description	Coverage
Myco-Replenish 3-3-3	25 lb 50 lb	Myco-Replenish combines the high quality of EarthWorks Replenish natural organic fertilizers with root stimulating endo and ecto mycorrhizae fungi. Mycorrhizae fungi in combination with the known value of the Replenish compost fertilizer will help to promote extensive root growth, reduce heat and drought stress, improves water and nutrient uptake and can eliminate transplant shock.	Mix with the soil being used to fill the planting hole at the rates shown: Trees: ½ pound (1 cup) for every 1" diameter of trunk. Shrubs: For one gallon containers use ¼ pound (1/2 cup) mixed thoroughly.
Replenish 5-4-5	50 lb	Replenish 5-4-5 is at the core of the Earthworks philosophy: complete nutrition for the plant and the soil. Healthy soil supports a healthy plant. The foundation for this product is mineral rich, egg-layer poultry compost.	Broadcast for ground covers: 10 lbs per 1000 sq ft Shrubs: 1 lb per 1-4Ft of canopy.
Replenish 3-4-3	50 lb	OMNI CERTIFIED. Replenish 3-4-3 is a naturally mineral rich organic fertilizer. We have used 100% egg layer chicken compost, making this an inexpensive top dressing fertilizer. The core of this formula still follows the recognized EarthWorks Carbon Pyramid, using both short and long chain carbons and a host of naturally digested minerals.	Broadcast for ground covers: 10 lbs per 1000 sq ft Shrubs: 1 lb per 1-4Ft of canopy.
Hollytone 6-4-2	40 lb	100% Natural and Organic Ingredients include Hydrolyzed Feather Meal, Poultry Manure, Bone Meal, Alfalfa Meal, Greensand, Hunates, Sulfate of Potash, Sul-Po-Mag and Elemental Sulfur	Shrubs: One cup per foot of branch spread. Double rate for branch spread 3 feet or larger.
Earthworks Kick	2.5 gl 55 gl	Kick is the "Ultimate Soil Conditioner" that addresses the issues of compaction, drainage, adequate root pore space, microbial stimulation, and plant nutrition. The abundance of ingredients assures that roots are consistently nourished as well as provided with raw materials that assist in stimulating the eco-system surrounding the roots. Kick also aids in the removal of toxic levels of root damaging salts.	Ornamentals- 4 oz. per 2 gallons of water, drenched into the soil. These applications should be diluted at least 50:1. Transplants- 8 oz. per 2 gallons of water, drenched around roots at time of planting
Earthworks Trilogy	2.5 gl 55 gl	Trilogy TBS is the "TOTAL Bio-Stimulant" addressing plant, root and microbial needs. The "bio" in bio-stimulant addresses much more than just the plant, and Trilogy TBS addresses the needs of the entire plant/soil matrix. In today's high pressure turf and ornamental markets, having a total bio-stimulant in one package will not only provide results, but will also make applications easier. Trilogy TBS will reduce plant stress, open tight soils, release nutrients from the soil, sequester salts and promote deep rooting.	Ornamentals- 8 oz. per 2 gallons of water drenched into the soil. Transplants- 10 oz. per 2 gallons of water drenched around roots at time of planting

Myco-Replenish 3-3-3

MYCORRHIZA 

GRANULAR PRE- EMERGENT HERBICIDES FOR ORNAMENTAL BEDS

GRANULAR PRE- EMERGENT HERBICIDES FOR ORNAMENTAL BEDS

PRODUCT	U/M	DESCRIPTION	RATE
Broadstar	50 lb.	<u>Contains .25% flumioxazin.</u> Granular selective pre-emergence for control of weeds in ornamental plantings and container grown ornamentals.	3.4 lbs./1000
Casoron 4G (Dyclomec)	50 lb.	<u>Contains 4% dichlobenil.</u> Granular selective pre-emergent for control of weeds in ornamental plantings. Apply in cool weather	2–3 lbs./1000 sq. ft. in ornamental beds.
Crew	50 lb.	<u>Contains 0.5% isoxaben and 0.25% dithiopyr.</u> Using Verge granule technology, Crew™ specialty herbicide is an easy-to-use preemergence granule solution for landscape bed needs. Crew will provide season-long, broad-spectrum preemergence control of a wide variety of grassy and broadleaf weeds.	150 - 200 lb / acre
Freehand 1.75G	50 lb	<u>Contains: 0.75% dimethenamid-P that's combined with 1% pendimethalin.</u> This new active ingredient for use around ornamentals & in beds. Unique combination controls many annual grasses, susceptible sedge species and many small-seeded broadleaf weeds.	2.3–4.6 lbs./1000 sq. ft. in ornamental beds.
RegalKade G	50 lb.	<u>Contains 0.5% prodiamine.</u> Granular formulation for use in ornamental plantings. Provides 4–6 months of control of many grassy weeds. Safe for over-the-top applications in a wide range of plant material.	3–6 lb./1000 sq. ft. See label.
RegalStar G	50 lb.	<u>Contains 0.2% prodiamine and 1.0% oxadiazon.</u> A unique premixed formulation in an easy to spread granule. Provides control of grassy and broadleaf weeds in ornamental beds and turf.	4.5 lb./1000 sq. ft.
Snapshot 2.5 DG	25 lb.	<u>Contains 2% trifluralin and 0.5% isoxaben.</u> On a DG Carrier. Selective pre-emergent controls a wide range of broadleaf weeds and annual grasses.	2.3–4.6 lb. /1000 sq. ft.
Snapshot 2.5 TG	50 lb.	<u>Contains 2% trifluralin and 0.5% isoxaben.</u> On a Verge carrier. Selective pre-emergent controls a wide range of broadleaf weeds and annual grasses.	2.3–4.6 lb. /1000 sq. ft.
Specticle G	50 lb.	<u>Contains 0.0224% Indaziflam.</u> Specticle G is a versatile, pre-emergent herbicide that sets a new standard for residual control at the lowest use rates on the market. It helps maintain premium, weed-free landscape for the entire growing season	2.3 lb. to 4.6 lb. per 1000 sq. ft.
Treflan 5G	40 lb.	<u>Contains .5% trifluralin.</u> A selective pre-emergence for the control of certain annual grasses and broadleaf weeds in ornamental beds.	1.8 lb./1000 sq. ft.

SPRAYABLE PRE-EMERGENT HERBICIDES FOR ORNAMENTAL BEDS

PRODUCT	U/M	DESCRIPTION	RATE
Barricade 4F	1 gal. 30 gal.	<u>Contains 40.7% prodiamine.</u> Selective pre-emergent provides residual control of grassy and broadleaf weeds in ornamental plantings. Inhibits weed seed germination and root development with up to 26 weeks of control with one application. Excellent control of crabgrass. Lower environmental impact formulation that eliminates leaching.	0.23–1.1/ 1000 sq. ft. 21–48 oz./acre
Dimension 2 EW	2.5 gal.	<u>Contains 24% dithiopyr.</u> Concentrated water based formulation with 2 lb. of active ingredient.	3.3–5.5 tsp./1000 sq. ft. 1.5–2.5 pt./acre
Dimension Ultra 40 WP	8 x 5 oz.	<u>Contains 40% dithiopyr.</u> PRE and POST emergent control of grassy and some broadleaf weeds with minimum movement in soil. Non-staining. Comes in a water dispersible packet.	2–4 pouches/acre.
Gallery SC	2 gal qt	<u>Contains 45.45% isoxaben.</u> Outstanding pre-emergent control of broadleaf weeds in turfgrass and a wide array of woody ornamentals and perennials.	0.3 oz to 0.7 oz / 1000 sq ft
Pendulum Aqua-Cap	2.5 gal.	<u>Contains 38.7% pendimethalin.</u> Pre-emergent control on certain broadleaf weeds and annual grasses.	1.1–3.1 oz./1000
Specticle Flo	18oz. 1 gal.	<u>Contains 20% indazifam.</u> Specticle FLO is a new tool for pre-emergent weed control, providing broad spectrum control of grassy weeds including Poa annua, crabgrass, goosegrass and more than 60 broadleaf weeds in landscape ornamentals.	2.3 lb. to 4.6 lb. per 1000 sq. ft.
Sureguard SC	.05 gal	<u>Contains 44% flumioxazin.</u> SureGuard SC delivers long lasting residual control of grass and broadleaf weeds in a new convenient liquid formulation. For use in landscape plantings, aquatic areas and bareground applications.	8–12 oz./acre
Tower	.5 gal.	<u>Contains 63.9% dimethenamid-p.</u> Broad spectrum pre-emergent herbicide with new active ingredient for control of broadleaves, grasses and seeds in ornamentals.	21–32 oz./acre

HORTICULTURAL FUNGICIDES

PRODUCT	U/M	DESCRIPTION	RATE
AgriFos	2.5 gal.	Agri-Fos is a unique fungicide with curative and protective activity against many pathogens of landscape ornamentals and trees. It is quickly absorbed by plant foliage, bark and roots and is distributed systemically throughout the plant. Once inside it turns on the natural defense mechanisms of the plant to resist invasion by disease causing pathogens. If diseases are already present it helps the plant to kill the pathogen invaders by curative activity while protecting new growth.	1 qt. to 2 qt. per 100 gal. spray For basal bark treatment mix 1 gal. Argifos with 1 gal. water and add 6.4 oz. of Pentra-Bark
Arbotect 20-S	1 gal.	<u>Contains 26.6% thiabendazole hypophosphite.</u> Preventive liquid trunk injection controls Dutch Elm Disease and Sycamore Anthracnose. Effective for 3 years following application.	DED = 12 oz/5 inch DBH, Sycamore Anthracnose = e = 8 oz/5 inch DBH
Armada 50 WDG	2 lb. 6/case	Contains 8.33% trifloxystrobin and 41.67% triadimefon. The Als of Compass and Bayleton. Broad spectrum control of foliar diseases such as Anthracnose, Scab Root, Leaf Spot, Black Spot & Powdery Mildew.	3 – 9 oz./100 gal.
Banner MAXX II	1 gal.	<u>Contains 14.3 % propiconazole.</u> A systemic control of Apple Scab, Rusts, Powdery Mildew, Tip Blight, and Black Spot, Leaf Spot & Anthracnose.	2 – 24 oz./100 gal.
Bayleton 50	4 x 5.5 oz. 4/case	<u>Contains 50% triadimefon.</u> Systemic control of Flower Blights, Leaf Blight/Spots, Powdery Mildew, Rusts and Tip Blight on many annual and perennial flowers, shade trees and ornamentals.	5.5 oz/ 68.75 – 137.5 gal.
Compass 50 WG	1 lb. 4/case	<u>Contains 50% trifloxystrobin.</u> Broad spectrum strobiluran. It can coat entire leaf surfaces by vapor transfer to adjacent leaves.	1/2 – 4 oz./ 100 gal.
Daconil Ultrex	5 lb. 4/case	<u>Contains 82.5% chlorothalonil.</u> THE BROADEST OF CONTACT FUNGICIDES. For ornamentals on residential properties. For control of Leaf Spots, Anthracnose, Rust, Needlecast.	1 – 2.5 lb./ 100 gal.
Daconil Weatherstik	2.5 gal. 2/case	<u>Contains 54% chlorothalonil</u> THE BROADEST OF CONTACT FUNGICIDES. For use on residential ornamental plants.	1 – 1.375 pt./ 100 gal.
Heritage	1 lb. 6/case	<u>Contains 50% azoxystrobin.</u> Strobiluran chemistry controls Leaf and Twig Blights, Downy Mildew and Powdery Mildew, Leaf Spots, Rust, Rhizoctonia, Fusarium, Botrytis.	1 – 4 oz./ 100 gal.
Medallion WDG	8 oz. 4/case	<u>Contains 50% fludioxonil.</u> Broad spectrum contact controls Botrytis, Alternaria and Rhizoctonia. Good starter strategy for Rhizoctonia Damping Off. Tank mix with Subdue or Banol for complete root rot control.	1– 2 oz./ 100 gal.
Pageant Intrinsic	1 lb. 4/case	12.8% Pyraclostrobin + 25.2% Boscalid. Unique combination of AI's for excellent long lasting control of Anthracnose, Crown and Basal Rots, Leaf Spots, Phytophthora, Powdery Mildew, Botrytis, Rust, and scab.	4 – 18 oz./ 100 gal.
Spectro 90 WDG	24 lb	Contains 72% chlorothalonil and 18% thiophanate-methyl. Spectro® 90 WDG is a combination of two broad-spectrum fungicides. It has contact and systemic properties that prevent and control disease in annual and perennial flowers, as well as bedding plants, groundcovers, trees and shrubs.	1 to 2 lbs / 100 gal
Subdue MAXX	1 gal.	<u>Contains 22% mefenoxam.</u> Systemic control of Phytophthora Root Rot, Crown Rot and Shoot Blight. Soil drench or foliar spray.	See label for details.
Transom 4.5F	2.5 gal.	<u>Contains thiophanate-methyl.</u> Broad spectrum control of woody ornamental and herbaceous perennial diseases including Scab, Anthracnose, Powdery Mildew, Leaf Spots and others.	See labels for rates.

LANDSCAPE INSECTICIDES AND MITICIDES

LANDSCAPE INSECTICIDES AND MITICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Acelepryn	64 oz.	<u>Contains 18.4% chlorantraniliprole.</u> Controls leaf feeding caterpillars, aphids, lace bug, birch leafminer, clearwing borers and white grubs.	<u>Foliar:</u> 1 - 16 oz / 100 gal. <u>Drench:</u> 0.0625 oz to 0.25 oz per inch DBH
Arena 50 WDG	40 oz.	<u>Contains 50% Clothianidin.</u> Controls Aphids, Mealybugs, Whiteflies, White Grubs, Leafhoppers, Apple Maggot, Leafminers, Soft Scales, Leafrollers, Oriental Fruit Moth. Labeled for outdoor landscapes, interior plantscapes, & residential fruit trees. Labeled as a drench or foliar spray.	.63 – 3 oz./ 100 gal
Avid .15 EC	1 gal.	<u>Contains 2% Abamectin.</u> For control of leafminer & mites including Two-Spotted Spider, Spruce Spider, Tarsonemid, and Eriophyid Mites.	4 – 8 oz./100 gal.
Bifenthrin	1 gal.	<u>Contains 7.9% bifenthrin.</u> Pyrethroid for broad spectrum insect control for use around residential and commercial properties. Not restricted use. Primarily controls leaf feeding insects.	.125 – 1.0 oz./ 100 gal.
Conserve SC	1 Quart	<u>Contains 11.6% spinosad.</u> Provides excellent control of Lepidopterous Pests, Sawflies, Leafminers and Elm Leaf Beetle. Research shows good safety to ornamental plants and beneficial insects. Labeled for use on many fruits & vegetables.	6 – 22 oz./ 100 gal.
Distance IGR	1 Quart	<u>Contains 11.23% pyriproxyfen.</u> Insect growth regulator. Controls: scale in woody ornamentals. Translaminar movement in foliage controls insects and suppresses egg hatch. Fits well with IPM to manage insect resistance.	6 – 12 oz/ 100 gal.
Forbid 4F	8 oz.	<u>Contains 45.2% spiromesifen.</u> A new chemistry with a unique mode of action to control all life stages of most mite species. Longest mite control available.	1.4 – 4 oz. / 100 gal.
Floramite	Quart	<u>Contains 22.6% bifenazate.</u> Rapid knockdown and long residual control of Two-Spotted Spider Mite, European Red Mite, Spruce Spider Mite and others. Shows excellent safety to beneficial/predatory mites.	2 – 4 oz./ 100 gal.
Hexygon DF	6 oz.	<u>Contains 50% hexythiazox.</u> A highly selective miticide with ovicidal/larvicidal activity on Tetranychid Mites including Two-Spotted and European Red Mites.	1 – 2 oz./ 100 gal.
Lucid	Quart 10/case	<u>Contains 2% abamectin.</u> Ornamental pest control of Mites and Leafminers. Suppresses: Aphids, Thrips and Whiteflies.	4 – 8 oz./ 100 gal.
Mavrik	1 gal	<u>Contains 22.3% tau-fuvalinate.</u> Broad spectrum pyrethroid controls Aphids, Thrips, Mites, Whiteflies, Caterpillars, Elf Leaf Beetle, Leafhoppers and Black Vine Weevils. Fits well into an IPM program.	4 – 10 oz./ 100 gal.
Meridian 25 WG	17 oz.	<u>Contains 25.0% thiomethoam.</u> Neonicotinoid controls a host of ornamental pests including: Aphids, Lacebugs, Leaf Beetles, Tent Caterpillars, Adelgids, Soft Scales.	2 – 8.5 oz./ 100 gal.
Merit 2F	1 gal	<u>Contains 21.4% Imidicloprid.</u> Broad spectrum control of most insects except caterpillars, soft scale, and round-headed borers. Foliar spray rate is 1.5 oz/100g. As a drench or roots zone injection apply 0.1 to 0.2 oz/inch DBH or shrub height. For Trees with greater than 15 inch DBH, borer control rates as high as 0.4 oz/inch DBH are permitted.	See product description.
Onyx	1 Quart	<u>Contains 23.4% Bifenthrin.</u> Higher concentration EC Formulation of Bifenthrin mainly used as a trunk spray for borer control	2.6 – 12.8 oz./ 100 gal.
Orthene WSP	3 x .33 lb. 12/case	<u>Contains 75% acephate.</u> Broad spectrum control of leaf feeding insects & Pine Tip Moth Larvae.	.33 – 1 lb./100 gal.

LANDSCAPE INSECTICIDES

LANDSCAPE INSECTICIDES

PRODUCT	U/M	DESCRIPTION	RATE
Provaunt	10 oz.	Contains <u>20% indoxacarb</u> . Water dispersible granular controls numerous lepidopterous larvae including: Armyworms, Cutworms, Tent Caterpillars, Bagworms, Gypsy Moth, European Crane fly and more.	1.25 – 5 oz./100 gal.
Safari 20 SG	3 lb.	Contains <u>20% dinotefuran</u> . Neonicotinoid with excellent control of Adelgid, Lacebug, Psyllid, Scale, Whiteflies, adult Japanese beetles. Labeled for use on indoor and outdoor ornamentals, in greenhouse, nursery and landscape plants. Foliar spray or basal drench. Low use rates. Labeled for control of armored scale & round-headed borers.	<u>Spray</u> : 4–8 oz./100 gal. <u>Drench</u> : 12–24 oz./100 gal. See label.
Scimitar CS	16 oz.	Contains <u>9.7% lambda-cyhalothrin</u> . Pyrethroid based insecticide for broad spectrum control of ornamental and turf pests.	1.5 – 5 oz./100 gal.
Sevin SL	2.5 gal.	Contains <u>43% carbaryl</u> . Controls a wide spectrum of insects including: Ants, Birch Leaf Miner, Bagworm, Boxelder Bug, Gall Wasps, Holly Leaf Miner, Eriophyid Mites, Japanese Beetle, Sawflies and Bark Beetles.	24 – 32 oz./100 gal. 2.5 oz./1 gal. for Bark Beetle
Tempo SC Ultra	240 ml. 12/case	Contains <u>11.8% b-cyfluthrin</u> . Synthetic pyrethroid controls a wide spectrum of pests including: Caterpillars, Lacebug, Sawfly Larvae, Boxelder Bugs Scale and others. Fits well into an IPM program.	1.5 – 5.4 oz./100 gal.
Tengard (Permethrin)	1.25 gal	Contains <u>36.8% permethrin</u> . Compare to Astro. Broad spectrum horticultural control of Ants, Aphids, Bagworms, Leafminers, Lace Bugs, Beetles, and Borers. An excellent replacement for chlorpyrifos products. Rate for bark borers: 32 - 64 oz./100 gal.	4–8 oz./100 gal.
Zylam	32 oz	Contains <u>10% dinotefuran</u> . A liquid formulation of dinotefuran, Zylam® Liquid Systemic Insecticide provides exceptional control of a broad spectrum of listed chewing and sucking insects. Used as a drench, soil injection, or bark banding application, Zylam Liquid features translaminar activity to quickly move through the leaf and control insects that hide on the underside of leaf surfaces.	<u>Spray</u> : 7.25 - 16 oz / 100 gl <u>Bark banding</u> : 0.25 - 0.51 oz/inch DBH <u>Drench</u> : 0.18 - 0.4 oz / 1 ft shrub height
BT, SOAPS AND OILS			
DiPel Pro DF	1 lb.	Contains <u>54% Bacillus thuringiensis var. kurstaki</u> . Dry formulation. Effective for a wide range of caterpillar pests. Labeled for organic production.	¼ lb. – 1 lb./ 100 gal.
M-Pede Soap	2.5 gal.	Contains <u>49% Potassium salts of fatty acids</u> . An insecticidal soap, M-Pede is soft on the environment but tough on bugs. Controls Mites, Aphids, Whiteflies, Leaf Rollers and Powdery Mildew. OMRI Listed.	1 qt. – 2 gal./100 gal.
Purespray 10E Spray Oil	2.5 gal. 55 gal.	Contains <u>99.9% pure grade of miscible oils</u> . Controls of horticultural pests such as mites, scale, aphids, adelgids, plant bug, sawfly & webworms.	0.8 – 3.1 gal./ 100gal
Purespray Green Spray Oil	2.5 gal. 30 gal	Contains <u>98% Ultra pure mineral oil</u> . Clear, no aromatic toxins, OMRI approved and is listed as a group 3 (chemicals of least concern) on EPA tolerance list. A highly refined horticultural oil, safe for summer sprays and preferred choice for horticulturists when the weather is warm.	0.75 – 2 gal./ 100 gal.



WEDGLE / ORNAMENTAL GROWTH REGULATORS / REPELLENTS

PRODUCT	U/M	DESCRIPTION	RATE
ORNAMENTAL GROWTH REGULATORS			
Atrimmec	1 gal.	<u>Contains 18.5% dikegulac-sodium.</u> A systemic, foliar applied PGR that interrupts apical growth and reduces pruning up to 50%. It creates a fuller more compact shape. Also labeled for chemical "pinching" of flowering plants.	1–3 oz./gal. Spray just short of runoff. Read label for plant specific rates.
Cutless .33G	21 lb. pail	<u>Contains 0.33% flupridinol.</u> Systemic plant growth regulator for shoot growth suppression in landscape ornamentals, resulting in more compact growth form and reduced trimming, in an easy to apply granular formulation. See label for rates for herbaceous perennials and groundcovers.	<u>Woody Ornamentals</u> Per 100 sq. ft use: >4': 11.2–16.8 oz 4'–8': 22.4–33.6 oz.
Florel Fruit Eliminator	2.5 gal.	<u>Contains 3.9% ethephon.</u> Contact PGR prevents nuisance fruit on ornamental trees and shrubs such as Sweet Gum, Apple, Crabapple, Cottonwood and others. Timing of spray is critical for optimal results.	24–32 oz./10 gal. Spray buds and blooms til thoroughly wet.
Shortstop	1 gal.	<u>Contains 21.8% paclobutrazol.</u> Same AI as Cambistat. Tree Growth Regulator inhibits gibberellic acid production. Soil Injection or basal drench application.	See Label. Rates depend on species and DBH.
ANIMAL REPELLENTS & BAITS			
Deer Pro Plant Protectant	2.5 gal	<u>Contains 25.8% Thiram.</u> A winter animal repellent that reduces browsing and chewing damage from deer, rabbits and voles. Formulated for easy mixing. Low odor.	1 part Deer Pro to 2 parts water
Deer Scram	25 lb pail	Deer Scram is an all-natural, biodegradable deer repellent that guarantees pesky white-tailed, black- tailed and mule deer will stop feeding on your prized gardens, shrubs and trees for 45 to 60 days per application	See label instructions
Flight Control Plus Goose Repellent	1 gal.	<u>Contains 50% 9,10-anthraquinone.</u> Anti-feedant. Geese experience a temporary but very effective digestive irritation, usually within 20 minutes, when they eat treated turf. Visual Warning. Geese have the unique ability to recognize FlightControl® PLUS in the ultraviolet light spectrum.They associate this color with the digestive reaction and conditioned geese move out of treated areas.	4 oz./1 gal water. Apply li<ne mist to turf. 1 bottle treats 1acre.
Plantskydd Deer Repellent	1.3 gal. RTU	<u>Contains 16.7% porcine or bovine dried blood.</u> Animal repellent which acts as a browse deterrent. Repels nuisance animals by smell before they feed. Lasts for 3-6 months. No mixing necessary. Used in Sweden and the U.S. since 1994 in the forest industry.	1 quart: 100 -12" plants. 1.3 gallon: 400-600 12" plants.
Talpirid Mole Bait	Box of 20 Worms	<u>Contains 0.025% bromethalin.</u> Talpirid is the only product submitted to EPA with "Laboratory efficacy tests" on moles. Scientifically designed and tested to mimic a mole's natural food source. Moles may consume a lethal dose in a single feeding.	Place worm bait into active tunnel
ARBORSYSTEMS TREE INJECTION TECHNOLOGY			
Wedge Direct-Inject QC Kit	Each	Wedge Direct-Inject QC Kit simplifies tree injections. Kit includes: injection unit, aluminum carry case, 6 needles, 2 bottles of water, WedgeCheck punch, 40 WedgeChecks, defector shield, safety glasses, maintenance tool, tape measure, O-rings, instructions, registration card, and baseball cap.	
Pointer™ Insecticide	120 ml.	<u>Contains 5% imidacloprid</u> systemic insecticide – same active ingredient as Merit. Controls: Adelgids, Armored Scales (suppression), Aphids, Elm Leaf Beetle, Black Vine Weevil Larvae, EAB, Flatheaded Borers (including Bronze Birch and Alder Birch), Japanese Beetle (adult), Lacebug, Leafhopper, Leafminer, Mealybug, Sawfly Larvae, Pine Tip Moth Larvae, Psyllid, Scale Insects & more. See label for	
Pinscher™ PGR (Atrimmec)	120 ml.	<u>Contains 18.5% dikegulac-sodium.</u> Injectable plant growth regulator for use on certain landscape ornamental trees to reduce the frequency of pruning. Also aids in the reduction of seed and fruit production to a cleaner landscape.	
Greyhound™ Insecticide	120 ml.	<u>Contains 1.9% abamectin.</u> Insecticide with the same AI as Avid. Systemic control for landscape ornamentals. Controls: Elm Leaf Beetle, Lacebug and more.	
Shepherd™ Fungicide	120 ml.	<u>Contains 14.3% propiconazole.</u> Systemic fungicide suppresses selected diseases in trees. Including Sycamore Anthracnose, Scab in Crabapple and more.	
Boxer Insecticide	120 ml.	<u>Contains 4% emamectin benzoate.</u> Systemic insecticide for control of Emerald Ash Borer as well as other mature and immature insect and mite pests of deciduous and coniferous trees.	

ARBORJET®

Revolutionary Plant Health Solutions

PRODUCT	U/M	DESCRIPTION
TREE-äge (RUP)	1 liter	Contains 4% emamectin benzoate. TREE-äge provides two-year control of listed arthropod pests in deciduous and coniferous trees and palms. Effectives for: Emerald Ash Borer; Western, Southern and Mountain Pine Beetles; Ambrosia Beetles; Gypsy Moth; Winter Moth; Flatheaded Borers; Bagworm; Leafminers (Lepidoptera, Coleoptera, Hymenoptera) and many more.
TREE-äge G4	1 quart	Contains 4% emamectin benzoate. TREE-äge G4 is a general use pesticide, eliminating the need for additional licensing and paperwork in most states. Each quart treats approximately 37 trees at 10" DBH, controlling Emerald Ash Borer, Pine Bark Beetles, Leaf Chewing Caterpillars and more for up to two years.
TREE-äge R10 (RUP)	1 pint	Contains 9.7% emamectin benzoate. Newest addition to the highly effective line of TREE-äge products with the lowest dose guidance, and quickest injection times. Effectives for: Emerald Ash Borer, Inland Shot Hole Borer; Spruce, Western, Southern, and Mountain Pine Beetles; Leaf Feeding Caterpillars; Bagworms; Webworms; Leafminers; Conifer Mites; and more.



FSeries F12

The first-ever 120 psi micro-infusion system, designed for injecting trees with maximum speed, accuracy, and ease. Comes with two bottle sizes and an easy fill cap, for safety on the job, and the broadest flexibility to treat with higher volume chemistries like fungicides, while also providing lower volume insecticides equal opportunity.



QUIK-jet AIR Kit

Lightweight, air-powered injection system, featuring a one-thumb switch operation, precise dose measuring in a rugged aluminum body, weighing less than 2 pounds. A favorite of municipal treatment programs.



Trunk injection is the most effective alternative to spraying or soil applied control products for tree insect or pathogen control. Arborjet's trunk injection equipment injects formulations directly into the trunk where it is quickly taken up by the vascular system and distributed throughout the tree. With over 20 years of research and development, our trunk injection systems and formulations are proven to give the best results when protecting trees from pests. The Arborjet drill-plug-inject method is easy to learn and application is quick. The Arborjet trunk injection system is a perfect fit for today's professional arborist.

PRODUCT	U/M	DESCRIPTION
ACE-jet	20 x 15 gram	<u>Contains 97.4% acephate.</u> Effective against a range of moths, caterpillars, aphids, adelgids, flies, and others.
Arbor-OTC	1 ounce 5 ounce	<u>Contains 36.7% oxytetracycline.</u> Arbor-OTC is a systemic water soluble systemic antibiotic for the treatment of bacterial infections of non-food bearing trees and palms. Effective for: Ash Yellows, Bacterial Leaf Scorch, Fire Blight, Leaf Spot, Lethal Yellows, Phytoplasma Disease, Texas Phoenix Palm Decline. Longer shelflife than liquid antibiotics
IMA-jet	1 liter	<u>Contains 5% imidicloprid.</u> Micro-injectable systemic insecticide for the management of specific insect pests in forests, trees, landscape ornamentals, and interior plantscapes. Effective for: Adelgids, Aphids, Leaf Beetles (including Elm and Willow Leaf Beetles), Borers (including Emerald Ash Borer, Asian Longhorned Beetle and Bronze Birch Borer), Lacebugs, Leafhoppers, Leafminers, Mealybugs, Psyllids, Scale Insects, and Whiteflies.
IMA-jet 10	1 liter	<u>Contains 10% imidicloprid.</u> IMA-jet 10 is a Micro-injectable systemic insecticide used in the management of specific insect pests. It is the same IMA-jet formulation you trust, in a 10% concentration. Effective for: Adelgids, Aphids, Leaf Beetles (including Elm and Willow Leaf Beetles), Borers (including Emerald Ash Borer, Asian Longhorned Beetle and Bronze Birch Borer), Lacebugs, Leafhoppers, Leafminers, Mealybugs, Psyllids, Scale Insects, Spotted Lanternfly, and Whiteflies.
NutriRoot	8 ounce	<u>Contains 2.0% N, 2.0% P, 3.0% K, 0.75% Fe, 0.5% Mn, 0.25% Zn, 22.0% Humectants, 4.0% Non-ionic Surfactant, 4.0% Seaweed Extract, 2.0% Humic Acid.</u> NutriRoot 2-2-3 Liquid Soil Applied Fertilizer is a unique blend of nutrients, seaweed extract, humic acid, surfactants, and humectants designed to accelerate root development and to reduce water stress in new plantings, mature trees, and shrubs.
PHOSPHO-jet	1 liter	<u>Contains 45.8% phosphorous acid.</u> PHOSPHO-jet is a systemic fungicide and plant health response elicitor for the suppression of various plant diseases for use in spring or fall. Effective for: Sudden Oak Death, Anthracnose, Phytophthora, Black Spot, Scab, Fire Blight, Root Rot, Bud Rot, Downy Mildew, Canker Blight, and many more.
Propizol	1 liter 1 gallon	<u>Contains 14.3% propiconazole.</u> Propizol is a systemic fungicide for trunk injection or spray application on trees, grasses, shrubs and flowers. Effective for: Oak Wilt, Dutch Elm Disease, Sycamore, Anthracnose, and leaf diseases on Crabapples, plus Conifer Blights/Spots, Powdery Mildew, and Rust. Also effective as a broad spectrum disease control for grasses and ornamental plants.
Shortstop 2SC	1 gallon	<u>Contains 22.3% paclobutrazol.</u> Shortstop 2SC is a systemic plant growth regulator that slows above ground vegetative growth in trees. Effective for: Slowing tree growth, reducing pruning frequency, reducing drought stress, reducing construction damage, enhancing fine root hair growth
Mn-jet Fe	1 liter	<u>Contains 2% Iron, 2% Manganese, 1% Potassium, 0.5% Zinc, 0.1% Copper, 0.1% Boron.</u> Mn-jet Fe is a balanced source of micro-elements for alleviating chlorosis caused by Manganese and Iron deficiencies. Effective for: Leaf yellowing or chlorosis caused by Manganese and Iron deficiencies. Also a good choice for general tree nutrition.

TREE INJECTION TECHNOLOGY



Scientific and Effective Tree Care

The J. J. Mauget Company and their The GENERATION II delivery system offers many advantages over competitive systems including faster and easier to use with up to a full 20 ml capacity. No special tools needed for application, no bark separation or high pressure damage, no "O" rings, truly leak proof, completely closed system with a hermetically sealed capsule, a simple two piece system engineered to provide consistent safe performance for many years to follow.

PRODUCT	U/M	DESCRIPTION
Abacide 2	2 ml	<u>Contains 1.9% abamectin.</u> Abacide 2 provides excellent control of mites with a long residual and improved formulation assisting in faster uptake and mobility in Conifers and other trees and plants.
	3 ml	
	4 ml	
Abacide 2 HP	1 liter	<u>Contains 1.9% abamectin.</u> Abacide 2 provides excellent control of mites with a long residual and improved formulation assisting in faster uptake and mobility in Conifers and other trees and plants.
Abasol	4 ml 6 ml	<u>Contains 1.7% debacarb, 0.3% carbendazim and 0.46% abamectin.</u> A combination of insecticide and fungicide in one capsule. A complex of pests, not a single problem, often causes the decline of trees and plants; in addition, insects are often vectors of disease
ArborFos	5 ml 7.5 ml	<u>Contains 45.8% mono and di-potassium salts of phosphorous acid.</u> ArborFos inhibits fungal growth through stimulation of the plant's own natural defense systems.
ArborFos HP	1 liter	<u>Contains 45.8% mono and di-potassium salts of phosphorous acid.</u> ArborFos inhibits fungal growth through stimulation of the plant's own natural defense systems.
Dinocide	3 ml 4 ml	<u>Contains 12% dinotefuron.</u> Dinocide is translaminar , its active ingredients can pass from a tree's xylem to its phloem making it mobile both in the xylem and the phloem. Dinocide can yield results in as little as three (3) days.
Dinocide HP	1 liter	<u>Contains 12% dinotefuron.</u> Dinocide is translaminar , its active ingredients can pass from a tree's xylem to its phloem making it mobile both in the xylem and the phloem. Dinocide can yield results in as little as three (3) days.
Fungisol	4 ml 6 ml	<u>Contains 1.7% debacarb and 0.3% carbendazim.</u> Fungisol® has been shown to be effective against more than 30 diseases on a large variety of ornamental, conifer, palm and other trees. Also has demonstrated efficacy on some soil borne pathogens.
Imicide	2 ml 3 ml 4 ml	<u>Contains 10% imidicloprid.</u> Effective control of Hemlock Woolly Adelgid, psyllids, flat headed borers, Bronze Birch Borer, aphids, Elm Leaf beetle, lacebugs, leafhoppers, leafminers, mealybugs and more. Fast acting.
Imicide HP	1 liter	<u>Contains 10% imidicloprid.</u> Effective control of Hemlock Woolly Adelgid, psyllids, flat headed borers, Bronze Birch Borer, aphids, Elm Leaf beetle, lacebugs, leafhoppers, leafminers, mealybugs and more. Fast acting.
Imisol	4 ml 6 ml	<u>Contains 1.7% debacarb, 0.3% carbendazim and 5% imidicloprid</u> Combination of fungicide and insecticide for control of a wide range of insects and plant diseases.
InjectaMin FeZn	6 ml	<u>Analysis: 1-0-2, 3%S, 0.13%Cu, 2%Fe, 0.2%Mn, 0.001%Mo, 1.41%Zn.</u> This injection treatment is particularly useful in trees where successful correction of deficiencies cannot be produced by foliage or soil feeding. This injection treatment should be applied no more than once per year.
InjectaMin Mn	6 ml	<u>Analysis: 1-0-1, 1.9%S, 0.13%Cu, 1.67%Fe, 1%Mn, 0.12%Mg, 1.54%Zn</u> Formulated as a micronutrient formulation containing manganese sulfate in a completely enclosed micro-infusion system for palms, maples, citrus and other tree species growing in alkaline soils.
Mycoject Ultra	6 ml	<u>Contains 4.22% oxytetracycline.</u> A systemic aid in suppressing certain ornamental and tree bacterial diseases including: Ash Yellows, Bacterial leaf Scorch, Elm Phloem Necrosis, Fire Blight, etc.
Mycoject Ultra HP	1 liter	<u>Contains 4.22% oxytetracycline.</u> A systemic aid in suppressing certain ornamental and tree bacterial diseases including: Ash Yellows, Bacterial leaf Scorch, Elm Phloem Necrosis, Fire Blight, etc.
Stemix Plus	6 ml	<u>Analysis: 1-1-1, 1.8%Ca, 0.08%Cu, 0.27%Fe, 0.08%Mn, 0.09%Mg, 0.29%Zn</u> An optimum formulation of chelated minerals with a very low salt index and elevated magnesium and calcium, designed to stimulate both foliar and root growth.
Stemix Plus HP	1 liter	<u>Analysis: 1-1-1, 1.8%Ca, 0.08%Cu, 0.27%Fe, 0.08%Mn, 0.09%Mg, 0.29%Zn</u> An optimum formulation of chelated minerals with a very low salt index and elevated magnesium and calcium, designed to stimulate both foliar and root growth.
Tebuject 16	6 ml	<u>Contains 16% tebuconazole.</u> A Triazole fungicide that inhibits sterol synthesis necessary for fungal development. It is traditionally used best in a preventative disease management program, but can suppress existing infections until trees regain additional vigor. Controls anthracnose, Crab Apple Scab and others.
Vigor 53	7.5 ml	<u>Analysis: 0-0-25 (28% Phosphite)</u> Vigor 53 is a Potassium-buffered Mauget tree injection Phosphorous Acid material, providing additional potassium nutrition in addition to phosphite technology. Vigor 53 works well in a total PHC program that emphasizes natural plant health defense systems. The additional potassium aids in leaf thickening, better stem and root development, and stimulated frost or cold damage recovery.



ADJUVANTS

Fisher & Son Company | RESOURCE MANUAL



ANTI-TRANSPIRANTS, BUFFERS, DEFOAMERS, CLEANERS, DRIFT CONTROL, MARKERS

PRODUCT	U/M	DESCRIPTION	RATE
ANTI-TRANSPIRANTS			
AquaLock Anti-transpirant	2.5 gal.	A unique wax dispersion that forms a thin, flexible, water-repellent layer on plant surfaces. AquaLock protects plants against drought, extreme temperatures, wind and sunscald.	4 - 8 oz /gal
Transfilm Anti-transpirant	2.5 gal	A mixture of polyethylenes and polyterpenes that forms an emulsion with water. Provides uniform leaf coverage for use in turf and herbaceous/woody plant material. Coats the leaf surface with a clear, glossy film that remains durable and stable	3 - 12 oz /gal
BUFFERS AND DEFOAMERS			
Convert Compatability Agent	2.5 gal.	Convert eliminates compatibility problems associated with tank mixing UAN solutions or suspension fertilizers with emulsifiable concentrates and flowable control products.	2 - 5 pints /100 gl
Knockdown Defoamer	1 qt.	De-foamer/Anti-foamer. Prevents foam when added first to spray solution and knocks down existing foam in spray tanks. Highly concentrated formulation for low use rates. Add before surfactants or after foam has formed.	1–4 oz./100 gal.
New Balance Acidifier with Antifoam	1 gal	NEW BALANCE is a safe-to-use, citric-based pH acidifier and nonionic surfactant reduces specifically designed to modify spray solution pH when breakdown from alkaline hydrolysis can reduce insecticide performance	Rate is dependent on beginning pH of spray solution
Zap! Defoamer	1 pint	Since 1974, Superintendents around the country have been controlling foam with Zap! Defoamer. Suppressing foam increases filling accuracy, provides better visual level control in spray tanks, and keeps foam down when cleaning spray tanks.	1 tsp per 100 gl
CLEANERS			
Erase Spray System Cleaner	1 qt.	Erase emulsifies oily residues in sprayer lines and hoses while elevating rinsate pH to degrade vulnerable plant protection products.Erase also is effective at removing stains left behind by pigments and dyes from sprayer and equipment surfaces.	1 qt./50 gals
Incide-Out Tank Cleaner	1 qt.	Spray tank cleaner formulation emulsifies and bonds pesticide residues to rinse water for complete purging. Penetrates residue building, won't clog screens, high pH neutralizes organic acids. Contains corrosive inhibitors to	1 qt./100 gals
DRIFT CONTROL			
Border Drift Control Agent	2.5 gal.	Border 2.0 is a concentrated liquid adjuvant for spray droplet management. It enhances the performance of spray applications by modifying the physical characteristics of the spray droplet, improving droplet retention while reducing off-target movement.	3 - 4 pints /100 gl
Direct RS Drift Retardant	1 qt	Reduces drift risk and maximizes pesticide performance by binding ultra-small spray particles into larger droplets.	1 - 4 oz /100 gl
MARKERS			
Bulls Eye Blue Spray Marker	2.5 gal.	Cost effective blue spray marker Washes off easily.	Boom: 8–14 oz./acre Hand gun: 24–32oz./acre Backpack: 1oz./gal.
Runway Foam Marker	1 qt. 12/case	Turf marking foam formulated for turfgrass use. Highly visible foam dissipates to less than 1% of original volume in less than 45 minutes.	3 oz./2 gal. water
Signal Blue EZ Marker Solupak	48 x 2oz cs	Unique packaging eliminates staining during mixing and handling. Temporary blue color dissipates with sunlight and moisture.	1 pak makes 50 gal.
Signal Green EZ Marker Solupak	48 x 2oz cs	Unique packaging eliminates staining during mixing and handling. Temporary green color dissipates with sunlight and moisture.	1 pak makes 50 gal.
Super Signal Green Marker	1 gal.	Highly concentrated low use rate spray pattern indicator. Dissipates quickly with sunlight or moisture. Green for low golfer awareness.	1–2 oz./ 3 gal. 16–32 oz./100 gal.

PENETRANTS/SPREADER-STICKERS, PIGMENTS AND COLORANTS

PRODUCT	U/M	DESCRIPTION	RATE
PENETRANTS / SPREADER STICKERS			
Basal Oil	2.5 gal.	Formulated to mix with herbicides for basal bark cut stump treatments. Use with Garlon 3A	1 part herbicide mixed with 4 - 5 parts basal oil
Chem-Stik Spreader Sticker	1 gal.	Spreader sticker formulated for turf and ornamentals. High quality, low use rate product ensures thorough coverage and wash off resistance of herbicides, contact fungicides and insecticides.	4–8 oz. /100 gal. Up to 16 oz./100 gal.
Compound activator	1 quart	Effectively buffers spray solutions, maximizes spread, enhances plant cuticle and cell wall penetration and reduces the off-target movement of tank mix partners.	1 - 6 pints /100 gl
Delux Surfactant + AMS	2.5 gal.	Biodegradable activator surfactant and ammonium sulfate premix enhances performance of glyphosate and certain postemergence herbicides.	4 - 10 qts /100 gl
LV Low Volume Spray Enhancer	1 quart	Water Conditioning Agent, Surfactant and Humectant is specifically formulated for low volume sprayer applications. The powerful water conditioning system of LV is blended with a non-ionic surfactant to increase product and spray solution efficacy.	16 - 64 oz. /100 gl
Microyl Crop Oil Replacement	1 gal. 2.5 gal.	Crop oil replacement. All the benefits of a Methylated Seed Oil with significantly less phytotoxicity risk. Use 1/2 rate of a standard MSO. Use with Drive XLR8 herbicide.	3-4 pts./100 gal. 0.375–0.5% v/v
Pentra-Bark Basal Bark Penetrant	1 quart	Pentra-Bark is specially designed to aid penetration of fertilizers, nutrients, insecticides, fungicides, and herbicides through the bark	1.5% to 2.5% by volume of spray solution .
Speed Nonionic Siloxane Surfactant	1 gal.	Low foaming, low use non-ionic silicone surfactant ensures coverage and penetration of insecticides, while minimizing dew and reduce topdressing pickup.	6–13 oz. /100 gal.
SYNC Fungicide Activator	1 pt. 12/case	Fungicide activator. The newest performance enhancing adjuvant. Specially formulated to work with contacts, penetrants and systemic fungicides.	1 pint/100 gal.
TURF PIGMENTS / COLORANTS			
Endurant	5 gal.	Endurant Turf Colorant is the authentically vibrant green grass organic pigment made with binders chosen specifically for excellent adherence to turfgrass. This ensures the color remains full and rich, providing a natural looking green that is consistent and long-lasting. Several tones to match any turf species.	8 to 24 oz. per acre
Envy	1 gal	Envy™ is a combination of pigments and spray adjuvants labeled for application to turf, trees or shrubs. Envy may be used to improve color, mask injury or discoloration and improve the coverage of spray droplets on the leaf blade.	16 oz/acre applied in 50 gl water
Green Pig	2.5 gal.	A premium pigment additive specifically formulated for golf courses and sportsturf facilities to enhance and extend aesthetic turf appearance. Green Pig will enhance turf color during the growing season as well as mask dormant turfgrass in the winter months. University research shows that tank mixing Green Pig with Grigg Bros Fairphyte can improve turf performance and quality during times of summer stress.	Cool Season Putting Greens: 10-14 oz./acre Cool Season Fairways: 14-18 oz./acre Warm Season Grasses: 14-18 oz./acre
Green Pig UV	2.5 gal.	Green Pig UV is a premium pigment additive. It provides natural green turf color for up to one month. It also contains a compound that reduces turf exposure to potentially harmful ultraviolet (UV) light, which may improve turfgrass quality. It may also promote more efficient energy capture and reduce oxidative stress. Fast dry time.	Golf Course Putting Greens: 2-4 fl oz per 1,000 sq ft. Apply with 50-100 gallons of water per acre.

EQUIPMENT-SPREADERS

Chapin 82108B Pro Salt and Ice Melt Spreader



This 100 lb capacity commercial grade spreader has a large, 2 piece hopper design with stainless steel Handles, a rugged stainless steel frame, solid linkage for full gate control, spiked auger to help move salt and tear through clumps, 14" pneumatic tires, front and side baffle system for precise control of spread pattern and enclosed metal gears with grease fitting.

Accupro 2000 Rotary



The Accupro 2000 is a high quality professional spreader built for heavy use. It utilizes a Patented helical cone-adjust spread pattern for better accuracy. A heavy duty enamel frame and pneumatic tires come standard.

Chapin 8303C 100-Pound Pro Turf Spreader



The 100-Pound Contractor Turf Spreader has a large 1-piece hopper fully supported by a rugged powder coated steel frame. Rubber-gripped t-handle and solidsteel linkage gate control. The rotary gate is a cast zinc plated agitator to help prevent clumping. Metal gears and 12-inch pneumatic tires. Rain cover and hopper grate are included.

SR-2000 Rotary



New thicker-walled, stainless steel frame. Positive on-off side deflector provides product delivery control. 13" Turf Saver 2 pneumatic wheels. Patented Helical Cone for uniform, consistent spread pattern.

BACKPACK SPRAYERS



The Chapin Tree/Turf Pro Sprayer is an excellent option for the professional landscaper as well as the homeowner. The sprayer comes with a 4-Gallon translucent poly tank with a 4-inch wide mouth opening for easy filling and cleaning, poly cushion grip poly shut-off, adjustable nozzle for a variety of applications, 3-stage filtration system to prevent clogging, poly wand and an innovative pump handle that can be set up for either right or left-hand use. The handle also folds up for compact storage. Padded shoulder straps offer hours of comfortable spraying. Viton seals provide compatibility with fertilizers, weed killers and pesticides.



The Chapin ProSeries Poly Sprayer is ideal for the landscape and turf professional but easily used by the homeowner too. The 2-Gallon translucent poly tank has a 4-inch wide mouth opening for easy filling, cleaning and checking fluid levels. This sprayer features the SureSpray Anti-Clog filter, poly wand, cushion grip poly shut-off, adjustable brass and poly cone nozzles and ergonomic handle for easy carrying. Viton seals provide compatibility with fertilizers, weed killers, and pesticides.



FlowZone® TYPHOON 2.5 - 4 Gallon



FlowZone® STORM 2.5 - 2.5 Gallon

Powered by a 18V Lithium-ion battery, these sprayers results in more efficiency than a manual sprayer. They can be operated continuously for up to 3 hours and spray more than 76 gallons per battery charge at a distance of over 30 feet! Five pressure settings with up to 115 psi pressure (Typhoon) or up to 60 psi (Storm).

SPRAYER CALIBRATION & SPREADER SETTINGS

CALIBRATING A BACKPACK SPRAYER.

What you will need: Measuring tape, Graduated measuring jar, Watch that counts seconds (to help ensure consistent walking speed), calculator, pencil & pad. Accuracy is important here!

1. Fill the sprayer at least half full with a known amount of WATER.
2. Spray a pre-measured area (1,000 square feet, for example) at the same pace you would in the field. Do not overlap swaths.

3. Keeping track of how much water you use, refill the sprayer to the known mark. Write down how much water it took to refill the sprayer. This number equals the amount of spray applied per 1,000 square feet. 1 gallon = 16 cups. Repeat these steps two or three times to get an average.
4. Plug your averaged numbers into this formula: Label rate in ounces/1,000 square feet = Number of ounces of pesticide to add per gallon of water /Refill volume in gallons/1,000 square feet.

CALIBRATE YOUR SPRAYER ACCURATELY

1. In a BROADCAST application, measure the distance, in inches, between two adjacent nozzles.
2. Locate this width in the table to the right and read off the corresponding course distance.
3. For more than one nozzle spraying the same area, as with fungicide, measure the band width of one of the nozzles and see #8 below.
4. In the field to be sprayed, mark off course of the proper distance.
5. Tie quart container to one nozzle on the sprayer so as to catch ALL of that nozzle's spray when sprayer is turned off.
6. Start a distance back from the beginning of the course to get up to operating speed, and turn sprayer ON at beginning of course and OFF at end.

Course Distance Width In Feet		Course Distance Width In Feet	
8"	510'	18"	227'
10"	408'	20"	204'
12"	340'	22"	185'
14"	291'	24"	170'
16"	255'	26"	157'

7. Remove quart container and read volume collected IN OUNCES.
8. For more than one nozzle spraying the same area, as with fungicide, multiply ounces collected by number of nozzles spraying the same area.
9. OUNCES COLLECTED=GAL/ACRE

SGN 90-110 Spreader Settings		1 lb. /1000 sq. ft.	2 lb. /1000 sq. ft.	3 lb. /1000 sq. ft.	4 lb. /1000 sq. ft.	5 lb. /1000 sq. ft.	6 lb. /1000 sq. ft.	7 lb. /1000 sq. ft.
Green's Grade	Pro-scape – Prizelawn Bigfoot	E	F	G	H	J	L	N
	PennMulch – Prizelawn HVO	E	F	G	H	J	L	N
	Cyclone	—	2	2 1/2	3	4	4 1/2	5
	Earthway Rotary	8	10	11	12	14	15	16
	Gandy	18	20	21	22	24	26	28
	Jet-Spred II	1 1/2	2	3	3 1/2	4	4 1/2	5
	Jet-Spred III	2	2 1/2	3	4	4 1/2	5	5 1/2
	Lely HR, 1250, 1500, 2010	—	2 II	2 1/2 II	3 II	4 II	5 II	6 II
	Lely W	—	2 II	2 1/2 II	3 II	4 II	5 II	6 II
	Lesco (letters)	C1	D	E	G	H	I	J
	Lesco (numbers)	9	14	15	16	17	18	21
	Prizelawn CBR III	E	F	G	H	J	L	N
	Prizelawn CBR II	—	1 1/2	2	2 1/2	4	4 1/2	5 1/2
	Prizelawn LF-1	—	1	1 1/2	2	2 1/2	3 1/2	5 1/2
	Prizelawn MPR 1	—	1	2	4	5	6	7
	Scotts RX7	B	C	F	E	E	G	I
	Scotts Accupro 2000, SR-2000	D	E	F	G	H	K	M
	Scotts R8A/SR-1	E	G	H	J	K	L	M
	Scotts AP	E	G	H	J	J	L	M
	Scotts SR2000	E	G	H	J	J	L	M
	Spyker	—	—	1 1/2	2	3 1/2	4 1/2	4 3/4
	Vicon	14	15	16	18	22	24	26

ALWAYS CALIBRATE YOUR SPREADER BEFORE APPLYING ANY PRODUCT.

SPREADER SETTINGS

SGN 140-155 Spreader Settings		1 lb. /1000 sq. ft.	2 lb. /1000 sq. ft.	3 lb. /1000 sq. ft.	4 lb. /1000 sq. ft.	5 lb. /1000 sq. ft.	6 lb. /1000 sq. ft.	7 lb. /1000 sq. ft.
Mid-size Grade	Pro-scape – Prizelawn Bigfoot	D	E	J	K	L	N	R
	PennMulch – Prizelawn HVO	D	E	J	K	L	N	R
	6Cyclone	2	3	4	4 1/4	4 1/2	5	6
	Earthway Rotary	11	12	14	15	15	16	22
	Gandy	21	22	24	25	26	28	34
	Jet-Spred II	3	3 1/5	4	4 1/4	4 1/2	5	6
	Jet-Spred III	3	4	4 1/2	5	5	5 1/2	6 1/2
	Lely HR, 1250, 1500, 2010	2 II	3 II	4 II	5 II	5 II	6 II	7 1/2 II
	Lely W	2 II	3 II	4 II	5 II	5 II	6 II	7 1/2 II
	Lesco (letters)	C1	D	H	I	I	J	M
	Lesco (numbers)	8	10	15	16	17	21	26
	Prizelawn CBR III	D	E	J	K	L	N	R
	Prizelawn CBR II	2	2 1/2	4	4	4 1/2	5 1/2	8
	Prizelawn LF-1	1 1/2	2	2 1/2	3	3 1/2	4	6
	Prizelawn MPR 1	1 1/2	2	5	3	3 1/2	4	6
	Scotts RX7	C1	D	E	F	G	I	M
	Scotts Accupro 2000, SR-2000	E	F	H	I	K	M	R
	PScotts R8A/SR-1	H	I	K	L	L	M	P
	Scotts AP	H	I	J	K	L	M	P
	Scotts SR2000	H	I	J	K	L	M	P
	Spyker	2	3	3 1/2	4 1/4	4 1/2	4 3/4	6
	Vicon	18	20	22	23	24	26	32

SPREADER SETTINGS are approximate, and will vary with ground speed, pattern adjustment and changes in the manufacturing.

SGN 200-220 Spreader Settings		1 lb. /1000 sq. ft.	2 lb. /1000 sq. ft.	3 lb. /1000 sq. ft.	4 lb. /1000 sq. ft.	5 lb. /1000 sq. ft.	6 lb. /1000 sq. ft.	7 lb. /1000 sq. ft.
Standard Grade	Pro-scape – Prizelawn Bigfoot	E	J	L	N	O	P	R
	PennMulch – Prizelawn HVO	E	J	L	N	O	P	R
	Cyclone	3 1/2	4	4 1/2	5	5 1/2	5 3/4	6
	Earthway Rotary	12	14	15	16	18	20	22
	Gandy	22	2	28	28	30	32	34
	Jet-Spred II	3 1/2	4	4 1/4	5	5 1/2	5 3/4	6
	Jet-Spred III	4	4 1/2	5	5 1/2	6	6 1/4	6 1/2
	Lely HR, 1250, 1500, 2010	3 II	4 II	5 II	6 II	6 1/2 II	7 II	7 1/2 II
	Lely W	3 II	4 II	5 II	6 II	6 1/2 II	7 II	7 1/2 II
	Lesco (letters)	D	G	I	J	K	L	M
	Lesco (numbers)	10	15	17	21	22	24	26
	Prizelawn CBR III	E	J	L	N	O	P	R
	Prizelawn CBR II	2 1/2	4	4 1/2	5 1/2	6	6 1/2	8
	Prizelawn LF-1	2	2 1/2	3 1/2	4	4 1/2	5	6
	Prizelawn MPR 1	2	2 1/2	3 1/2	4	4 1/2	5	6
	Scotts RX7	D	E	G	I	J	L	M
	Scotts Accupro 2000, SR-2000	F	H	K	M	O	P	R
	Scotts R8A/SR-1	I	K	L	M	N	O	P
	Scotts AP	I	K	L	M	N	O	P
	Scotts SR2000	I	K	L	M	N	O	P
	Spyker	3	4	4 1/2	4 3/4	5 1/4	5 1/2	6
	Vicon	20	22	24	26	30	31	32

DE-ICER & ICE MELTER BASICS

Salt is the primary component in most of today's ice melter products. Rock Salt, Calcium Chloride, Magnesium Chloride, and Potassium Chloride all contain a considerable amount of salt in them.

Salt Lowers the Freezing Point

Why does salt melt ice?

Salt is a great ice melter because it causes "freezing point depression." This means that salt helps in lowering the freezing point and, consequently, the melting point of water (the main component of snow and ice). In its pure state, water freezes at 0°C or 32°F. By using salt, that freezing point can be lowered which forces the ice to melt and prevents the water from freezing or re-freezing.

It must be noted, however, that salt alone can't melt ice. It must first be combined with water to start the melting process. Fortunately, ice and snow are generally covered with a thin film of water. As salt touches this water, it starts to dissolve – subsequently lowering the freezing point and melting the ice surrounding it. It is because of this process that most, if not all, ice melters today are made with some quantity of salt.

Perhaps you are also curious why ice melters also make use of different substances like calcium, potassium, and magnesium. These ingredients help in further decreasing freezing points. They also help in reducing tracking and the corrosive characteristics that salt naturally possesses. To give you an idea of how salt solutions work, here is a very short list:

- With 10% salt solution, water freezes at 20°F (-6°C)
- With 20% salt solution, water freezes at 2°F (-16°C)

	SODIUM CHLORIDE	UREA	POTASSIUM CHLORIDE	MAGNESIUM CHLORIDE	CALCIUM CHLORIDE
Particle	Non-uniform	Uniform	Uniform	Pellet or Flake	Flake or Pellet
Practical Temperature	15 - 20°F	25°F	20°F	13°F	-10°F
Eutectic Temperature (Temperature at which brine freezes)	-6°F	11°F	12°F	-28°F	-60°F
Harmful to Plant	High	Low	Low	Medium	Low
Damaging to Concrete	Yes	Yes	Not Directly	Yes	Not Directly
Water Pollutant	Yes	Yes	No	Yes	Yes

Visit us on the web at: fisherandson.com

Ice Beeter Responsible

- » Specially formulated with beet extract solution
- » Performs at lower temperatures
- » Superior lasting performance
- » Color coated for visual coverage
- » Triple screened for consistent granulation
- » Provides instant traction



EnvironMelt
the green solution
ice melter with CMA

Environmelt

- » The green solution ice melter
- » Enhanced with CMA (calcium magnesium acetate)
- » Less harmful to vegetation (reduces damage to grass, trees and shrubs)
- » Safer for children and pets
- » Forms protective coating on surface to guard against concrete, wood and corrosion damage
- » Designed to reduce tracking and residue problems when used correctly
- » Easy to use. No protective clothing necessary

Simple and Safe

- » Environmentally formulated ice melter
- » Safer for plants and animals when used as directed
- » Colored for consistent visual distribution
- » Contains sodium chloride, calcium chloride, potassium chloride and magnesium chloride



Snow Shield Green

- » Color-coated green to enhance visibility
- » Formulated with Calcium Chloride and CMA for fast-acting, long-lasting performance
- » Melts down to -25°
- » Fast acting-durable, superior staying power
- » Designed to reduce tracking. Safer for children, pets



Snow Shield Purple

- » Color-coated purple to enhance visibility
- » Formulated with Calcium Chloride, Mag Chloride and CMA
- » Safer on concrete and vegetation
- » Ideal granulation size for fast-acting performance
- » Effective to temperatures below -20° F

»



Professional Ice Melter

- » Melts even in extreme cold (to - 16°F).
- » 4-way blend of tech-grade calcium, magnesium, potassium and sodium chlorides
- » Triple-screened to provide uniform spreading
- » Coated with Defrost® to enhance melting power
- » Treated with an anti-caking agent



Pro's Choice is the only manufacturer who produces soil conditioners utilizing a seven-step process. The absorbent clay is mined, sized, dried, ground into specific particle sizes, dried again, thermally optimized and de-dusted. This process is unique to Pro's Choice and ensures the highest quality products on the market today.

Because 100% of granules are ground and sized prior to the thermal optimizing processes, each granule receives the full benefit of thermal optimization. In other processes, they dry the clay before it is ground. This results in the surface being at a less than optimal moisture level, which means lower liquid holding capacities and lower absorptivity.

Pro's Choice Infield Team

Pro's Choice products offer a whole team of products to help make your infield the best it can be. Pro's Choice Red and Pro's Choice Select soil conditioners can be used in field construction or as top dressing to eliminate compaction and improve playing surfaces. Pro Mound® packing clay can be used to construct long-wearing and stable pitcher's mounds and batter's boxes. Rapid Dry® drying agent can save the game by drying up puddles and slick spots after rain.

Product	U/M	Description
RED INFIELD CONDITIONER	50 lb	Designed to meet the challenges of wet, dry or compacted infields, this unique durable granule helps create passageways for drainage and eliminate compaction for truer bounces and safer play.
SELECT PREMIUM INFIELD CONDITIONER	50 lb	This premium infield conditioner keeps infields smooth, safe and resilient. It's uniformly sized granules and deep red color makes the perfect infield top dressing for professional looking infields.
PROmound PACKING CLAY	50 lb	A unique blue gumbo packing clay, Pro Mound bonds to form a solid subsurface in the mound and batters boxes that allows players to "dig in" and establish footing without leaving large holes. Also available in preformed brick.
rapidDRY DRYING AGENT	50 lb	Stay in the game with Rapid Dry drying agent. These tiny granules are designed to quickly wick away excess water from your infield and keep your games playing safely and without delay.
PROred PREMIUM RED TOPDRESSING	50 lb	Pro's Choice Pro Red premium topdressing provides exceptional deep red color to your infield to give it the professional look of World Series Championship fields. Used by professional groundskeepers to enhance the look of their field, Pro Red is the only red conditioner that maintains its rich red color.

Field Striping Materials

Product	U/M	Description
Krylon Marking Paint	20 oz	The leading aerosol marking paint for athletic fields. 12 x 20 oz case. Available in Athletic Field White and Orange.
Guide Line Marker	50 lb	Premium Dry Athletic Field Marker for baseball diamonds and all athletic fields

Turf Blankets

Product	U/M	Description
Field Saver Winter Turf Blankets	ea	Durable 100% woven polypro fabric designed to last (3.0 oz./sy.). Re-usable storage bag included. Heavy-duty spur brass grommets spaced 5' apart in 4-ply double stitched hem on all sides. Sod staples included for 5' placement on all sides. AVAILABLE IN ALL SIZES BY SPECIAL ORDER

LIQUID MEASURE CONVERSIONS						
gal.	qt.	pt.	cup	oz.	Tbl.	tsp.
			cup	1/2	1	3
			1/8	1	2	6
		pt.	1/4	2	4	12
	qt.	1/2	1/2	4	8	24
	1/4	1/2	1	8		
gal.	1/2	1	2	16		
1/4	1	2	4	32		
1/2	2	4	8	64		
1	4	8	16	128		

Check out this online converter on the Web:
theconvertersite.com/conversions/liquidvolume.php

AREA CONVERSIONS
1 mile = 1760 yards
1 sq. mile = 640 acres
1 acre = 4840 sq. yards
1 acre = 43,560 sq. ft.
1 sq. yard = 9 sq. ft.

LAND AREA MEASUREMENTS
Area of a Square/Rectangle Length x Width
Area of a Triangle 1/2 Base x Height
Area of a Circle Area = πr^2

MEASURING IRREGULAR LAND AREAS
Irregularly shaped land areas can be reduced to one or more geometric shapes (square/rectangle/ triangle/circle). Use the appropriate formula (noted above) for each part or the irregular turf area and calculate the area of each shape. Next add the calculated areas of each shape. Next add the calculated areas of each shape together. This gives you a very accurate area to use in your application calculations. Check out this area converter on the Web: onlineconversion.com/area.htm

LIQUID MATERIAL MEASUREMENT CONVERSIONS		
Rate /Acre	Rate /1000 sq. ft.	Rate /100 sq. ft.
1 pt.	3/4 Tbsp.	1/4 tsp.
1 qt.	1 1/2 Tbsp.	1/2 tsp.
1 gal.	6 Tbsp.	2 Tbsp.
25 gal.	4 1/2 pt.	1 cup
50 gal.	4 1/2 qt.	1 pt.
100 gal.	9 qt.	1 qt.
200 gal.	4 1/2 gal.	2 qt.
300 gal.	6 3/4 gal.	3 qt.
400 gal.	9 gal.	1 gal.
500 gal.	11 1/4 gal.	1 1/4 gal.

LINEAR MEASUREMENT
1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet
1 yard = 0.91 meters
1 meter = 39.37 inches
1 mile = 1,609.34 meters

METRIC CONVERSIONS
Liquid
1 liter = 1.06 qts.
10 liters = 2.64 gal.
1 gallon = 3.8 liters
1 qt. (32 fl. oz.) = .95 liter
1 pint (16 fl. oz.) = .47 liter
1 fluid ounce = .03 liter
Linear
.394 inch = 1 cm.
1 inch = 2.54 cm.
1 foot or 12 inches = 30.48 cm.
1 yard or 3 feet = 91.44 cm.
3.281 feet = 100 cm. or 1 meter
328 feet = 100 meters
.621 mile = 100 meters or 1 km.
1 mile or 5,280 feet = 1.69 km.

NUTRIENTS PER GALLON OF PRODUCT
Formula: Weight per gallon x % Nutrient Example: 18-3-6 10.58 lb. per gal. x 18% Nitrogen = 1.9 lb. Nitrogen per gallon

NUTRIENTS PER OUNCE OF PRODUCT
Formula: lbs. Nutrient per gallon/128 oz. Example: 18-3-6 = .0148 lb. Nitrogen per ounce

TEMPERATURE CONVERSION
$^{\circ}\text{C} = (5/9) \times (^{\circ}\text{F}-32)$
$^{\circ}\text{F} = (9/5) \times ^{\circ}\text{C}+32$
Check out this online temperature converter on the Web: onlineconversion.com/temperature.htm

AQUATIC CONVERSIONS
1 cubic foot = 7.48 gallons 1 acre foot = 325,851 gallons
Pond Volume = Average Depth x Surface Acres
1 ppm (part per million) = 2.7 lbs of A.I. per Acre Foot
V/V at Glance 1 quart per 100 gallons = 0.25% v/v 2 quarts per 100 gallons = 0.50% v/v 3 quarts per 100 gallons = 0.75% v/v 4 quarts per 100 gallons = 1.00 % v/v
Check out this online pond volume calculator on the Web: pond.dnr.cornell.edu/Pond/farmpond/contents/calculator.xls

Maximize Your Profits: Take the necessary time to make sure you have the calibrated measuring devices before you leave the shop. Over the course of the application season, mis-measuring can cost you more than just profits. They can cause injury to plants or the need for reapplication or replacement.
HAVE YOU CALIBRATED YOUR SPREADERS & SPRAYERS ?

HAS YOUR FIELD BEEN SCREENED LATELY FOR HIDDEN HAZARDS?



Although synthetic sports fields do eliminate the need for mowing, fertilization and irrigation, they are by no means exempt from other vital maintenance practices.

Regular surface inspections, hardness tests and deep-cleaning procedures are critically necessary for keeping the field safe and optimally playable, as well as for protecting your investment.

It's astounding, actually, how quickly debris can accumulate — unseen — on a synthetic field, causing several problems. Such debris can create safety hazards for the athletes (particularly sharp metal items), abrade the synthetic grass fibers and degrade the crumb rubber (which, in turn, increases the field's hardness), reduce water infiltration by clogging drainage pores and develop an organic layer that is conducive to the proliferation of bacteria, mold, moss, fungi and insects, as well as the germination of weed seeds. When FSC Pro Services performs deep cleanings on our clients' synthetic fields, these are among the many contaminants we routinely remove:

- ◆ Metal items, such as cleat tips, nails, screws, springs, staples, paper clips, safety pins, jewelry, bobby pins and pieces of wire
- ◆ Mouthguards, helmet snaps and Band-Aids®
- ◆ Pen caps and, occasionally, pens and pencils
- ◆ Batteries
- ◆ Paper and food/gum wrappers
- ◆ Buttons, fabric fibers and straps
- ◆ Hair
- ◆ Gum, food scraps, sunflower seeds, pistachio and peanut shells
- ◆ Tobacco products, including cigarette butts and "wads"
- ◆ Tracked-on dirt and mud
- ◆ Leaves and pine needles

Unfortunately, foot and equipment traffic can deeply embed these items below the fibers' surface, hiding them from view and creating the illusion of field cleanliness. And then, of course, there are all the microscopic contaminants that also accumulate and add to the creation of an organic layer, including dust, pollen and human skin cells.

Your Solution

So, what can you do to rid your field of all these hazards lurking under the fibers, posing long-term problems and endangering your investment? Look on the other side of this flyer to see how FSC Pro Services can come to your field's rescue.



We Can Help Keep Your Field Safe and Prolong Its Optimum Playability

FSC Pro Services offers a comprehensive program designed to diagnose potential field problems and remove hidden hazards embedded into the surface. Our program features a three-pronged approach:

»Gmax Testing

Unlike natural turf, synthetic turf often shows very few signs of degradation of the fibers until it's too late to rectify the problem with grooming and/or cleaning. Our Gmax test (conducted with a F355 Missile) can evaluate how your field is aging, as well as analyze its surface hardness and shock-absorbing characteristics. Our certified Gmax test is done in accordance with ASTM F1936-10 & F355-10; you will receive a complete, detailed report with date, time, location test points (minimum of 10) and average Gmax per point, as well as an overall average.

»Field Inspection

We carefully inspect the entire surface of the field, taking special notice of seams and inlays (checking for worn areas and tears), as well as the depth of the crumb rubber infill. If your field needs repairs, subsurface de-compaction and/or more infill, we can provide cost estimates for these additional services.

»Surface Cleaning

Finally, we will perform a surface and top layer cleaning of your field's top layer with our Redexim Verti-Top, considered among the best synthetic-field cleaners in the industry. With its unique vacuum and retrofitted magnet, our cleaning system will remove up to 90% of all hair, dust, dirt, pollen, leaf litter, metal objects, jewelry and other contaminants found within the turf.

Leaving the turf safer, softer and cleaner, we follow up with a detailed report of our findings, along with recommendations on future maintenance in order to prolong the life of the field, all within the guidelines of each manufacturer.

Our Program Levels

Depending on the amount of use your field receives, we offer four levels of maintenance:

Bronze – one testing
one inspection
one deep-cleaning visit a year

Silver – one testing
two inspections
two deep-cleaning visits a year

Gold – one testing
three inspections
three deep-cleaning visits a year

Platinum – one testing
four inspections
four deep-cleaning visits a year



New clients receive a 10% discount!

Contact us today to see how we can help you keep your field playing its best. Plus, mention this flyer to **receive a 10% discount on your first testing/inspection/cleaning visit.**

To discuss your needs and get on our maintenance schedule, call Jim Cornelius at 800-262-2127 or 610-496-7100, or email him at jcornelius@fisherandson.com. We look forward to serving you!



110 Summit Drive • Exton, PA 19341 • Phone: 800-262-2127 •

Fax: 610-363-0553

www.FisherAndSon.com



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TERMS AND CONDITIONS

Shipping Information:

We have the facilities to ship your orders by the most effective methods via: Fisher & Son's Fleet Service, Motor Freight, Air Freight, UPS and Parcel Post. For details concerning the delivery area of our fleet service, contact your Sales Representative. We reserve the right to select the most reliable and efficient carrier. However, if you require special shipping instructions, please contact our shipping department. We ship via the most economical method, unless otherwise instructed.

A \$49 delivery fee is applied to all orders shipped by the FSC Fleet.

UPS, FED EX and drop ship freight charges are the responsibility of the customer.

Deliveries:

In order to provide you with the best service possible and ensure the correct product and quantities are received, all deliveries must be signed for. Any shortages or missed shipments must be noted upon receipt of your delivery, so please have someone available on the delivery date. All in stock orders for delivery via Fisher & Son Fleet Trucks must be placed 2 working days prior to your delivery day. **June 1st through October 1st**, Fisher & Son offers a 'First Call- Same Day Service' for emergency fungicide needs to all accounts within a 50 mile radius of our facilities. **All deliveries require a customer signature in order to leave product unless a waiver is signed in advance.**

Payments:

We accept Cash, Check and the following major Credit Cards: Visa, MasterCard and Discover.



Offerings:

Products listed are subject to availability. We will not be held responsible for delays of shipment caused by conditions beyond our control. Should a product not be available, a suitable substitute may be available and offered. Any "custom blend" fertilizer product that is ordered may vary under or over your initial quantity ordered at the discretion of the manufacturer.

Terms & Conditions of Sale:

Net 30 days to approved credit accounts. A finance charge of 1.5% per month is added on all overdue accounts. This is a 18% annual charge. Terms are prepay where credit has not been established. A \$30.00 service fee is charged for any returned checks.

Prices:

Prices are not provided in this Resource Manual. Prices are quoted by your Technical Sales Representative. If you do not know who the representative is for your area, call 800.262.2127.

Prices are subject to change with out notice.

Sales Tax:

Appropriate state tax will be charged based on location of delivery. In compliance with the law, we must charge the tax on all items which the state designates as taxable. All items will be charged sales tax unless we have a tax exempt number on file from the purchaser.

Recommendations:

All recommendations are compiled from recognized agronomic and horticultural sources and product manufacturers. We are not responsible for damage or failure because of any recommendations. Always refer to product labels prior to the use of any product.

Returns:

Damaged goods must be reported within 24 hours of delivery. Other returns must be approved by Fisher and Son within 30 days of receipt and are subject to a 8% restocking fee. Invoice number and date of purchase is required for all returns.

Custom and special order products, upon approval from FSC and the manufacturer, may only be returned due to quality related issues.

Notice To Purchaser:

The following statement is made in lieu of all warranties expressed or implied. The seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be held liable for any injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product. Before application, user shall determine the suitability of the product for their intended use. The user assumes all risk and liability whatsoever in connection therewith.

Always read and follow product label directions prior to use!



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**Fisher & Son Company
is proud to support these
Trade Organizations and Associations:**

*Allied Association of Golf Course Superintendents
Central Penn Golf Course Superintendents Association
Delaware Nursery & Landscape Association
Eastern Shore Association of Golf Course Superintendents
Golf Course Superintendents Association of America
Golf Course Superintendent's Association of New Jersey
Greater Washington Golf Course Superintendents Asso.
Hudson Valley Superintendents
Independent Turf and Ornamental Distributors Association
International Society of Arboriculture
Keystone Athletic Field Managers Organization
Keystone Golf Course Superintendents Association
Lawn Care Association of Pennsylvania
Maryland Arborist Association
Maryland Athletic Field Managers Organization
Maryland Nursery and Landscaping Association
Maryland Turfgrass Association
Maryland Turfgrass Council
MET Golf Course Superintendents Association
Mid-Atlantic Association of Golf Course Superintendents
Mid-Atlantic Chapter of I.S.A.
New Jersey Green Industry Council
New Jersey Nursery and Landscape Association
New Jersey Superintendent Association
New Jersey Turfgrass Association
New York Greengrass Association
New York State Turf and Landscape Association
PennDel Chapter of I.S.A.
Pennsylvania Landscape and Nursery Association
Pennsylvania Turfgrass Council
Philadelphia Association of Golf Course Superintendents
Pocono Golf Course Superintendents Association
Professional Grounds Management Society
Professional Lawn Care Association of America
Responsible Industry for a Sound Environment
Shenandoah Valley Turfgrass Association
Sports Field Managers Association of New Jersey
Sports Turf Managers Association
Virginia Golf Course Superintendent Association
Virginia Sports Turf Managers Association*



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The 'Green Industry' Source for Superior Products for Turf and Horticultural Professionals

