



Summer Plant / Root Stress Implementing an Integrated Management Program

Bent grass, Poa Annua and Champion Bermuda are susceptible to periods of high heat and humidity.

- Root decline reduces plant water and nutrient movement.
- Disease and insect tolerance declines.
- Recovery capacity is significantly reduced

Implementing an integrated program to minimize the impacts of summer plant stress will greatly improve plant performance during these periods.

Strategy: Increase and maintain the natural plant defenses, combined with a preventative fungicide program.

Bio Stimulants S.A.R. Inducers

Kelp Extract

- Natural Nutrition
- Natural Plant Stress Hormones
- Natural Plant Growth Regulators

Phosphite

- Natural Plant Defense and Physical
- Nutrient source

Preventative Fungicide Program

- Biweekly
- Rotation of key active ingredients
- Scouting for potential outbreaks
- Include bio stimulants and S.A.R. inducers to improve overall performance



Kelp Extract

What it is – What it does

- ✓ Increased root mass and function
- ✓ Increased plant and root tolerance to stress
- ✓ Improved nutrient uptake and utilization during stress periods.

As with many things, there are numerous concentrations, sources and processing methods for kelp extract.

The key is “cool water grown and cold extract process.” This combination provides the highest levels of minerals, plant growth and stress tolerance hormones, vitamins, enzymes and proteins.

Kelp extract is a natural bio-stimulant that is naturally chelated. It acts as a plant nutrient supplying 70 macro and minor elements. It contains cytokinin, auxins and gibberellic hormones. The highest concentration is cytokinin which improves cell division, cell size and delays the cell aging process in tissue and roots.

Kelp extract provides an S.A.R. effect naturally increasing the plants natural immune system.

Used in combination with regular nutrition and disease prevention products, Kelp extract greatly improves the plants' ability to thrive during periods of increased environmental stress.





NETRIC

Concentrated North Sea Kelp

NETRIC is a highly concentrated cold extract of *Ascophyllum nodosum*. NETRIC provides a natural source of nutrients that improve plant stress tolerance and root development. NETRIC contains a proprietary surfactant to improve distribution in the rootzone and aid in plant uptake.

Guaranteed Analysis	
Soluble Potash (K ₂ O)	1.0%

Derived from: *Ascophyllum nodosum* sea plant
Non-Plant Food Ingredients: 5% alcohol ethoxelates

Directions for Use: All Turf Varieties

- Apply 1.0 fl. Oz. / 1000 sq. ft. on a biweekly application schedule when turf growth begins.
- Increase frequency to 7 days during periods of increased plant stress.
- Apply sufficient irrigation to move product into upper rootzone.
- NETRIC can be tank mixed with fertilizers and pest control products. A compatibility test is recommended prior to tank mixing.

Caution: Keep Out of Reach of Children
Contents 2.5 gal - Net Weight 23 lb. - 9.2 lb. / gal
Manufactured For:
Vereens 8862 Hwy 90, Longs, SC 29568 - (800) 634 7626





A Phosphite Primer

Phosphorous Acid:

- Discovered by the Germans during WWII
- They were looking for a phosphorous replacement during the war since imports of phosphate were cut off
- It had little P_2O_5 availability due to instability
- Later discovered the SAR property – Sustained Acquired Response
- Proved to illicit natural plant defense to phytophthora and pythium

What Is It:

- P_2O_3
- A strong acid
- Quickly converts to P_2O_4 – then to P_2O_5
- In the P_2O_3 and some of the P_2O_4 stage – it has the SAR properties.
- Once converted to P_2O_5 – it has very little fertility value
- It is reacted with a “Base” to neutralize the acid – potassium and aluminum tris
- It is not listed in the Guaranteed Analysis because only the P_2O_5 form is recognized as a “ fertilizer ingredient”
- The “Pounds Phosphorous Acid / Gallon” is the differentiator

How It Works:

- Sends a signal to the plant that there is a potential “invader”
- The plant initiates natural cell defense mechanisms to prevent it
- The plant needs a certain level of P_2O_3 to make the signal work

How To Use It:

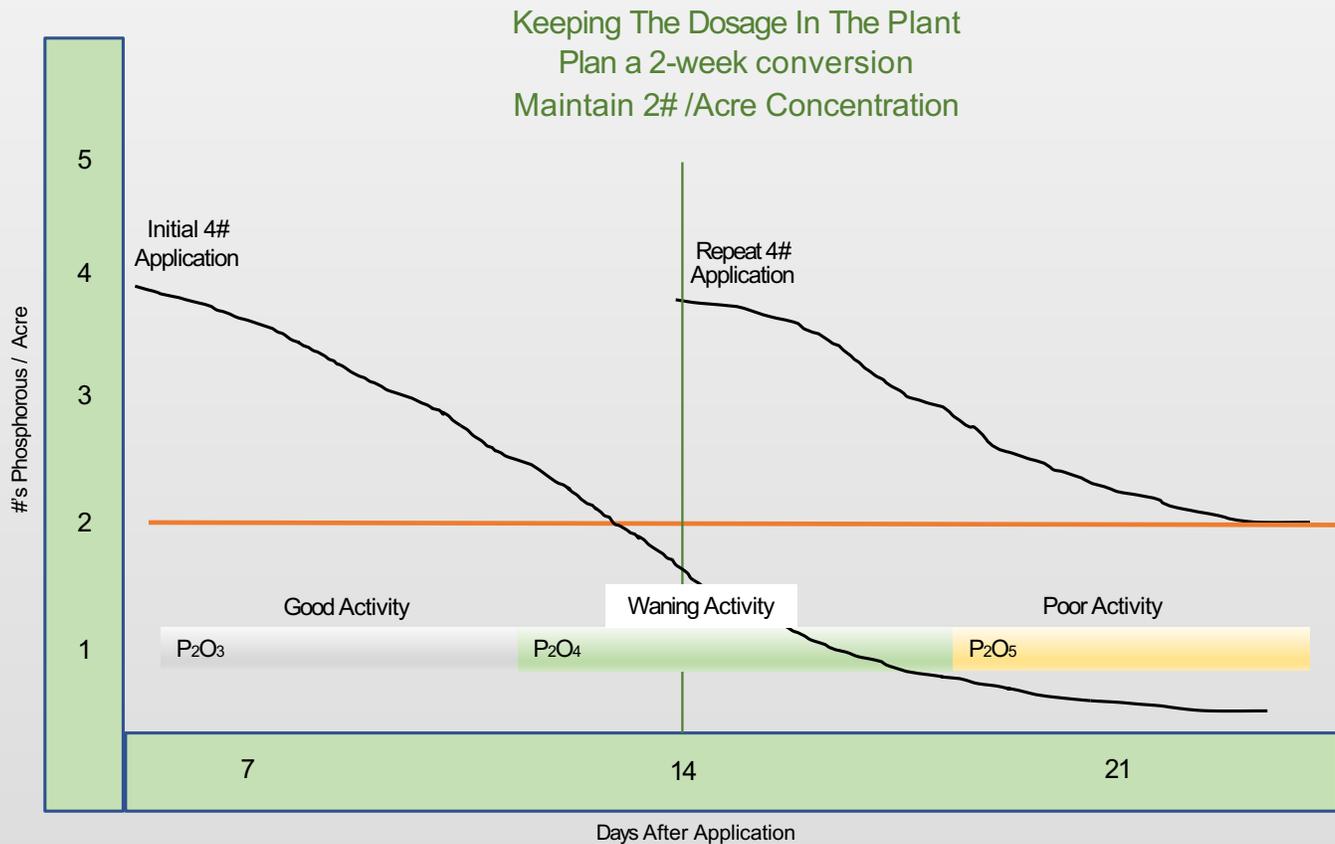
- It is about keeping the ppm of P_2O_3 in the plants at a certain level
- It converts quickly by picking up oxygen – P_2O_4 – P_2O_5
- It has preventative and curative capabilities
- Approximately 2# of P_2O_3 per acre is required to be effective
- Application rates have a cushion to allow for the conversion to P_2O_5
- Most are based on a 2-week application schedule
- Apply a minimum of 4# P_2O_3 per acre biweekly
- Increase frequency – versus rate – during periods of high stress and favorable conditions.

What Are The Conditions To Look Out For?:

- Cool Season/ Champion Bermuda: High Temperatures and Humidity (June, July, August)
- Warm Season: Low Temps- Low Growth Potential – Fall-Winter- Spring



A Phosphite Primer



Fungicide Registration versus Fertilizer

- A handful of products have a FIFRA registration for the technology and can be sold as fungicides.
 - Appear II
- Most do not carry a FIFRA registration and are sold as "plant nutrients / plant health products."
 - Prize Phiter, Title Phyte, Gold Standard, many others.



Phosphite Technologies

Comparing "Apples to Apples"



Rates Compare Equal Amounts of Phosphorous Acid

Rates vary for products containing phosphorous acid based on the agronomic objectives.

It is the conversion of the P₂O₃ acid that provides the benefits.

Knowing the amount of phosphorous acid per gallon will assure you are getting the correct amount and equally comparing the economics of each brand.

The Labels Can Be Misleading!

Energy Prize Phiter
2-0-16
5.74# /gl
2.0 – 4.0 oz/1000
\$70.70 / gl
\$48 - \$96/ac

Appear II
4.1# /gl
3.0 – 6.0 oz/1000
\$189 / gl
\$189 - \$378/ac

Title Pyhte
0-0-30
4.77# /gl
2.5 – 5.0 oz/1000
\$75/ gl
\$64 - 128 /ac

Gold Standard
10-0-0
4.5# /gl
2.5 – 5.0 oz/1000
\$95/ gl
\$81 - \$162 /ac

The ENERGY Phosphite Lineup

26 Phyte
0-0-26

ENERGY 26 PHYTE is a concentrated nutrient solution containing mono and di-potassium salts of phosphorous acid. ENERGY 26 PHYTE is readily absorbed through the leaf tissue or by root uptake quickly enhancing plant vigor and quality.

Guaranteed Analysis	
Soluble Potash (K ₂ O)	26.0%
Derived from: potassium phosphite	
Contains 4.08 lbs. of phosphorous acid per gallon	
Directions for Use: Warm Season Turfgrass	
• Apply 6.0 to 8.0 fl. Oz. / 1000 sq. ft. on a 7-to-14-day interval in a minimum of 2 gallons of water per 1000 sq. ft.	
Directions for Use: Cool Season Turfgrass	
• Apply 3.0 to 6.0 fl. Oz. / 1000 sq. ft. on a 7-to-14-day interval in a minimum of 2 gallons of water per 1000 sq. ft.	

ENERGY 26 PHYTE can be tank mixed with fertilizers and pest control products. A compatibility test is recommended prior to tank mixing.

Caution: Keep Out of Reach of Children
 Contents 2.5 gal / Net Weight 30.23 lb. / 12.1 lb. / gal
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Prize Phyter
0-0-16

ENERGY PRIZE PHYTER is a highly concentrated nutrient solution containing mono and di-potassium salts of phosphorous acid. ENERGY PRIZE PHYTER is readily absorbed through the leaf tissue or by root uptake quickly enhancing plant vigor and quality.

Guaranteed Analysis	
Soluble Potash (K ₂ O)	16.0%
Derived from: potassium phosphite	
Contains 5.74 lbs. of phosphorous acid per gallon	
Directions for Use: All Turf Varieties	
• Apply 1.0 to 2.0 fl. oz. / 1000 sq. ft. on a 7-to-14-day interval in a minimum of 2 gallons of water per 1000 sq. ft.	

ENERGY Prize Phyter can be tank mixed with fertilizers and pest control products. A compatibility test is recommended prior to tank mixing.

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Shield Si
0-0-24

ENERGY SHIELD SI is a revolutionary combination of Potassium Phosphite and Silicon dioxide. ENERGY SHIELD SI chemically enhances the turf's resistance to stress and increases plant metabolism. The Silicon increases the physical resistance to stress and damage by increasing the turgor pressure of plant tissue.

Guaranteed Analysis	
Soluble Potash (K ₂ O)	24%
Silicon (Si)	1.0%
Derived from: potassium phosphite, silicon dioxide	
Contains 3.0 lbs. of phosphorous acid per gallon	
Directions for Use: Warm Season Turfgrass	
• Apply 6.0 to 8.0 fl. Oz. / 1000 sq. ft. on a 7-to-14-day interval in a minimum of 2 gallons of water per 1000 sq. ft.	
Directions for Use: Cool Season Turfgrass	
• Apply 3.0 to 6.0 fl. Oz. / 1000 sq. ft. on a 7-to-14-day interval in a minimum of 2 gallons of water per 1000 sq. ft.	
Directions for Use: Overseeding, Sprigging, Laying Sod	
Apply 6.0 fl. Oz. / 1000 sq. ft. after germination, sprigging or laying of sod, on 14-day interval in a minimum of 2 gallons of water per 1000 sq. ft.	

ENERGY SHIELD SI can be tank mixed with fertilizers and pest control products. A compatibility test is recommended prior to tank mixing.

Caution: Keep Out of Reach of Children
 Contents 2.5 gal / Net Weight 29.09 lb. / 11.6 lb. / gal
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Summer Fungicides

A successful integrated summer fungicide program relies on rotation and application timing.

There are numerous active ingredients providing targeted and broad-spectrum control on the market.

The Vereen MATREX Integrated summer fungicide program is designed to provide optimum protection from all diseases impacting turfgrasses.

Key Fungicide Considerations

Preventative versus curative

Application timing: June – through September 15th

Tank mix for broader spectrum and resistance management

Key Diseases:

- Dollar Spot
- Brown Patch
- Anthracnose
- Pythium

Key Active Ingredients:

- Azoxystrobin – patch/anthracnose/pythium
- Tebuconazole – patch/anthracnose/Bermuda decline
- Iprodione – dollar spot, leaf spot, anthracnose
- Chlorothalonil – dollar spot, patch, anthracnose
- Cyazofamid – pythium root rot/blight

Vereens Turf Products carries a broad line of fungicide products. Our Field Sales Professionals can design and assist you in managing a custom program.

Always Read and Follow Label Directions



A Dynamic Duo

Summer Plant Stress – Nutrition – Plant Protection

Summer heat and humidity can take a quick toll on bent grass. Increasing the plants natural defense systems and stimulating root function will greatly improve how your turf manages through the summer stress period.

Sea Plant Extract and Phosphite technologies have a proven track record. Decades of use have validated the performance.

Used in combination with your Summer foliar feed and fungicide programs, this “Dynamic Duo” provides:

- Reduced root senescence
- Increased root depth and functionality
- Increased natural plant defense Sustained Acquired Response (S.A.R)
- Improved plant stress tolerance and recovery



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NETRIC

Concentrated North Sea Kelp

- 95% pure kelp extract
- Proprietary soil surfactant blend to aid in uniformity of placement
- Natural plant and root growth hormones
- Natural Vitamins and Minerals
- Improves plant stress tolerance and recovery

1.0 to 1.5 fl oz/1000
Biweekly application
\$29 - \$43 / acre

Prize Phyter

High Load Phosphite

- 5.74 # of phosphorous acid per gallon
- Potassium phosphite formulation
- Tissue and root absorption
- 24-hour plant S.A.R. initiation
- Adjust rate and frequency based on agronomic conditions

2.0 to 4.0 fl oz/1000
Weekly - Biweekly application
\$49 - \$96 / acre