



# SINCE 2007

Our Founder, Durend Locke, created Plant Health Solutions in order to maintain the crucial element of personal relationships in the Golf Course Turf Management industry. Over a decade later, Plant Health Solutions still thrives as a family owned and operated business with Durend's original mission at the forefront.

Several decades of combined experience, personal consultants, a variety of partnerships and on-time deliveries are all built upon a foundation of providing a high-quality customer experience. This enables us to provide the best possible Plant Health Solutions for each of our customer's unique needs.

We specialize and consult in the most exclusive and prestigious golf industries across Florida. We also proudly serve sod farms, nurseries, equestrian communities, pest control organizations, athletic fields and landscapers. Each have seen the benefits that come from our quality products and customized solutions.



# CONTENT

- 3 Wetting Agent Pellet
- 4 Adjuvants & Surfactants
- 7 Soil Conditioners
- 8 Biostimulants
- 9 Micro nutrients
- 13 Speciality NPK & Phosphates
- 17 Personal Consultants
- 18 Contact Information

# WETTING AGENT PELLET

## INTRUDE



Non-foaming pelletized soil surfactant with 100% active ingredient designed for spot treatment of hydrophobic areas and "hot spots" on greens. Designed for applications in standard hand-watering guns, Intrude is safe to apply on greens, will not crumble during use, and will easily treat two greens per pellet.

- **Typical rate:** One pellet will treat at least 2 greens
- **Features and Benefits:** Low foaming, 100% active ingredient formula with excellent pellet integrity, a high degree of turf safety, and superior wetting properties
- **Availability:** 6 x 12 pellets



# SURFACTANTS AND ADJUVANTS

## MSO-ORGANO SI



MSO-Organo Si is a non-ionic spray adjuvant that contains organosilicone, methylated seed oils and emulsifiers. Designed to maximize spreading and wetting as well as enhancing deposition and penetration of applied chemistry. MSO-Organo Si is a particularly good choice for use with biological and biorational pesticides, especially those containing Neem Oil/Azadirachtin or Bacillus Thurengensis.

- **Rate:** 1-2 pt/100 gal
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

## SPOT ON



Spot On is a blend of soil wetting agents combined with solvent technologies intended to treat existing problems of localized dry spot and hydrophobic soils as a corrective strategy. While the solvents remove organic compounds and waxy coatings on soil particles that are responsible for LDS, the surfactant helps restore normal hydration characteristics to the soil. As opposed to a short-term treatment strategy that addresses only the symptoms of hydrophobic areas and LDS, Spot On actually works to correct the causal effects of LDS.

- **Rate:** 6 oz/1,000 sq ft
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

## INVASION



Invasion is a three-polymer blend soil surfactant designed to maintain proper moisture conditions in the soil and to prevent the development of LDS and hydrophobic conditions. When used as part of a regular maintenance program for tees and greens, Invasion helps ensure quality playing conditions, balanced soil moisture, rapid re-wetting, and excellent turf safety.

- **Rate:** 6 oz/1,000 sq ft
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

## DEAD ON



Dead On is a spray tank acidifier combined with an indicator solution. Tank mix will change colors based upon solution pH. Prevents alkaline hydrolysis and mitigates spray tank bicarbonates.

- **Rate:** 4-8 oz/100 gal
- **Availability:** 4 x 1 gal





### CYCLONE

Cyclone is a 100% active ingredient product formulated to deliver uniform hydration, root zone moisture retention, and rapid rewetting, yet delivering a firm, dry playing surface. This is a premium product for turfgrass managers who want a very high performance putting surface. Cyclone is formulated with capped triblock polymers as well as penetrating agents to deliver ultimate moisture management while moving excess moisture down.

- **Rate:** 6 oz/1,000 sq ft
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

### QUADRAHYDE

Quadrahyde is a soil surfactant designed for injection into irrigation systems for short-term moisture management. Quadrahyde is a blend of 4 polymers in a precise ratio to encourage uniform wetting, increase moisture penetration, and enhance moisture retention for about two weeks. Quadrahyde will increase moisture delivery to the root system, reduce localized dry spots, and increase the efficiency of irrigation.

- **Rate:** 1-2 qt/100 gal
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

### HYDRA-5

Hydra-5 is an advanced surfactant system designed with five separate surfactant chemistries. This unique design delivers multiple performance characteristics all in one product. The use of multiple proprietary surfactant chemistries delivers a highly versatile product that will work under a wide variety of environmental and soil moisture conditions while performing a multitude of surfactant and water conditioning functions.

- **Rate:** 5 oz/1,000 sq ft
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

### TRIPPLICATE

Triplicate is a blend of three high-performance branched polymers designed for unmatched soil surfactant longevity. This unique chemistry is extremely safe for applications on cool and warm season turf. Triplicate is perfect for fairways and areas that have limited access where turf managers would prefer to make only one or two applications a year. Triplicate delivers uniform hydration, penetration, and rewetting with extremely low risk of phytotoxicity.

- **Rate:** 8 oz/1,000 sq ft (2 applications)
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

### PENT-ACTION

Pent-Action is a blend of adjuvant technologies designed to be used with systemic fungicides, PGR's, and insecticides. It is a non-ionic foliar adjuvant that serves as an activator, penetrant, anti-drift, and deposition aid product all in one. Pent-Action will also safely buffer tank pH to help prevent alkaline hydrolysis.

- **Rate:** 1-2 pt/100 gal
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote

### PENT ACTION PLUS

Pent-Action Plus is designed for use with pesticides when the addition of a non-ionic surfactant is recommended. Pent-Action Plus is a proprietary blend of methylated seed oil, lecithin, emulsifiers and surfactants. Pent-Action Plus has a neutral pH and contains a proprietary elicitor of S.A.R. (Systemic Acquired Resistance) which works together with systemic chemistries to enhance plant protection.

- **Rate:** 1-4 pt/100 gal.
- **Availability:** 30 gal drum, 55 gal drum, 250 gal tote



## SOIL CONDITIONERS

### CARB AMP

Carb Amp 21 is a supplemental nitrogen source and soil conditioner with complex carbohydrates and amino-acid based polymers. The amino-acid based polymer stabilizes nitrogen against volatilization loss while increasing plant availability of soil solution nutrients.

- Rates: 3-15 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



### HUMIC ACID 20%

Humic Acid 20% is a blend of humic and fulvic acids, 20% total concentration by A&L and BaCl method of analysis.

- Rates: 1.5-3 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

### ADIOS - NA 4-0-0

ADIOS-NA 4-0-0 with 7% Calcium derived from calcium biopolymers & calcium nitrate, combined with a block polymer surfactant. Designed to remediate high sodium soils and help turf resist and recover from salt damage. This formulation attacks sodium from three angles: calcium removes sodium from the soil particle, a sequestering agent keeps the sodium in solution and a block polymer surfactant helps move the sodium down and out of the root zone.

- Rates: 6-8 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

## BIOSTIMULANTS

### KELP PLUS 4-0-0

Urea combined with 15% kelp extracts, iron, manganese, magnesium and zinc. Designed to enhance root growth and color response while encouraging resistance to stress conditions.

- Rates: 3 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal

### OPTI-HUME

A blend of humic acid, kelp extracts, potassium acetate and organic acid complexed iron. Designed to enhance cation exchange, enhance nutrient utilization, color response, and enhance tissue levels of potassium.

- Rates: 3-6 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

### COMBAT 2-0-2

Combat 2-0-2 contains SAR elicitor compounds to enhance stress resistance, amino acids to aid in protein synthesis and carbohydrate production, humic acid and fulvic acid to enhance nutrient uptake and utilization, and biostimulant compounds to enhance turf vigor and rooting, even during periods of stress.

- Rates: 3-6 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

### VITALIZER 2-3-3

Highly plant available calcium with auxin-rich kelp extract. Designed to enhance stress resistance, encourage rooting and to increase heat/drought tolerance. This unique form of kelp extract contains a high auxin to cytokinin ratio which has a strong influence on encouraging root growth.

- Rates: 1.5-3 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

### SILICA 10%

10% plant available silica derived from patent pending Sil-Shield Technology. Sil-Shield silica is designed to be more plant available than potassium and sodium silicates and unlike other silicates, Sil-shield will tank mix with virtually any input at virtually any pH range.

- Rates: 1.2-3 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

# MICRONUTRIENTS

## MINORS

3% Fe, 1% Mn, 0.80% Zn, 0.022% B complexed with organic acids. Suitable for foliar and soil applications.

- Rates: 3 oz / 1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



## 12-0-0 WITH MINORS

Fast release urea-based nitrogen with organic acid complexed iron and minors for maximum green-up.

- Rates: 2-8 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



## 5 % MAGANESE GLUCO

5% Mn - Single element nutrients are complexed with both carboxylic acid and glucoheptonate to maximize availability for both foliar and soil applications.

- Availability: 30 gal drum, 55 gal drum, 250 gal tote



## 3% MAGNESIUM GLUCO

3% Mg - Single element nutrients are complexed with both carboxylic acid and glucoheptonate to maximize availability for both foliar and soil applications.

- Availability: 30 gal drum, 55 gal drum, 250 gal tote



## MEGA MICROS



Mega Micros is a specialty micronutrient designed to increase stress resistance and enhance turf vigor. Mega Micros contains a biostimulant package as well as SAR elicitor compounds designed to enhance stress resistance and increase turf quality under adverse conditions. Mega Micros contains 1.5% Mg, 0.75% Mn, 3.5% Fe, 0.75% Zn, .004% Mo, and 0.17% B with fulvic acid and humic acid added to enhance nutrient uptake.

- Rates: 1.5 - 3 oz / 1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

## HEPTO MICROS



1% Mg, 4% Mn, 3% Fe, .02% Zn, and .02% B chelated with glucoheptonates.

- Rates: 1.5-2.5 oz / 1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

## HIGH MN COMBOS



4% Mn, 3% Fe, 1% Mg complexed with organic acids. Foliar or soil applications will enhance green color response and turf vigor. Low stain risk and amine-based herbicide compatible.

- Rates: 1.5 - 3 oz / 1,000 sq ft
- Availability: 2 x 2.5 gal, 30 gal drum, 55 gal drum, 250 gal tote

## 15-0-0 PLUS 6% FE



Amine compatible, complexed iron with urea-based nitrogen. Low risk of staining. Rapidly corrects nutritional deficiencies and creates a quick and dramatic green-up through foliar applications.

- Rates: 2-8 oz. / 1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

 **ON-TIME DELIVERIES**



### CAL-BOR

10% Calcium glucoheptonate with 0.5% Boron for enhanced cell wall structure.

- Rates: 3-4oz / 1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



### CAL-10

10% Ca - Single element nutrients are complexed with both carboxylic acid and glucoheptonate to maximize availability for both foliar and soil applications.

- Availability: 30 gal drum, 55 gal drum, 250 gal tote



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HEALTH  
SOLUTIONS  
FOR  
EVERY  
PROJECT**

### CAL-NITE 8-0-0

Cal-Nite 8-0-0 is a liquid formulation of calcium nitrate designed to prevent and/or correct calcium deficiencies in all crops, ornamentals and turf. Cal-Nite 8-0-0 contains 1.09 pounds of calcium and .87 pounds of nitrate nitrogen per gallon. Cal-Nite 8-0-0 provides the nutrients necessary for increasing plant vigor, cell wall formation and stimulating root and leaf formation.

- Availability: 30 gal drum, 55 gal drum, 250 gal tote





# SPECIALTY NPK & PHOSPHATES

## FORCE-PHITE MAX 0-26\*-24



Blend of potassium phosphite, potassium acetate, and Silica for maximum turf hardness. Phosphite works synergistically with silica to elevate turf vigor, enhance the physical strength of turf and increase stress resistance.

- Rates: 3 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

## FORCE-PHITE BASIC 0-28\*-26

Classic phosphite analysis with a neutral pH for applications to greens, tees, and fairways.

- Rates: 3 - 6 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



## FORCE-PHITE 2-40\*-16

High analysis potassium phosphite with 1% Silica.

- Rates: 1-2 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



## FORCE PHITE IGNITE 3-26\*-15

A blend of 16% phosphite with 10% phosphate (label will read 3-10-15) with SAR elicitor compounds added to enhance stress resistance and turf vigor.

- Rates: 4 - 6 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



## ACCELE-ROOT 11-20-0



Combination of high phosphate and a proprietary biostimulant designed to rapidly establish new turf, recover from disruption, and greatly accelerate tillering and rooting. Perfect formulation for aeration recovery, overseeding, establishment, and to improve areas of thin or weak turf.

- Rates: 4 - 6 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote

## 29 K ACETATE



Derived from potassium acetate which has the highest degree of foliar availability out of any other potash fertilizer sources. Potassium acetate has up to 5 times the foliar uptake of potassium thiosulfate and potassium nitrate while also having an extremely low risk of phytotoxicity.

- Rates: 2-3 oz/1,000 sq ft
- Availability: 30 gal drum, 55 gal drum, 250 gal tote



Phosphite analysis may not be shown on label in states that do not recognize phosphite as a form of available P2O5. Phosphite holds no nutritional value.



### 14-2-14 ACETATE



Balanced foliar fertilizer with 50% SRN urea triazone and potassium acetate.

- **Rate:** 6 oz/1,000 sq ft
- **Availability:** 30 gal drum, 65 gal drum, 250 gal tote

### 3-18-18



Extremely low salt index mixture of UAN and Di-potassium phosphate in a 100% plant available form for rapid and efficient foliar absorption.

- **Rate:** 6-8 oz/1,000 sq ft
- **Availability:** 30 gal drum, 65 gal drum, 250 gal tote

### 18-3-6 WITH MINORS



Basic turf formulation with 50% slow release urea triazone nitrogen and EDTA chelated minors (Fe, Mn, Zn).

- **Rate:** 6 oz/1,000 sq ft
- **Availability:** 30 gal drum, 65 gal drum, 250 gal tote

### UAN 32-0-0



Fast release nitrogen with ammonia, nitrate, and urea based nitrogen.

- **Rate:** 6-8 oz/1,000 sq ft
- **Availability:** 30 gal drum, 65 gal drum, 250 gal tote

### 30-0-0 SRN



Slowly available nitrogen fertilizer derived from Urea-Triazone with 40% free urea and 60% slowly available polymer.

- **Rate:** 6-8 oz/1,000 sq ft
- **Availability:** 30 gal drum, 65 gal drum, 250 gal tote



## WE COME HIGHLY RECOMMENDED

The enormity of the impact that golf course development was having on Florida could not be ignored. However, Durand found one glaring problem. Personal relationships with representatives and consultants were disappearing as the corporate model continued to expand. Durand understood the value that golf course and landscape managers placed on personal relationships and the importance it had on making informed decisions. Durand walked away from a promising career to create Plant Health Solutions.

From that early moment, Plant Health Solutions has never wavered on its commitment to provide personal service, not pushy sales tactics. This approach may not always develop sales, but it has continued to foster the backbone of the company - relationships. The company's mission is evidenced by Plant Health Solution's perseverance and growth even through out economic recession.

I have counted on Durand Locke for over twenty years. It is an honor to share my thoughts on him, his team, and Plant Health Solutions.

- Ashley Wilkinson, Department Chair  
Golf & Sports Turf Management  
Harry Georgetown Technical College



## PERSONAL CONSULTANTS

PLANT HEALTH SOLUTIONS PROVIDES EACH ACCOUNT HOLDER WITH THEIR OWN PERSONAL CONSULTANT. WE WORK WITH YOU, IDENTIFYING YOUR UNIQUE NEEDS TO MEET YOUR DESIRED OUTCOME. YOUR GOALS ARE OUR GOALS.

TOGETHER OUR TEAM BOASTS DECADES OF EXPERIENCE AND WE ARE ON A COSTANT SEARCH FOR BETTER, HEALTHIER RESOLUTIONS. ALL OF THIS COMBINED WITH OUR VARIETY OF PARTNERSHIPS ALLOWS US TO PROVIDE ANY BUDGET WITH THE BEST POSSIBLE PLANT HEALTH SOLUTIONS.

**YOUR UNIQUE NEEDS  
CALL FOR  
OUR UNIQUE SOLUTIONS.**

## CONNECT WITH US

 561-383-6892

 [acctInfo@planthealthsolutions.net](mailto:acctInfo@planthealthsolutions.net)

 PO Box 102 Loxahatchee, FL 33470

 561-333-3172

**PlantHealthSolutions.net**





**PLANTHEALTHSOLUTIONS.NET**