



TURF & ORNAMENTAL

PRODUCT CATALOG

ABOUT

Performance Nutrition® is dedicated to delivering innovative, high-performing solutions for the Turf & Ornamental market. Our comprehensive product portfolio includes Pest & Disease Control Products, Biostimulants, Nutritional Blends, Plant Growth Regulators, and Polymer Adjuvants. Each product is carefully developed to support healthier plants, optimize growth, and provide reliable performance in diverse growing environments.

Dedication to continuous innovation remains the focus of Performance Nutrition. Our team of technical and product development experts work to create advanced products that address the evolving needs of today's growers. From enhancing nutrient efficiency to improving soil health and plant vitality, our solutions are designed to deliver measurable results with every application.

We are proud to collaborate with a trusted network of independent distributors across the country who bring local expertise to ensure our solutions meet the unique challenges of every region. Together, we empower growers with the tools they need to achieve exceptional results and thrive in an ever-changing industry.

PERFORMANCE NUTRITION **Turf & Ornamental Sales Managers**

Ed Brockman

Director of Sales
T&O Products
(502) 645-4445
ed@pnfertilizers.com

Devin McCaffrey

SE Territory Sales Manager
T&O Products
(919) 935-2276
devin.mccaffrey@pnfertilizers.com

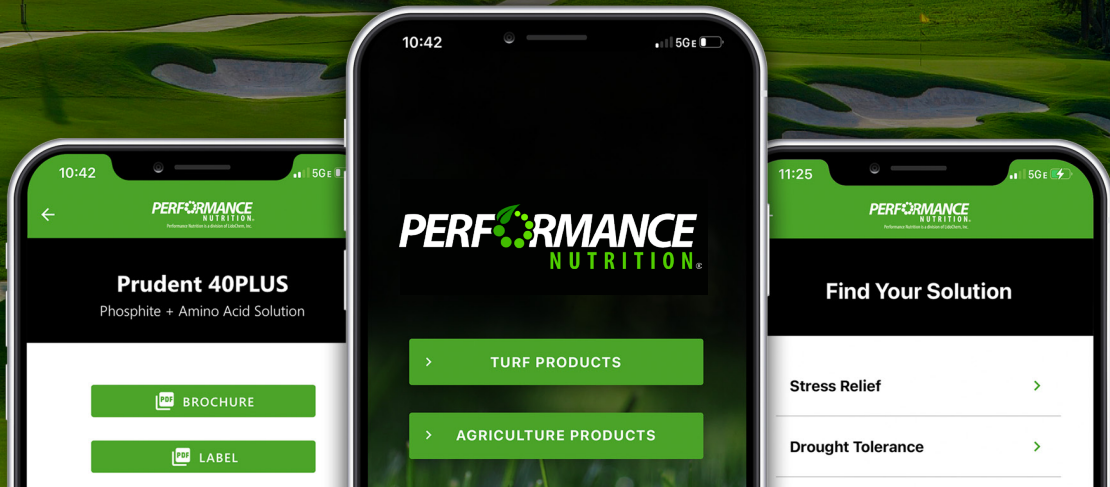
Eric Castellari

NE Territory Sales Manager
T&O Products
856-362-1545
eric.castellari@pnfertilizers.com

Corporate Office

LidoChem, Inc
20 Village Court • Hazlet, New Jersey 07730
Phone: (732) 888-8000 • Fax: (732) 264-2751
info@pnfertilizers.com

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PERFORMANCE

ECOSYSTEM MANAGEMENT[®] PROGRAMS

The *PERFORMANCE* Ecosystem Management[®] Program

(PEMP) is a pro-active, comprehensive system for turf management that is safe, effective, easy-to-use and simple to manage. PEMP consists of our patented Performance Treatments, each of which targets specific components of an ecosystem:

- ***Soil***
- ***Turf Nutrition and Micronutrition***
- ***Microbial Populations***
- ***Water & Soil Solutions***

TREATMENTS FOR *TURF OPTIMIZATION*

Each *PERFORMANCE* Treatment corrects conditions that negatively impact the ecosystem, and, enhances conditions that favor vigorous, more stress resistant and sustainable turf.

With continued use, the *PERFORMANCE* Treatments will balance plant nutrition and micronutrition, support healthy populations of diverse microorganisms, and reduce the need for chemical fertilizers and pesticides. In addition, *PERFORMANCE* Treatments improve availability and uptake of soil nutrients, increase levels of soil organic matter, enhance the soil's water-holding capacity, build thick, deep roots and maintain healthy, stress-resistant turf.





The **PERFORMANCE Soil Treatment®** improves the condition and composition of the soil, enhances microbial populations, improves nutrient efficiency and delivers an arsenal of amino acids, enzymes, sugars and organic substances. Incorporating PST® into turf management regimens supports a vigorous ecosystem and enhances conditions that contribute to turf quality and sustainability.

ExAlt® Concentrated Soil Surfactant

Maintenance Rate: Apply ExAlt at a rate of 16 - 32 fl. oz. per acre (0.35 - 0.70 fl. oz. per 1,000 ft²) every 2 - 4 weeks throughout the growing season.

Apply labeled rates of RemeD8 WSP Soil Inoculant as a tank mix with ExAlt or within 3 - 7 days after the application.

RemeD8™-WSP Microbial Inoculant

Greens, tees and other low-cut turf: Apply one 8 oz. packet of RemeD8-WSP per 1.0 - 1.25 acres. Apply every 14 days throughout the season.

Fairways, roughs, sports turf and other high-cut turf: Apply one 8 oz. packet of RemeD8-WSP per 2.0 - 2.5 acres. Apply every 14 days throughout the season.

Pennamin® High-K Amino Acid

Apply 0.4 - 2 oz. per 1000 ft² (1 - 5 lb. per acre). Substitute other Pennamin® products depending on turf or soil requirements.



The **PERFORMANCE Foliar Treatment®** safely and efficiently delivers foliar nutrition, micronutrition and disease suppression. Turf treated with the PFT® develops highly fibrous and branched root systems, stays greener longer and is more stress tolerant.

Pronyx™ KelpPlus Fertilizer Solution

Apply 1.5 to 6 fl. oz. per 1,000 ft² every 2 weeks throughout the season.

Prudent® Phosphite Fertilizer

Apply 0.5 - 2 fl. oz. per 1,000 ft². Begin applications in the spring and continue on a 7 to 14 day schedule throughout the season.

Vibrant® Foliar Fertilizers

Vibrant Red: Apply 3 - 6 fl. oz. per 1,000 ft² every 2 weeks

Vibrant Green: Apply 4 - 8 fl. oz. per 1,000 ft² every 2 weeks

Krystal Klear® Micronutrients

Krystal Klear® Fe & TurfMix: Apply 0.75 - 2 fl. oz. per 1,000 ft² every 2 weeks throughout the growing season.

Krystal Klear® ResQ: Apply 3 - 6 fl. oz. per 1,000 ft² every 2 weeks throughout the season.

Nutrol® BioPesticide

Apply 2 - 4 oz. per 1,000 ft² (6 - 11 lb. per acre) per application. Apply every 7 to 14 days throughout the season. If used as a starter fertilizer during transition periods to cool season grasses, apply 4 - 6 oz. per 1,000 ft².



FREE L-AMINO ACIDS FOR SUPERIOR TURF

THE PENNAMIN DIFFERENCE

Amino acids are the essential building blocks of turf health and performance, driving critical processes that support vitality and resilience. However, turf can only absorb amino acids in their free form—not when they are locked up in peptides or proteins. **Pennamin®** Products are uniquely formulated with an unmatched concentration of free-form L-Amino Acids—the only form usable by turf. Every Pennamin product is highly soluble and provides rapid absorption of nutrients, ensuring effective plant nutrition that supports more resilient turf.

WHY CHOOSE PENNAMIN?

Unmatched Free Amino Acid Content:

High percentage of free amino acids for quick plant uptake and efficiency.

Accelerated Foliar Uptake:

Boosts absorption of nutrients, delivering faster nutrient availability.

Stress Tolerance:

Increases drought tolerance and heat resistance while mitigating salt stress.

Improved Plant Vitality:

Enhances plant turgidity and protects from heavy metal toxicity.

Pest and Pathogen Resistance:

Strengthens plant defenses, which enables resilient turf.

Versatile and Easy to Use:

Highly water-soluble formula for seamless blending and application.

Revitalizes Soil:

Enhances soil structure and microbial activity to improve nutrient availability.

PRODUCT OPTIONS

PENNAMIN® <i>DRIVER-P</i>	12-0-0 81.5% FREE Amino Acids
PENNAMIN® <i>HIGH-K</i>	6-0-15 + 9% Ca, 5.4% S 38.6% FREE Amino Acids
PENNAMIN® <i>PERFECT-K</i>	8-0-9 + 3.1% S, 5% Ca, 0.1% Fe, 0.05% Cu, 0.05% Mn, 0.05% Zn, 0.02% B 56.1% FREE Amino Acids
PENNAMIN® <i>Ca</i>	7-0-0 + 14% Ca 48.0% FREE Amino Acids
PENNAMIN® <i>FeMn</i>	8-0-0 + 4% Fe, 3% Mn 57.4% FREE Amino Acids
PENNAMIN® <i>Mn</i>	9-0-0 + 7% Mn 60.6% FREE Amino Acids
PENNAMIN® <i>Si</i>	10-0-0 + 4% Si 65.2% FREE Amino Acids

Application Instructions

Pennamin Ca, Mn, Fe&Mn, Driver-P, High K, Perfect K

Apply 0.40 – 2 oz. per 1000 ft² every 14 to 28 days as needed.

Pennamin Si

Cool Season – Apply 0.2 - 0.5 oz. per 1,000 ft²

Warm Season – Apply 0.2 - 0.9 oz. per 1,000 ft²

See page 29 for more Pennamin advantages!



FERTILIZER SOLUTION w/ Sea Kelp & Amino Acids

ABOUT

Pronyx™ KelpPlus is a concentrated liquid fertilizer containing sea kelp with the added benefits of Pennamin amino acids, which support nutrient uptake, plant metabolism, and stress tolerance. This unique formulation provides naturally occurring growth promoters, helping to enhance root development, vigor, and overall plant health.

GUARANTEED ANALYSIS

Total Nitrogen (N)1.0%
1.0% Water Soluble Nitrogen
Available Phosphate (P₂O₅)1.0%
Soluble Potash (K₂O)1.0%
Derived from kelp and amino acids.

AMINO ACID PROFILE			
Amino Acid	Content	Amino Acid	Content
Alanine	0.22%	Histidine	0.03%
Arginine	0.30%	Isoleucine	0.22%
Aspartic Acid	0.33%	Leucine	0.35%
Cystine	0.01%	Lysine	0.09%
Glutamic Acid	0.50%	Phenylalanine	0.22%
Glycine	0.37%	Methionine	0.03%
Proline	0.49%	Tyrosine	0.04%
Serine	0.57%	Valine	0.37%
Threonine	0.22%	Total Amino Acids	4.4%

BENEFITS

- Provides a nutritional supplement through the release of naturally occurring plant nutrients and trace minerals.
- Accelerates and improves seed germination
- Promotes vigorous rooting and overall plant health

THE ADVANTAGE

Pennamin Amino Acids - 100% of these amino acids are free amino acids so they are quickly available to the plant Amino acids can complex micronutrients tied up in the soil, making them available for plant uptake

Vitamins - play important roles in plant health and growth, nutrient transport systems in cold temperatures and root regeneration. A, B, B1, B12, C, E, K and PP

Naturally Occurring Growth Promoters Found In Kelp - Promote the synthesis of Gibberellins, Auxins, Cytokinins, Glycol kinetin, Betaines and Carotene

Application Instructions

Turfgrass:
Apply 1.5 to 6 fl. oz. per 1,000 ft² every 2 weeks throughout the season.

Ornamental Plant Maintenance:
Dilute 1 to 100 in water (1 oz./gal.) and apply as a soil drench for stressed plants or spray diluted solution on foliage to runoff every 30 - 60 days to promote flowering.
Apply 6 fl. oz. per 1000 ft².

Tree Maintenance:
Mix 1 gallon per 400 gallons of water and apply with fertilizer to root zone with injection feeding equipment.



PLANT EXTRACT SOLUTION

ABOUT

Kelpene® GPX is a blend of sea kelp extracts, and, plant extracts, primarily terpenes, derived via a unique proprietary extraction process. Kelpene GPX plant extracts are derived from plants that thrive in diverse environments.

GUARANTEED ANALYSIS

Available Phosphate (P ₂ O ₅).....	3.0%
Soluble Potash (K ₂ O).....	2.0%
<i>Derived from monopotassium phosphate and kelp.</i>	

NON PLANT FOOD INGREDIENTS

Plant extracts.....	3.5%
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Application Instructions

Maintenance Rate:
Make 4 foliar applications of 15 fl. oz. of Kelpene GPX per acre during spring and early season every 2 – 3 weeks, followed by 1 application mid-season and 1 fall dormancy application.

Recovery/High Stress Rates:
Make 12 – 18 foliar applications of 15 fl. oz. of Kelpene GPX per acre during the season. Apply every two weeks during the key growing period and then every 30 – 60 days at other times.

Nursery Crops:
Foliar apply or soil drench 7.5 – 15 fl. oz. of Kelpene GPX every other month.

BENEFITS

- Establishes environmental adaptability
- Improves stress management
- Increases plant and turf resilience
- Increases root mass and root tips
- Improves nutrient uptake
- Enhances tissue responsiveness
- Elevates Nutrient Use Efficiency
- Allows better allocation of energy
- Fortifies turf and plants with naturally-occurring phyto-hormones
- Nourishes turf, plants and soil microbes with organic carbon

Kelpene® GPX applications have been shown to support plant health, improve nutrient uptake and encourage robust root development.

Turf, ornamentals and nursery crops become more resilient and adaptive during periods of environmental stress, such as high heat, intense sunlight, shade, unexpected cold, drought, salinity, anaerobic conditions and water stress, etc.





CONCENTRATED SOIL SURFACTANT

ABOUT

ExAlt® is a concentrated soil surfactant that improves the availability of nutrients in the soil and enhances the performance of fertilizer applications. ExAlt corrects compacted soils and eliminates soil “crusting”, making it easier for newly germinated seeds to pop through the soil. ExAlt flushes sodium from the soil profile while keeping needed micronutrients in the root zone. ExAlt provides a natural, eco-safe solution for the long-term health of the soil.

For General Maintenance:

ExAlt may be used in maintenance applications to improve nutrient uptake, correct mineral build up, improve drainage, reduce black layer and stimulate plant growth.

For Curative Application:

For the treatment and rejuvenation of highly compacted soils, salt-contaminated soils, damaged soils affected by hydrophobicity and to aid in the recovery of soil damaged by soil borne pathogens.

As a Rescue Application:

ExAlt remediates flood-stressed or over-fertilized areas, treats and rejuvenates compacted soils, detoxifies salt-contaminated soils, and remediates soils impacted by poor water quality.

BENEFITS

- Solubilizes and releases soil-bound ions, such as calcium, magnesium, iron, manganese, phosphorus and sulfur
- Flushes sodium from the root zone without indiscriminately stripping the soil of nutrients
- Improves soil drainage
- Stimulates deeper root systems
- Reduces crusting and penetrates hard pan
- Reduces soil compaction
- Increases soil aggregation
- Improves efficiency of fertilizers and other chemicals
- Improves soil aeration

Application Instructions

Maintenance Rate (To prevent and correct mineral buildup):
Apply ExAlt at a rate of 16 - 32 fl. oz. per acre (0.35 - 0.70 fl. oz. per 1,000 ft²) every month throughout the growing season.

Curative Rate (For the treatment and rejuvenation of highly compacted soils, salt-contaminated soils, damaged soils affected by hydrophobicity and to aid in the recovery of soil damaged by soil borne pathogens):
Apply ExAlt at a rate of 16 - 32 fl. oz. per acre (0.35 - 0.70 fl. oz. per 1,000 ft²) every week for the first month followed by applications every month throughout the season.

Rescue Rates (Remediation of sudden stressed areas, burnt areas, flood-stressed areas, over-fertilized areas, spill areas, or storm surge areas, etc.):
Apply ExAlt as a soil spray at a rate of 16 to 32 ounces mixed with 10 - 20 gallons of water per 1,000 ft². Follow application with normal daily irrigation, if needed.

Apply labeled rates of Remed8-WSP Soil Inoculant as a tank mix with ExAlt or within 3 - 7 days after the ExAlt application. **Note:**
Do Not Mix With Selective Herbicides

GUARANTEED ANALYSIS

Active Ingredients	
Humic Acids.....	35%
Water.....	65%



CONCENTRATED FULVIC ACID SOLUTION

ABOUT

Spectra™ improves the foliar uptake of nutrients and micronutrients and can improve fertilizer performance when added to starter or foliar fertilizer applications.

NON-PLANT FOOD INGREDIENTS

Fulvic Acid.....	20%
Other Ingredients.....	80%
Total.....	100%

Application Instructions

With Herbicides

Apply Spectra at rates of 2 - 12 fl. oz. per acre with NON-SELECTIVE herbicides only.

Transplanting and Cuttings

Blend 2 - 4 fl. oz. of Spectra per 20 gal. of solution.

Cool Season Grasses

Include Spectra with all foliar nutrient applications at a rate of 2 fl. oz. per 25 gal. of spray solution.

Use Spectra alone to reduce plant stress before, during or after stressful periods at a rate of 0.5 fl. oz. per 1,000 ft² or 2 - 6 fl. oz. per 25 gal. of spray solution.

Trees, Shrubs, Woody Ornamentals and Bedding Plants

Include Spectra with all foliar nutrient applications at a rate of 2 fl. oz. per 25 gal. of spray solution.

Use Spectra alone to reduce plant stress before, during or after stressful periods at a rate of 0.25 fl. oz. per 1,000 ft² or 2 - 6 fl. oz. per 25 gal. of spray solution.

Warm Season Grasses and Ornamentals

Inject into irrigation or broadcast spray at a rate of 10 - 20 fl. oz. per acre 1 to 3 times during the growing season.

Mix with root injections at a rate of 4 - 6 fl. oz. per 10 gal. of injection solution.

BENEFITS

INCREASES NUTRIENT ABSORPTION

Makes nutrients more absorbable by complexing them into organic, ionic forms that are easily transported through cell membranes

IMPROVES FERTILIZER EFFICIENCY

Increases plant uptake of soil and foliar applied nutrients. The low molecular weight formulation improves mobility through cell walls to plant growth points

IMPROVES TANK MIX COMPATIBILITY

Spectra is compatible with foliar applications of non-selective herbicides, fungicides, insecticides and other pesticides. In fact, it provides tank mix compatibility of fertilizer/pesticide combinations.

DETOXIFIES POLLUTANTS

Fulvic acid is vital in helping form new species of metal ions, binding with organic pollutants such as pesticides and herbicides, and catalyzing the breakdown of toxic pollutants.

HELPS TRANSPORT NUTRIENTS

Spectra also plays a role in helping transport nutrients into plant foliage and roots. The highly active low-molecular weight formulation improves mobility of solution through cell walls to plant growth points. This results in a more productive and impactful application.



CONCENTRATED HUMIC ACID SOLUTION

ABOUT

Korban®-SC Liquid Humate (0-0-4+2S) is formulated with PERFORMANCE Organic Acids™, a blend of a wide range of humic acids that are sourced from Leonardite. Derived using a proprietary extraction and separation process, these natural organic acids are selected for their ability to perform in both the soil and the plant. This extraction and stabilization process yields a high carbon (greater than 7%) humic acid solution that remains soluble over a wide pH range and in solutions with a high ionic load with other nutrients. In addition, Korban-SC Liquid Humate can be used as a recovery tool where turf has been stressed from soil imbalances, including residual herbicide buildup.

Application Instructions

Korban-SC Liquid Humate can be used with any liquid fertilizer application with a pH of 3.2 or higher.

It blends well with both Ortho and Polyphosphates, micronutrient solutions, and any commonly used NPK fertilizers.

It can be applied on fairways and greens, on trees, shrubs and ornamentals.

Soil Applications:
Korban-SC Liquid Humate may be applied with any typical broadcast spray or mixed with deep root injection solutions at a rate of 2 - 4 quarts per 10 gallons solution.

Fertigation Applications:
Korban-SC Liquid Humate may be blended into fertigation solutions to provide 1.5 - 3.0 ounces per 1,000 ft² (2 - 4 quarts per acre) up to twice monthly.

Foliar Applications:
Korban-SC Liquid Humate may be applied at a rate of 1.5 - 6.0 ounces per 1,000 ft² (0.5 - 2 gallons per acre) monthly or 1 to 3 times at random intervals during the growing season.

BENEFITS

- Promotes a sustainable approach to soil health by supplying organic carbon
- Protects phosphate fertilizers from binding up into unavailable soil minerals
- Provides a readily available source of potassium
- Aids in nitrogen efficiency and retention in the soil
- Enhances solubility, availability, and plant uptake of important ions
- Improves cation exchange in soil solutions
- Supports populations of beneficial soil bacterial and fungi
- Combines readily with most liquid fertilizers, which can help reduce fertilizer induced foliar and/or root burn
- Safe for use in all applications from established turf to new plantings and over-seeding
- Will not precipitate in tank mixes or plug screens/spray nozzles during field applications
- Blends with most solutions, including those with a high ionic load, even in solutions as low as pH 3.2

GUARANTEED ANALYSIS

Soluble Potash (K ₂ O).....	4%
Sulfur (S).....	2%
<i>Derived from elemental sulfur and potassium hydroxide</i>	
Active Ingredients	
Humic acids.....	20%
<i>Derived from leonardite.</i>	



POTASSIUM FERTILIZER & HUMIC ACID SOLUTION

ABOUT

Korban® 0-0-13 provides the benefits of Korban® SC, Suprex™ K-29 and chelated micronutrients in one, ready to use product. It is ideal for use during black-out periods when applications of nitrogen have to be limited but other nutrients are still required.

Korban 0-0-13 is formulated with PERFORMANCE Organic Acids™ that are selected for their ability to perform in both the soil and the plant. The process used for extraction yields a high carbon humic solution that remains stable over a wide pH range and in solutions with a high ionic load with other nutrients. The potassium supplied by Korban 0-0-13 is potassium acetate, a more desirable choice for foliar fertilization because of its small molecular size. Since it is manufactured with organic acids, it makes it an excellent and safe tank mix partner with most plant inputs including other NPK and micronutrients. Korban 0-0-13 contains boron, copper, iron, manganese and zinc providing turf with all of the essential micronutrients.

Application Instructions

Applications for Turf

(including but not limited to fairways, greens, lawns and other high-cut turf):

Korban 0-0-13 can be applied monthly or 1 to 3 times at random intervals during the growing season at a rate of 2 to 6 ounces per 1,000 ft² (2.5 to 8 quarts per acre).

BENEFITS

- Supplies organic carbon to improve soil health.
- Provides a readily available source of potassium and micronutrients.
- Enhances nutrient solubility, uptake, and efficiency.
- Boosts energy transfer and metabolic functions with potassium for improved plant vitality.
- Supports root growth and beneficial microbial activity.
- Improves soil structure, water retention, and cation exchange capacity.
- Tank-mix compatible and safe for all turf and planting applications.

GUARANTEED ANALYSIS

Soluble Potash (K ₂ O).....	13.0%
Sulfur (S).....	0.9%
0.9% Free Sulfur (S)	
Boron (B).....	0.08%
Copper (Cu).....	0.08%
0.08% Chelated Copper (Cu)	
Iron (Fe).....	1.0%
1.0% Chelated Iron (Fe)	
Manganese (Mn).....	0.3%
0.3% Chelated Manganese (Mn)	
Zinc (Zn).....	0.08%
0.08% Chelated Zinc (Zn)	

Derived from potassium acetate, potassium hydroxide, elemental sulfur, citric acid, copper carbonate, ferric chloride, manganese chloride, zinc oxide and boric acid

Active Ingredients

Humic acids.....	4.8%
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NK FERTILIZER & HUMIC ACID SOLUTION

ABOUT

Korban® 12-0-2 provides the benefits of Korban® SC, Suprex™ 30-0-0 and Krystal Klear® Turf Mix in one, ready to use product. It delivers humic acids, slow release nitrogen and micronutrients with every application.

Korban 12-0-2 is formulated with *PERFORMANCE Organic Acids™* that are selected for their ability to perform in both the soil and the plant. The process used for extraction yields a high carbon humic solution that remains stable over a wide pH range and in solutions with a high ionic load with other nutrients. The combination of humic acid and slow release nitrogen helps maintain turf color for several weeks as well as improve nitrogen efficiency and retention. The micronutrients in Korban 12-0-2 are chelated utilizing a dual-chelation system for optimal performance and have excellent tank mix compatibility, provide quick uptake of micronutrients and deliver a sustained response.

Application Instructions

Applications for Turf

(including but not limited to fairways, greens, lawns and other high-cut turf):

Korban 12-0-2 can be applied throughout the growing season on warm, transitional and cool season grasses. Applications should begin in early Spring and continue through late fall at rates of 3 to 6 ounces per 1,000 ft² (1 to 2 gallons per acre).



BENEFITS

- Supplies organic carbon to improve soil health.
- Provides a readily available source of potassium and chelated micronutrients.
- Enhances nutrient solubility, uptake, and efficiency.
- Improves soil structure, water retention, and cation exchange capacity.
- Stimulates root growth and microbial activity.
- Includes humic acids to support nutrient retention and soil fertility.
- Tank-mix compatible and safe for turf and planting applications.

GUARANTEED ANALYSIS

Total Nitrogen (N).....	12.0%
6% Urea Nitrogen	
6% Slowly Available Water Soluble Nitrogen*	
Soluble Potash (K ₂ O).....	2%
Sulfur (S).....	0.9%
0.9% Free Sulfur (S)	
Boron (B).....	0.08%
Copper (Cu).....	0.08%
0.08% Chelated Copper (Cu)	
Iron (Fe).....	1.0%
1.0% Chelated Iron (Fe)	
Manganese (Mn).....	0.3%
0.3% Chelated Manganese (Mn)	
Zinc (Zn).....	0.08%
0.08% Chelated Zinc (Zn)	

Derived from methylene urea, urea, potassium hydroxide, elemental sulfur, copper EDTA, copper IDS, iron EDTA, iron IDS, manganese EDTA, manganese IDS, zinc EDTA, zinc IDS and boric acid

Active Ingredients

Humic acids.....	4.8%
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CARBON BASED BIO-FERTILIZERS

MICROBIAL COMPONENTS

- Blend of naturally occurring microbes that work together to convert resources already present in the soil and atmosphere into usable plant nutrition
- **Rhizosphere competent** – sourced from the soil
- **Quality assured** – professionally fermented and backed by Certificate of Analysis documenting cfu/gram counts
- ✓ *Bacillus amyloliquefaciens*
- ✓ *Bacillus megaterium*
- ✓ *Bacillus subtilis*
- ✓ *Saccharomyces cerevisiae*
- ✓ *Trichoderma harzianum*

NUTRIWISE BENEFITS

- Enhances Nutrient Use Efficiency (NUE) of blended chemical fertilizers.
- Improves soil fertility and organic matter.
- Reduces fertilizer leaching and supports beneficial microbes.
- Provides uniform slow-release nitrogen for consistent growth.
- Prevents growth surges by releasing nitrogen gradually.



NutriWise® G is an eco-friendly granular soil inoculant that fixes nitrogen from the atmosphere, solubilizes phosphate and unlocks potassium from the soil.



NutriWise® WSP is a water soluble microbial powder for spray or soil applications and should be applied with a source of fulvic or humic acid.

NutriWise WSP is used all season to supplement and re-inoculate early season applications of NutriWise granular.

Application Instructions

NutriWise G

Replace 20-25% of soil-applied granular NPK with NutriWise G. Apply as per your normal fertilizer schedule and method.

NutriWise WSP

Initial Application: 6-9 oz/acre using flood jet nozzles.

Follow-Up Applications: 3-6 oz/acre every 2-4 weeks (preferably every 2 weeks). For monthly applications, use the higher rate.



MICROBIAL SOIL INOCULANT

ABOUT

RemeD8™-WSP water-soluble soil inoculant is designed to improve nutrient use efficiency, maintain turf health and vigor, and, improve stress tolerance.

ACTIVE INGREDIENTS

5.3 X 10⁹ cfu *Bacillus amyloliquefaciens* per gram

2.4 X 10⁹ cfu *Bacillus licheniformis* per gram

1.1 X 10⁹ cfu *Bacillus megaterium* per gram

4.5 X 10⁹ cfu *Bacillus subtilis* per gram

Inactive Ingredients:

Sucrose based culture medium

Application Instructions

Greens, tees and other low-cut turf:

Apply one 8 oz. packet of RemeD8-WSP per 1.0 - 1.25 acres.

Apply every 14 days throughout the season.

Fairways, roughs, sports turf and other long-cut turf:

Apply one 8 oz. packet of RemeD8-WSP per 2.0 - 2.5 acres.

Apply every 14 days throughout the season.



THE MICROBES

- **Durable and sustainable:**

All are spore formers, which can survive adverse conditions such as heat, cold, low/high pH, etc.

- **Rhizosphere competent:**

All were sourced from the soil, so they can thrive in soil.

- **Quality Assured:**

All are professionally fermented, identified through DNA analysis and backed by Certificate of Analyses documenting cfu/gram counts.

- **Prolific Enzyme Producers:**

Together, they produce a wide range of beneficial enzymes and bio-active compounds that offer a number of plant health benefits.

WHAT TO EXPECT

- A more vigorous soil ecosystem
- Higher Cation Exchange Capacity (C.E.C.)
- Enhanced root development, germination rates and stress tolerance
- Faster nitrification process for better uptake of nitrogen
- Nitrogen fixation to supplement applied nitrogen
- Enhanced stress tolerance
- Quicker recovery from pathogen attack
- Prevention of excessive hydrophobic organic matter



VIBRANT[®]

Foliar Fertilizers

PATENTED FOLIAR FERTILIZER SOLUTION

ABOUT

Vibrant[®] patented foliar fertilizer solutions are designed to support healthy turf throughout the growing season. Vibrant fertilizer solutions can be blended together to create a variety of analyses.

Vibrant fertilizer solutions are formulated with premium sources of NPK, Krystal Klear[®] micronutrients and proprietary organic supplements.

BENEFITS

- Independent university studies have demonstrated that Vibrant fertilizer solutions provide long lasting turf color and quality, even during the height of summer stress periods.
- Compatible with most fungicides, herbicides and insecticides.
- Exceptional tank mix capabilities.

Application Instructions

Vibrant Blue:

Apply at a rate of 4.0 – 7.0 fl. oz. per 1,000 ft² (1.4 – 2.4 gal/A) every 2 – 4 weeks throughout the season.

Vibrant Green:

Maintenance Applications: 4 - 5 fl. oz. per 1,000 ft² (1.4 - 1.7 gal/A)

Severe Deficiencies: 6 - 8 fl. oz. per 1,000 ft² (2 - 2.7 gal/A)

Apply throughout the growing season beginning in the early spring and continue through the late fall.

Vibrant Red:

Maintenance Applications: 3 - 6 fl. oz. per 1,000 ft² (1 - 2 gal/A)

Apply throughout the growing season beginning in the early spring and continue through the late fall.

Vibrant[®] Blue

15-3-5 - with 0.5% Fe, 0.1% Mn, Cu and Zn & 0.025% B plus organic extracts

Provides quick green-up and turf color and quality, even during the height of summer stress.

Vibrant[®] Green

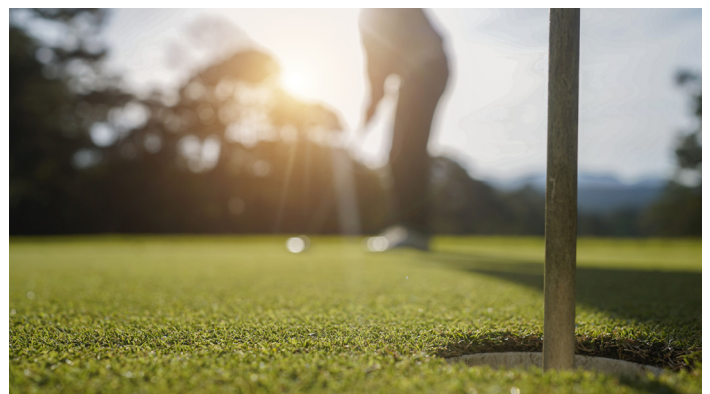
18-3-4 - with 10% SRN and 1% Fe, 0.1% Mn and Zn, 0.025% B plus organic extracts

Designed to deliver a significant color response with a limited growth response.

Vibrant[®] Red

3-6-12 - with 0.1% Cu, Fe, Mn and Zn, 0.05% Si, 0.025% B plus organic extracts

Formulated to help tolerate environmental conditions such as heat and drought stress during tough summer months.



See page 31 for Vibrant Mix & Match Chart!



WATER SOLUBLE FERTILIZERS WITH MICRONUTRIENTS

ABOUT

Vibrant® Water-Soluble Fertilizers deliver efficient, readily available nutrients to support the health, color, and vigor of turf and ornamental plants. Designed for quick uptake and plant response, these fertilizers provide balanced nutrition to promote strong root systems, lush growth, and stress resilience.

Enhanced with Krystal Klear® micronutrients, Vibrant formulations optimize nutrient efficiency, ensuring plants receive consistent, long-lasting benefits. With easy mixing, excellent compatibility, and proven performance, Vibrant fertilizers offer a convenient, cost-effective solution for maintaining healthy, thriving landscapes.

BENEFITS

- Rapid nutrient availability for efficient correction of deficiencies
- Highly soluble for easy mixing and uniform application
- Versatile application—compatible with most fertilizers and tank-mix programs
- Promotes strong root development, vibrant color, and overall plant health
- Formulated with patented Krystal Klear® micronutrients for enhanced nutrient efficiency
- Dual chelation technology improves nutrient uptake and availability
- Enhances turf and ornamental resilience to environmental stress
- Reliable and cost-effective solution for professional landscape and turf management

PRODUCT OPTIONS	
The logo for Vibrant 12-6-36 fertilizer, featuring the stylized green 'V' icon and the text 'VIBRANT 12-6-36' in green.	12-6-36 with 0.5% Mg, 0.025% B, 0.055% Cu, 0.5% Fe, 0.15% Mn, 0.0005% Mo & 0.05% Zn
The logo for Vibrant 20-20-20 fertilizer, featuring the stylized green 'V' icon and the text 'VIBRANT 20-20-20' in green.	20-20-20 with 0.05% Mg, 0.025% B, 0.055% Cu, 0.14% Fe, 0.06% Mn, 0.0005% Mo & 0.055% Zn
The logo for Vibrant 21-3-31 fertilizer, featuring the stylized green 'V' icon and the text 'VIBRANT 21-3-31' in green.	21-3-31 with 0.025% B, 0.055% Cu, 0.24% Fe, 0.12% Mn, 0.0005% Mo & 0.055% Zn
The logo for Vibrant 25-0-25 fertilizer, featuring the stylized green 'V' icon and the text 'VIBRANT 25-0-25' in green.	25-0-25 with 0.025% B, 0.055% Cu, 0.14% Fe, 0.07% Mn, 0.0005% Mo & 0.055% Zn
The logo for Vibrant 28-8-18 fertilizer, featuring the stylized green 'V' icon and the text 'VIBRANT 28-8-18' in green.	28-8-18 with 0.05% Mg, 0.025% B, 0.055% Cu, 0.14% Fe, 0.07% Mn, 0.0005% Mo & 0.055% Zn

Contact your Performance Nutrition rep for other water soluble blend options!

Application Instructions

Vibrant water soluble fertilizers are recommended as a supplement to a well-balanced fertilizer program only.

Foliar Spray: May be applied with all types of ground spraying equipment.

Apply 5 pounds per 100 gallons of water per acre. Do not exceed a concentration of 10 lb. per 100 gallons of water.

For best results, repeat every 14 days taking soil and weather conditions into consideration.



VIBRANT[®] FISCHEN

LIQUID FISH HYDROLYSATE

Vibrant[®] Fischen liquid fish hydrolysate is a 100% natural product made through a specialized cold-process enzymatic digestion of fresh water rainbow trout, ensuring no chemicals are used and preserving all beneficial oils and proteins. It serves as a rich source of natural protein and mineral nutrients for plants and soil microbes, offering a fresh fish scent without the offensive odor associated with fish emulsions.

BENEFITS

- Enriches the soil and promotes fertility.
- Introduces beneficial microbes and mycorrhizae.
- Boosts biological activity by supporting soil microbes.
- Improves fertilizer efficiency and nutrient uptake.
- Accelerates root establishment & increases root mass.
- Enhances plant growth, flowering, and fruit production.
- Enhances soil water retention & reduces transplant shock
- Aids in thatch degradation.

GUARANTEED ANALYSIS

Total Nitrogen (N).....	2.0%
1.7% Water Soluble Nitrogen	
0.3% Water Insoluble Nitrogen	
Available Phosphate (P ₂ O ₅).....	3.0%
Soluble Potash (K ₂ O).....	1.0%
Derived from fish hydrolysate and Sulfate of Potash	

Application Instructions

Apply 8 - 16 fl. oz. per 1,000 ft² every 3 - 4 weeks throughout the season.

VIBRANT[®] XTRAKT

WORM CASTING EXTRACT

Vibrant[®] XTRAKT is a premium low-salt organic fertilizer derived exclusively from earthworm castings and enriched with a proprietary blend of soil microbes and mycorrhizae to rejuvenate soil and support healthy plants and turf. Produced in a climate-controlled environment with a consistent, waste-free diet for the worms, Vibrant XTRAKT ensures reliable quality year-round. Safe for both soil and foliar applications, its low-salt formulation prevents plant burn, while being free of pathogens, animal and Yard waste.

BENEFITS

- Low-salt, chlorine-free organic fertilizer with low odor.
- Easy to apply and won't clog equipment.
- Concentrated and long-lasting for fewer applications.
- Provides essential nutrients, enzymes, amino acids, and trace elements.
- Supports beneficial soil microbes and improves soil fertility.
- Helps rebuild overworked, unproductive soil.

GUARANTEED ANALYSIS

Total Nitrogen (N).....	0.5%
0.5% Water Soluble Nitrogen	
Available Phosphate (P ₂ O ₅).....	0.02%
Soluble Potash (K ₂ O).....	0.02%
Derived from Earthworm Castings	

Application Instructions

Apply 6 to 8 ounces per 1,000 ft² every 2 weeks or 12 to 16 ounces per 1,000 ft² every month throughout the season and again in late fall.



FERTILIZER SOLUTIONS WITH MICRONUTRIENTS

ABOUT

Suprex™ liquid fertilizers are designed to deliver high-quality plant nutrition, providing essential nutrients for efficient uptake and optimal plant health. Formulated to meet the diverse needs of turf and ornamentals, Suprex products offer versatile application options, ensuring effective soil and foliar feeding for strong, healthy growth.

BENEFITS

- Liquid formulations with premium nutrient sources
- Some blends are enhanced with Krystal Klear® chelated micronutrients for improved plant uptake
- Available in a range of formulations to support varying nutrient requirements
- Ideal for both soil and foliar applications, maximizing nutrient efficiency
- Developed for turf and ornamental plants, promoting overall plant vigor and resilience



18-3-6 with 0.1% Fe, 0.01% B & 0.05% Mn and 9% Slow Release Nitrogen



30-0-0 with 15% Slow Release Nitrogen

Application Instructions

Turf applications: Suprex 30-0-0 and 18-3-6 can be applied throughout the growing season on warm, transitional, and cool season grasses. Applications should begin in early spring and continue through the late fall at rates of 1 to 4 oz per 1,000 ft².

Trees, Shrubs and Ornamentals: Suprex 30-0-0 and 18-3-6 can be applied throughout the growing season as a foliar spray at rates of 1 to 4 oz per gallon of spray mix.

SUPREX K29

FOLIAR POTASSIUM ACETATE FERTILIZER

ABOUT

Suprex™ K29 is a unique source of potassium, having superior foliar absorption over traditional forms of potassium. Potassium acetate is a more desirable choice for foliar fertilization because of its small molecular size and the plant's natural affinity for organic acids.

Suprex K29 has been demonstrated to have up to 5X the foliar uptake of traditional forms of potassium like potassium nitrate, potassium thiosulfate, potassium sulfate and potassium chloride.

Suprex K29 is manufactured with organic acids, making it an excellent and safe tank mix partner with most plant inputs including other NPK and micronutrient products. Suprex K29 has a very low salt index in comparison to many popular potassium sources due to its organic nature, allowing it to have a high degree of plant safety, even at higher rates. Plant tissue has a high affinity for this near neutral, non-aggressive, organic form of nutrient, which allows for greater and more efficient foliar uptake of nutrients.

Application Instructions

Turfgrass and Sod: Apply 2 to 8 quarts/acre every 14 to 21 days as needed.

Greens and Tees: Apply 2 to 8 ounces per 1000 sq. ft. every 14 to 21 days as needed.

BENEFITS

- Unmatched foliar absorption
- Lower use rates than other forms of potassium
- Foliar uptake is up to 5x greater than other sources

Excellent Tank Mix

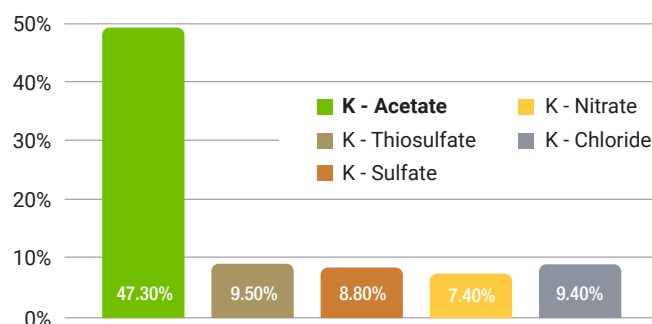
- Organic acid derived nutrient aids in tank mixing
- Highly compatible, non aggressive form of potassium

Plant Safety

- Reduced risk of phytotoxicity
- Safe for stressed plants

FOLIAR ABSORPTION OF POTASSIUM SOURCES

Department of Horticultural Sciences Texas A&M University



GUARANTEED ANALYSIS

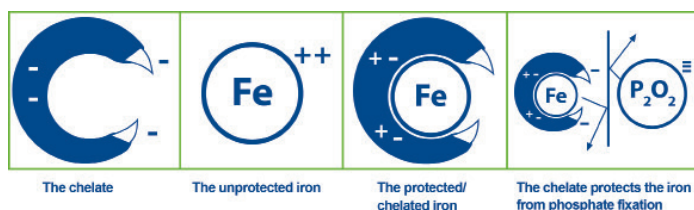
Soluble Potash (K_2O).....29%
Derived from potassium acetate

CHELATED MICRONUTRIENT SOLUTIONS



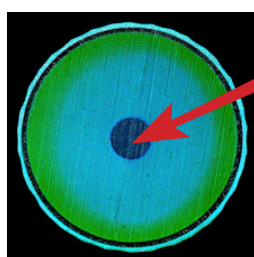
WHAT ARE CHELATES?

The word chelate (pronounced: “key-late”) is derived from the Greek word “chele” which literally means “claw”. Hence, chelate refers to the pincer-like manner in which a metal nutrient ion is encircled by the larger organic molecule (the claw), usually called a ligand or chelator.



Chelated micronutrients are protected from oxidation, precipitation, and immobilization in certain conditions because the organic molecule (the ligand) can combine and form a ring encircling the micronutrient. The pincer-like manner in which the micronutrient is bonded to the ligand changes the micronutrient’s surface property and favors the uptake efficiency of foliarly applied micronutrients.

Chelation occurs when certain large molecules form multiple bonds with a micronutrient, protecting it from reacting with other elements in the nutrient solution and increasing its availability to the plant.



Chelated metal being protected from attraction to other materials.

Why are Krystal Klear micronutrient solutions so effective?

Dual Chelation: Utilizes patented, biodegradable IDS-40 in conjunction with EDTA to maximize the benefits of both chelating agents.

Stability Constant: Refers to the equilibrium state of a metal cation and a ligand to form a chelating complex: A good stability constant is one in which the bond is strong enough to hold the metal in solution but not so strong that it doesn’t release the metal when applied.

Number of ligands: This refers to the ligands or “legs” that bond the metal to the chelating agents. For example, EDTA has 6 and IDS-40 has 5 ligands while citric acid has 3 carboxylic ligands and glucoheptonate has 1. The higher the number of legs means more cation surface area is covered.

That is why both EDTA and IDS-40 chelated metals are stable in orthophosphate solutions for an extended period while others fall apart and precipitate over time.





PATENTED CHELATED MICRONUTRIENT SOLUTIONS

ABOUT

Krystal Klear® micronutrient solutions are produced using a patented “dual-chelation” system for optimal performance. Krystal Klear micronutrient solutions have excellent tank-mix compatibilities, provide quick uptake of micronutrients, and deliver a sustained response.

KRYSTAL KLEAR PRODUCT OPTIONS

Krystal Klear® Fe 4% chelated Fe	Maintenance Applications: Apply at a rate of 0.75 - 2 fl. oz. per 1,000 ft ² each spray. Begin applications in the spring on a 14 to 21 day interval.
Krystal Klear® Turf Mix Chelated solution with 3% Fe, 1% Mn, 0.25% B, 0.25% Cu & 0.25% Zn Provides turf with a balanced chelated micronutrient package and helps support photosynthesis.	Maintenance Application: Apply 0.75 - 2 fl. oz. per 1,000 ft ² every 2 weeks. Moderate Deficiency: Apply 2 - 3 fl. oz. per 1,000 ft ² every 2 weeks. Severe Deficiency: Apply 4 fl. oz. per 1,000 ft ² every 2 weeks.
Krystal Klear® ResQ 8-0-2 solution with chelated 2% Fe, 0.5% Mg, 0.5% Mn, 0.25% B, 0.25% Cu, 0.25% Zn plus kelp Provides a complete micronutrient package with the additional benefits of sea kelp and other proprietary ingredients that increase tolerance to drought and stress.	Turf Applications: Apply 3 - 6 fl. oz. per 1,000 ft ² every 7 to 14 days throughout the season. Trees, Shrubs and Ornamentals Applications: Apply 1 gal. of Krystal Klear ResQ per 100 gal. of spray solution. Apply as needed throughout the season.
Krystal Klear® B 5% complexed boron solution	Complexed boron for quick corrections of boron deficiency. Boron is essential for optimal root and tissue levels.
Krystal Klear® Cu 5% chelated copper solution	Quickly corrects copper deficiencies. Copper is essential for growth and the activation of many enzymes.
Krystal Klear® Mg 3% chelated magnesium solution	Magnesium is essential for photosynthesis in plants and prevents yellowing of leaves.
Krystal Klear® Mn 5% chelated manganese solution	Quickly corrects manganese deficiencies. Manganese activates enzymes required for amino acid production.
Krystal Klear® Zn 9% chelated zinc solution	Quickly corrects zinc deficiencies. Zinc controls the synthesis of indoleacetic acid, which regulates plant growth.

PATENTED PHOSPHITE FERTILIZERS

PRUDENT®

Application Instructions

For Prudent 44 and Prudent 40Plus

Apply 0.5 - 2 fl. oz. per 1,000 ft². Begin applications in the spring and continue on a 7 to 14 day schedule throughout the growing season.

Foliar Applications:

Prudent 44 and Prudent 40PLUS may be applied with all types of ground spraying equipment or by air.

DO NOT exceed a rate of fl. oz. of product per gallon of water when using less than 20 gallons of solution per acre.

DID YOU KNOW?

Urea phosphite is a eutectic because it contains two solids - urea and phosphorus acid - that form a liquid eutectic composition. This allows for a high concentration of phosphorus acid to be solubilized without the addition of water.

See page 30 for more information on the stability of phosphite in Prudent products!

WHY ARE PRUDENT PRODUCTS UNIQUE?

- Contain one of the highest percentages of PO₃ of any phosphite fertilizer
- Formulated with very little water allowing the PO₃ to remain stable in the jug; won't convert to PO₄ the way other phosphites can
- Can be used at much lower rates per acre than most phosphite fertilizers, making them more economical and effective
- Contain a surfactant for improved spreading and nutrient uptake
- Can be used in combination with Nutrol EPA registered fungicide for effective control of soil borne and foliar diseases

PRUDENT BENEFITS

- Improve plant strength and ability to tolerate unfavorable environmental conditions
- Increase integrity of plant cell walls, improving plant strength and resistance
- Improve ability to absorb water and nutrients
- Stimulate key pathways in the plant, which produce compounds responsible for defending the plant against environmental stress
- Keep un-chelated metals stable in solution
- Reduce scale build-up in spray tanks and other equipment

PRUDENT[®] 44

15-0-0

GUARANTEED ANALYSIS

Total Nitrogen (N).....15%

2.5% Ammoniacal Nitrogen

12.5% Urea Nitrogen

Derived from aqua ammonia and urea phosphite

Prudent[®] 44 is a highly concentrated phosphite fertilizer that is effective at very low use rates. It's an ideal partner product with Nutrol[®] EPA registered fungicide for control of soil borne and foliar diseases.

Prudent 44 (15-0-0 with 42% PO₃) fertilizer is formulated with patented urea phosphite. Urea phosphite is a "eutectic", which allows a high concentration of phosphite in the Prudent family of specialty fertilizers.

COMBAT

ENVIRONMENTAL STRESSES WITH AMINO ACIDS

PRUDENT[®] 40PLUS

13-0-0

GUARANTEED ANALYSIS

Total Nitrogen (N).....13%

0.5% Ammoniacal Nitrogen

12.13% Urea Nitrogen

0.37% Other Water Soluble Nitrogen

Derived from aqua ammonia, amino acids and urea phosphite

Prudent[®] 40PLUS highly concentrated phosphite fertilizer (40% PO₃, expressed as P₂O₅), is formulated with patented urea phosphite and Pennamin Driver-L amino acids. The amino acids aid in building tolerance against environmental stresses, help move nutrients into the plant, and, play important roles in almost every plant function. And, since they are free amino acids they are readily plant-available. This saved energy can then be used for other plant functions.



LIQUID FERTILIZER

ABOUT

Embella™ is a liquid fertilizer designed to promote beneficial microbial activity. It feeds the microbes that enhance the breakdown of nutrients to make them more available to the soil.

Embella is now formulated with three carbohydrate sources—monosaccharides, disaccharides, and oligosaccharides—to provide immediate, quick, and slow-release energy that sustains and expands microbial populations. This balanced approach ensures consistent microbial activity, leading to improved soil fertility, organic matter development, and overall plant resilience.

RESTORE THE SOIL BY FEEDING THE MICROBES!

Soil microbes rely on sugars as an energy source, with microbial uptake often surpassing plant uptake. These microbes convert simple sugars into complex molecules, helping to build soil organic matter while cycling nutrients and releasing carbon dioxide. By supporting microbial communities, soil structure is enhanced and nutrient availability is improved.

BENEFITS

TO THE SOIL

- Provides nutrition for native microbial populations, the driving force of any ecosystem
- Improves soil conditions and nutrient availability by unlocking nutrients that may be tied-up in the soil
- Encapsulates nutrients and keeps them in the root zone for plant uptake
- Improves the water holding capacity of the soil
- Reduces leaching
- Nutrients stay in the root zone where plants can use them and out of ground water, aquifers and other waterways
- Improves soil aeration

TO THE PLANT

- Improves nutrient uptake
- Strengthens cell walls
- Increases root depth and mass
- Enhances drought, disease and stress tolerance
- Supports plant's immune response

Application Instructions

Apply with fertilizer at a rate of 8 - 16 fl. oz. per acre (0.18 - 0.36 fl. oz. per 1,000 ft²) at planting or sod-laying. Follow with foliar fertilizer applications at a rate of 16 fl. oz. per acre every 30 - 45 days.

AGRA-ROUSE®

INCITE®

BLENDED PHYTOHORMONE SOLUTIONS

AGRA-ROUSE

Agra-Rouse® is a blend of bio-stimulants containing naturally-occurring and synthetic plant growth regulators and plant hormones known to **encourage root development and propagation, promote cell division and enhance plant health.** The phytohormones work with the plant's own natural physiology to stimulate growth, increase vigor and improve overall plant health.

BENEFITS

- Faster seed germination
- Plants are more tolerant of heat, cold and drought
- Deeper roots
- Promote healthier turf that is more resistant to disease

AGRA-ROUSE CONTENTS

.09% Indole-3-Butyric Acid (IBA) – Auxin
.05% Gibberellins
.05% Cytokinins

Application Instructions

Foliar and Soil: Ornamentals, Trees and Turf: 4 - 8 fl. oz. per acre
Seed Treatment: 1 - 4 fl. oz. per 100 pounds of seed
Transplant and Rooting Solutions, Nursery/Container Use: 1 - 2 fl. oz. per 5 gallons of solution

INCITE

Incite® is a blend of bio-stimulants containing naturally-occurring and synthetic plant growth regulators and plant hormones known to **promote cell division, shoot initiation, and bud formation, and, stimulate chlorophyll synthesis and leaf expansion from cell enlargement.** They work with the plant's own natural physiology to stimulate top growth, increase vigor and improve overall plant health.

BENEFITS

- Increase leaf growth in turf grass
- Help recovery from both winter and summer damage
- Increase turf growth during the season
- Accelerate growth in newly seeded areas

INCITE CONTENTS

.05% Indole-3-Butyric Acid (IBA) – Auxin
.05% Gibberellins
.09% Cytokinins

Application Instructions

Foliar and Soil: Ornamentals, Trees and Turf: 4 - 8 fl. oz. per acre
Seed Treatment: 1 - 4 fl. oz. per 100 pounds of seed
Transplant and Rooting Solutions, Nursery/Container Use: 1 - 2 fl. oz. per 5 gallons of solution



POLYMER ADJUVANT AND ANTI-TRANSPIRANT

ABOUT

Argosy® RF is a water-soluble, environmentally safe polymer matrix designed to enhance the efficacy of pesticides, nutrients, and plant hormones. By encapsulating the active ingredient, Argosy RF ensures superior adhesion, even under challenging conditions such as rain or irrigation. Its unique elastic properties stretch with plant growth, maintaining product coverage and reducing the need for reapplication. Argosy RF improves drought tolerance, reduces plant stress, and efficiency, saving both time and resources.

INGREDIENT DISCLOSURE

Inert ingredients	0.62%
Water	99.38%
TOTAL	100.00%

DRAWS AMBIENT MOISTURE FROM ATMOSPHERE TO LEAF!



BENEFITS

Enhanced Pesticide Efficacy

Improves turf care by extending pesticide effectiveness, improving weed and pest control, and promoting healthier, more resilient turf.

Drought Resistance

Retains moisture on the plant surface, reducing irrigation needs and helping plants recover faster from drought stress.

Improved Nutrient Efficiency

Boosts the performance of fertilizers and plant hormones, leading to higher stress resistance, faster rooting, and stronger plant growth.

Reduces Environmental Impact

Minimizes runoff and bounce, leading to better area control and less environmental waste. Supports organic growing practices.

Fewer Applications Required

Saves labor and reduces the need for companion products by maintaining coverage longer, even after rain, and improving drift control.

Application Instructions

Apply as a 0.125 to 1.25 % solution (1 pint to 1.25 gallons per 100 gallons of solution)

See product label for complete directions for use.

Evaluation of chemical compatibility is the sole responsibility of the user.



FUNGICIDE - WATER-SOLUBLE PK FERTILIZER - TANK BUFFER

ABOUT

Nutrol® is a fungicide effective against powdery mildew, a true tank buffer that can prevent alkaline hydrolysis and a highly concentrated, yet very gentle, water soluble PK fertilizer.

Nutrol, when used with any Prudent® fertilizer, can also control soil borne and foliar pathogens.

GUARANTEED ANALYSIS

Available Phosphate (P_2O_5).....50%
Soluble Potash (K_2O).....32%

Derived From: Monopotassium phosphate

Application Instructions

Nutritional (Cool and Warm Season): Apply 2 - 4 oz. per 1,000 ft² (6 - 11 lb. per acre). Apply every 7 to 14 days throughout the season. If used as a starter fertilizer during transition periods to cool season grasses, apply 4 - 6 oz. per 1,000 ft².

Powdery Mildew Control: Apply 8 - 40 lb. Nutrol per acre. Start sprays in early spring when conditions become favorable for disease development and continue sprays every 7 to 14 days for the entire season.

Control of diseases caused by *Pythium*, *Fusarium* and *Rhizoctonia* when applied with Prudent® fertilizers:

Mix 8 - 11 lb. of Nutrol with labeled rates of Prudent fertilizers per 100 gal. and apply as necessary. DO NOT exceed one application every 7 days.

See Full label for additional instructions

FUNGICIDE

- Fungicide labeled for use to control and eradicate powdery mildew and other soil-borne and foliar diseases
- Prevents the formation of resistant strains of powdery mildew when used in alternation with other labeled fungicides

TANK BUFFER

- Ensures optimal performance by preventing alkaline hydrolysis, which is the breakdown of pesticides by alkaline pH
- True buffer and can maintain the pH of tank solutions (The pH of a 1% aqueous solution of Nutrol in distilled water is 4.5 +/- 0.3)

NUTRIENT

- Highly concentrated, water-soluble fertilizer containing over 50% P_2O_5 and 32% K_2O
- Safe to use, has the lowest salt index of any fertilizer and will not cause phytotoxicity even at high concentrations
- Suitable for foliar, soil and drip irrigation applications

Nutrol is an excellent tank buffer that will acidify and buffer distilled water to a pH range of 4.5 - 5.5. Many pesticides can start to lose their efficacy immediately if they are mixed with alkaline solutions. By adding Nutrol to the tank, you can buffer the tank solution and ensure that pesticide applications are effective and are delivered to the target pest at the manufacturer's desired activity. This means fewer re-sprays, more consistent performance, and reduced chemical usage and labor costs.

PERFORMANCE PROTOCOLS

NUTRITION®

Warm Season Monthly Fairway Program

ExAlt® – 16 fl. oz. per acre (0.37 fl. oz. per 1,000 ft²)

Pennamin® Perfect K, or Pennamin® High K – 1 - 5 lb. per acre (0.4 - 2.0 oz. per 1,000 ft²)

SRN Source – 4.4 - 11 lb. per acre (0.10 - 0.25 lb. per 1,000 ft²)

Cool Season Monthly Fairway Program

ExAlt® – 16 fl. oz. per acre (0.37 fl. oz. per 1,000 ft²)

Pennamin® High K – 1 - 5 lb. per acre (0.4 - 2.0 oz. per 1,000 ft²)

RemeD8™-WSP – One 8 oz. packet per 2.15 acres

Kelpene® GPX – 15 fl. oz. per acre (0.35 fl. oz. per 1,000 ft²)

Seed Establishment Programs

SEEDING

Agra Rouse® – 4 fl. oz. per acre (0.1 fl. oz. per 1,000 ft²)

Nutrol® – 8 lb. per acre (3 oz. per 1,000 ft²)

Prudent® 44 – 1.4 qt. per acre (1 fl. oz. per 1,000 ft²)

Krystal Klear® – 1.4 qt. per acre (1 fl. oz. per 1,000 ft²)

OVERSEEDING

Agra Rouse® – 4 fl. oz. per acre (0.1 fl. oz. per 1,000 ft²)

Nutrol® – 8 lb. per acre (3 oz. per 1,000 ft²)

Kelpene® GPX – 5 gal. per acre (15 fl. oz. per 1,000 ft²)

CONSTRUCTION/NEW SEEDING

Nutrol® – 8 lb. per acre (3 oz. per 1,000 ft²)

Agra Rouse® – 4 fl. oz. per acre (0.1 fl. oz. per 1,000 ft²)

Saline, Compacted and Bicarbonate/Black Layer Solution

ExAlt® – 32 fl. oz. per acre (0.75 fl. oz. per 1,000 ft²) per month

Tournament Program

Tournament conditions can be maintained on a daily basis with the use of our programs and overall Ecosystem Management Approach.

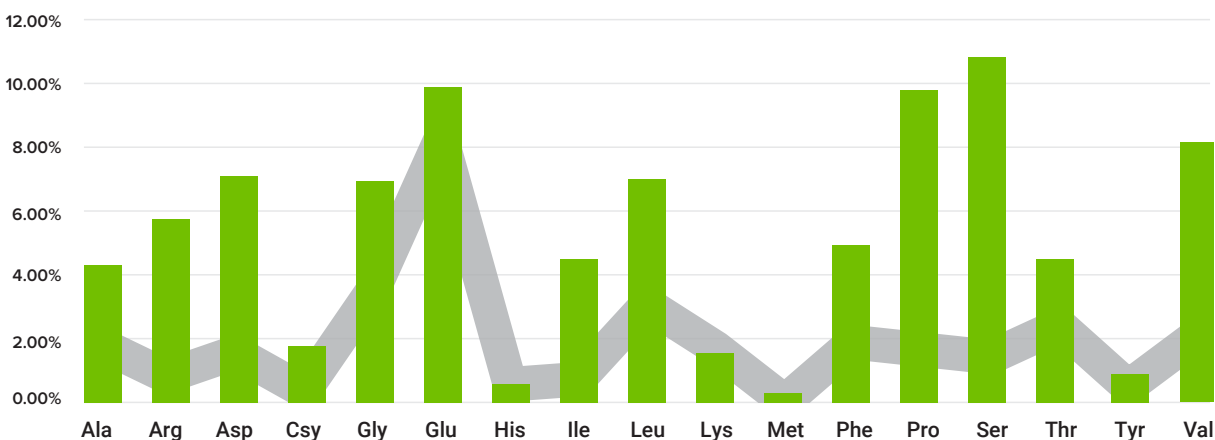
PENNAMIN® PRODUCTS AMINO ACID PROFILE

Amino Acid	Pennamin® Driver-P	Pennamin® High K	Pennamin® Perfect-K	Pennamin® Ca	Pennamin® Fe&Mn	Pennamin® Mn	Pennamin® Si
Alanine	4.29%	2.0%	3.0%	2.5%	3.0%	3.3%	3.4%
Arginine	5.39%	2.6%	3.7%	3.2%	3.8%	4.2%	4.3%
Aspartic Acid	6.48%	3.1%	4.5%	3.8%	4.6%	5.1%	5.2%
Cystine	1.20%	0.6%	0.8%	0.7%	0.8%	0.9%	1.0%
Glutamic Acid	9.38%	4.4%	6.5%	5.5%	6.6%	7.3%	7.5%
Glycine	7.08%	3.4%	4.9%	4.2%	5.0%	5.5%	5.7%
Histidine	0.60%	0.3%	0.4%	0.4%	0.4%	0.5%	0.5%
Isoleucine	3.29%	1.6%	2.3%	1.9%	2.3%	2.6%	2.6%
Leucine	6.48%	3.1%	4.5%	3.8%	4.6%	5.1%	5.2%
Lysine	1.60%	0.8%	1.1%	0.9%	1.1%	1.2%	1.3%
Methionine	0.50%	0.2%	0.3%	0.3%	0.4%	0.4%	0.4%
Phenylalanine	4.19%	2.0%	2.9%	2.5%	3.0%	3.3%	3.3%
Proline	9.78%	4.6%	6.7%	5.8%	6.9%	7.6%	7.8%
Serine	11.27%	5.3%	7.8%	6.6%	7.9%	8.8%	9.0%
Threonine	4.29%	2.0%	3.0%	2.5%	3.0%	3.3%	3.4%
Tyrosine	0.60%	0.3%	0.4%	0.4%	0.4%	0.5%	0.5%
Valine	5.09%	2.4%	3.5%	3.0%	3.6%	4.0%	4.1%
Total FREE Amino Acids	81.5%	38.6%	56.1%	48.0%	57.4%	63.6%	65.2%



Total vs. Free Amino Acids

A large percentage of the amino acids found in many of our competitor's products are tied up in long and short chains of peptides. Depending on several factors such as moisture levels, temperature, pH levels, available microbes and chain length, these peptide chains can take days, weeks, months, or even entire growing seasons or longer to break down into the free form amino acids that plants can use. Directly applying free L-form amino acids to soil allows plants to absorb the nutrients immediately and far more efficiently for superior results.



Pennamin vs. Market Standard Range: Free Amino Acids Comparison

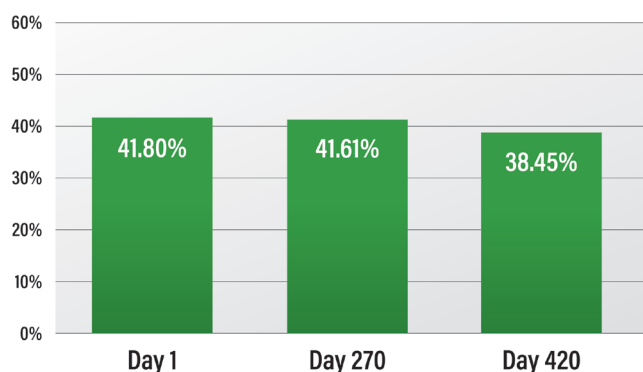
■ Pennamin Driver-P ■ Market Standard Range

PRUDENT®

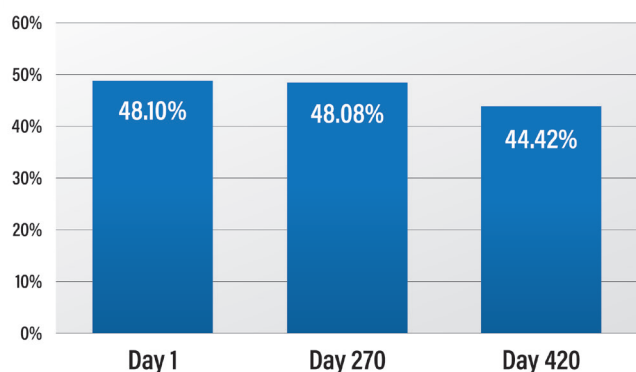
You're Paying for Phosphite; **MAKE SURE YOU'RE APPLYING PHOSPHITE**

It is a common knowledge that the phosphite (PO_3) content of fertilizers can convert to phosphate (PO_4) while stored in their jugs or containers. This is because most phosphite fertilizers are formulated with added water, and, phosphite (PO_3) can convert to phosphate (PO_4) in the presence of water, beginning shortly after production. The Prudent® family of phosphite fertilizers* are the exception, since they are produced without adding water, keeping the phosphite stable in the jug.

PO_3 (Phosphite) % (expressed as P_2O_5) in Prudent 44



PO_3 (Phosphite) % in Prudent 44



To document the stability of Prudent® 44, we commissioned Stillmeadow Labs, an independent EPA-qualified lab, to test the PO_3 content of Prudent 44 samples taken the day of production and taken more than 9 months after production.

As the graphs above show, the PO_3 in Prudent® 44 remained the same after 9 months.

PRUDENT STABILITY: THE PERFORMANCE ADVANTAGE

**PRUDENT®
44** **PRUDENT®
40PLUS**

"Mix N' Max"

Adjust the Proportion of Vibrant® Red and Vibrant® Green to achieve optimal performance depending on the nutritional requirements of turf and ornamentals.



Vibrant Red				Vibrant Green				Vibrant "Mix N' Max" NPK Analyses			
N	P	K	SRN	N	P	K	SRN	N	P	K	SRN
3.0%	6.0%	12.0%	0.0%	18.0%	3.0%	4.0%	10.0%				
0.0%				100.0%				18.00%	3.00%	4.00%	10.00%
5.0%				95.0%				17.25%	3.15%	4.40%	9.50%
10.0%				90.0%				16.50%	3.30%	4.80%	9.00%
15.0%				85.0%				15.75%	3.45%	5.20%	8.50%
20.0%				80.0%				15.00%	3.60%	5.60%	8.00%
25.0%				75.0%				14.25%	3.75%	6.00%	7.50%
30.0%				70.0%				13.50%	3.90%	6.40%	7.00%
35.0%				65.0%				12.75%	4.05%	6.80%	6.50%
40.0%				60.0%				12.00%	4.20%	7.20%	6.00%
45.0%				55.0%				11.25%	4.35%	7.60%	5.50%
50.0%				50.0%				10.50%	4.50%	8.00%	5.00%
55.0%				45.0%				9.75%	4.65%	8.40%	4.50%
60.0%				40.0%				9.00%	4.80%	8.80%	4.00%
65.0%				35.0%				8.25%	4.95%	9.20%	3.50%
70.0%				30.0%				7.50%	5.10%	9.60%	3.00%
75.0%				25.0%				6.75%	5.25%	10.00%	2.50%
80.0%				20.0%				6.00%	5.40%	10.40%	2.00%
85.0%				15.0%				5.25%	5.55%	10.80%	1.50%
90.0%				10.0%				4.50%	5.70%	11.20%	1.00%
95.0%				5.0%				3.75%	5.85%	11.60%	0.50%
100.0%				0.0%				3.00%	6.00%	12.00%	0.00%

[illegible]



PERFORMANCE
NUTRITION®