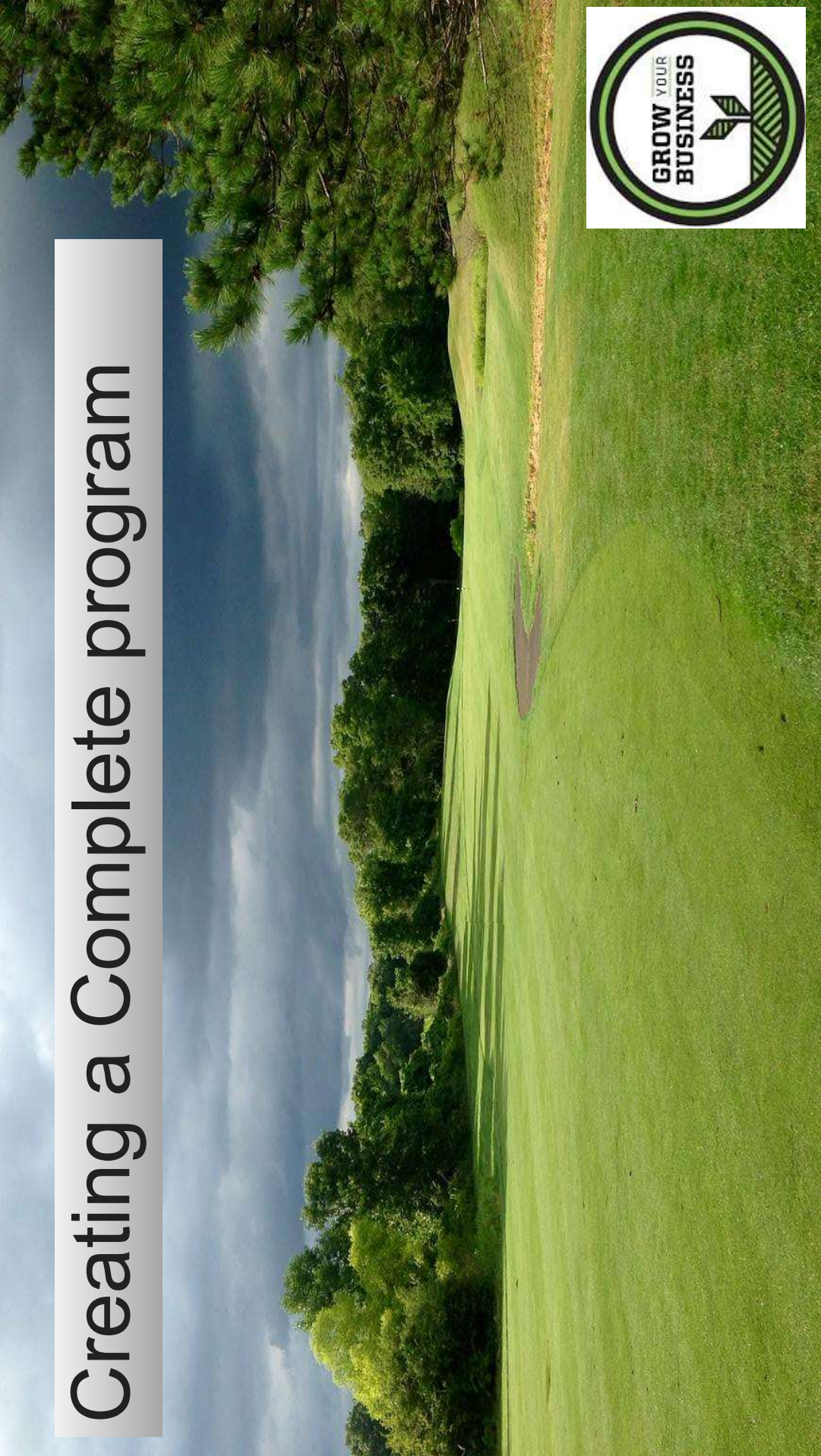


# Creating a Complete program



# Mother Nature

As rain falls, **nitrogen is pulled out of the atmosphere** and in a way this fertilizes the grass. ... The fresh fallen rain can be a benefit to the grass because the water helps to flush the roots which may allow the roots to take up this fresh nitrogen and tap into the nitrogen that was already present

During a thunderstorm, a bolt of lightning can **instantly create nitrogen oxide** (which is the key ingredient in fertilizers). The grass absorbs this immediately without waiting for the microorganisms to do their job. Lightning is Mother Nature's fertilizer!





Let's try to  
understand why we  
do what we do.

- What does nitrogen do?
- What does phosphorus do?
- What does potassium do?
- What is prodiamine and why do I need it in the program?
- Why do I get fungus every year?
- What are weeds trying to tell us?
- New liquid Aeration!
- What do some of our products do?
- What does Weed and feed do?

# NPK

Nitrogen

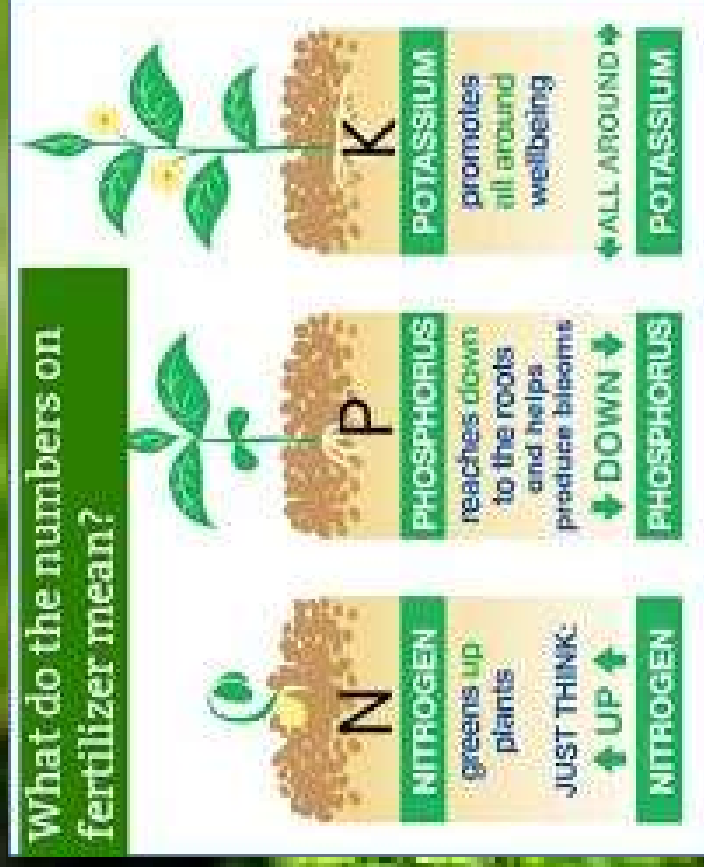
Phosphorus

Potassium

What do these do?

# UNDERSTANDING NPK

NPK stands for “nitrogen, phosphorus, and potassium” the three nutrients that compose complete fertilizers. You may encounter these letters when reading the contents printed on bags of fertilizer.

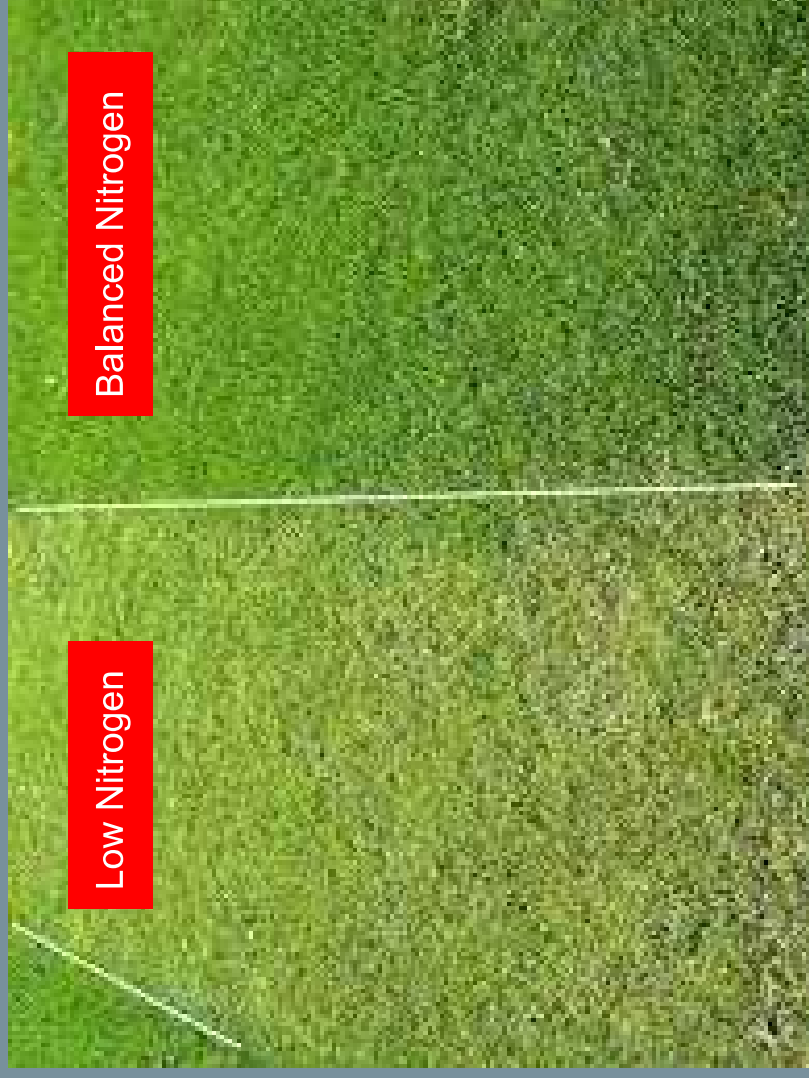


# What does Nitrogen do?

Nitrogen- this is the most important nutrient for grass. This is what gives grass its vibrant color and helps the blades to grow straight and strong. If there is not enough nitrogen, the grass will have stunted growth and will not have that deep green color.

Can you apply too much Nitrogen?

**YES!** Remember too much Nitrogen increases shoot to root ratio.

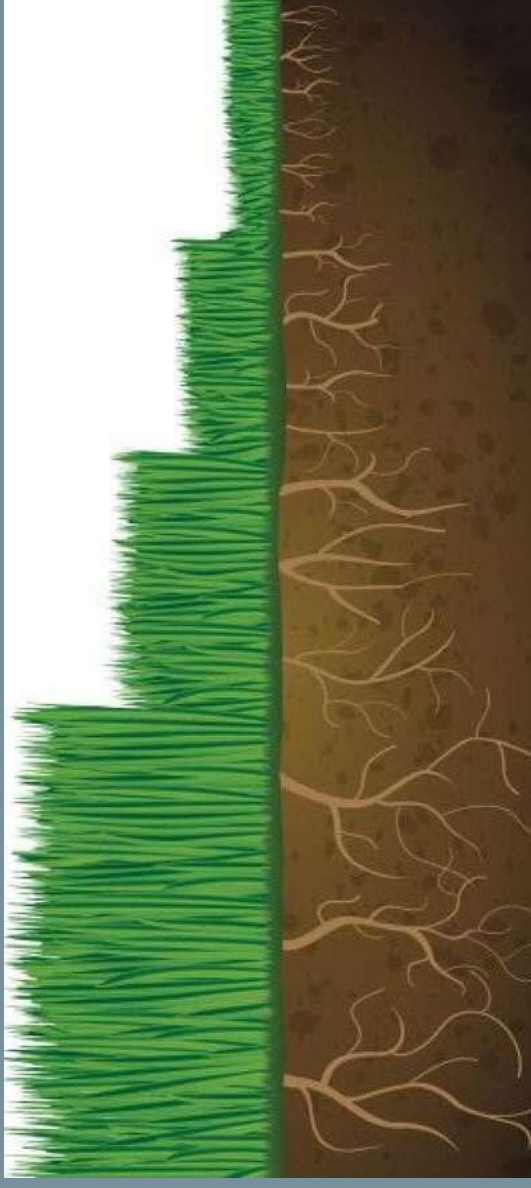


# What does phosphorus do?

The presences of phosphorus in soil helps turf grow lush and thick because it promotes strong root growth. An abundance of phosphorus allows plants to grow more efficiently. PHOSPHORUS BENEFITS YOUR LAWN BY:

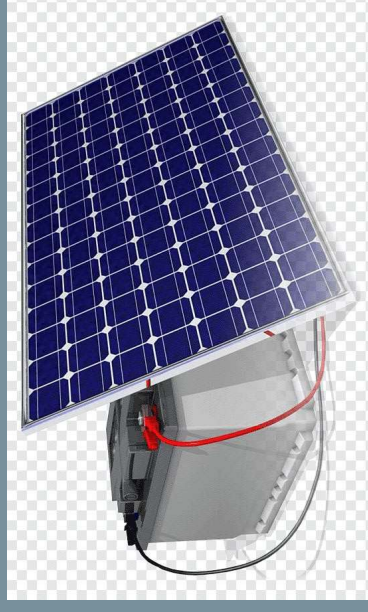
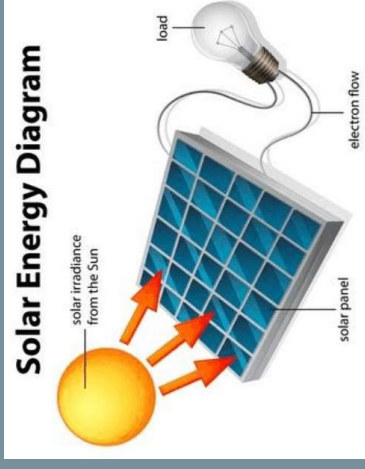
## Enhancing Plant Energy

**Reactions;** phosphorus plays a vital role in the energy transfer of plants.



But why to I need healthy roots?

Think about a solar farm.



# What does Potassium do?

Potassium is important in turf grass. ... Potassium assists in better water and nutrient uptake while **helping synthesize proteins and starches**. Potassium also helps the grass build thicker cell walls, stay healthy and strengthen the plant so it can withstand various stresses such as drought, heat, cold and disease.



Think of a Potato. Wait what?



What is Potash? Sometimes you hear this when people talk about Potassium. The name derives from pot ash, which refers to plant ashes or wood ash in a pot, which was the primary means of manufacturing the product before the industrial era



Similarities to Human athlete bodies. Make this relatable to customers.



Can't hurt me!

What athlete is closest to what we try to create?



Wrong! We want the Goggins of grasses!

## What does prodiomine do?

Prodiamine works to control grasses and broadleaf weeds before they have sprung up from the soil by preventing the weed seeds from germinating.

Think of it like a force field.



# Fungus

The most common causes of a lawn fungal disease

- Improper mowing (mowing too low)
- Compacted soil
- Overwatering
- Watering at the wrong time of day
- Improper fertilizing
- Weather conditions. Cool wet mornings.
- Excessive organic material



What are the  
weeds trying to  
tell us?



# Clover



**Poor Nitrogen Levels:** Clover thrives in soil with poor nitrogen levels. Grass needs nitrogen in the soil to grow well, while clover can obtain the nitrogen it needs from the air, effectively making its own fertilizer.



# Nutsedge



The main cause of nutsedge is **poor soil that holds water for extended periods of time**. If the lawn has drainage problems a professional may need to be called in to regrade the property with fresh soil and add drain pipes to redirect the water that sits for long periods of time



# Dollar weed



Dollarweed is caused **by excess moisture**, and it thrives in areas of poor drainage, poor excess irrigation, poor soil, and thin turf.



# Virginia Buttonweed



Virginia buttonweed becomes more troublesome and **thrives in poorly drained or overly moist lawns** caused by **excessive rainfall or frequent irrigation**. Its shiny, dark green, lance-shaped leaves are oppositely arranged on the stems and have no petioles (stalks that attach leaves to stems)





# Crab Grass



Crabgrass prefers to grow in densely **compacted soil** where grass has been **weakened or thinned**. The larger crabgrass grows, the more water and nutrients it needs.



**When and what  
fertilizer is best?**



# EMPRO®

## ST. AUGUSTINE & ZOYSIA TURF MAINTENANCE CALENDAR

SOUTH TEXAS

STTX.SV01132020

KEY: ● Granular ● Liquid \* Dry Product for Liquid Use

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
FERTILIZERS			<b>BEST</b> EMPRO® 5-5-25 5% FE ●	<b>BEST</b> EMPRO® 28-3-10 50% UFLEX WOLFTRAX ●	<b>BEST</b> EMPRO® 5-5-25 5% FE ●	<b>BETTER</b> GreenTRX 16-1-2 175 2% FE ●	<b>BETTER</b> GreenTRX 16-1-2 175 2% FE ●	<b>BETTER</b> GreenTRX 16-1-2 175 2% FE ●	<b>BEST</b> EMPRO® 5-5-25 5% FE ●			
PRE-EMERGENTS		<b>BEST</b> Prodiamine 0.37% 0-0-7 ●		<b>BETTER</b> EMPRO® 17-5-10 Trace Pkg ●								
POST-EMERGENTS	<b>BEST</b> Trimec Southern (Broadleaf) ♦		<b>BEST</b> Avenue South (Broadleaf, Yellow Nutsedge) ♦			<b>BEST</b> Certainty* (Sedges, Grasses, Broadleaf) ♦		<b>BEST</b> Fahrenheit (Broadleaf, Grasses) ♦			<b>BEST</b> MSM Turf 60 DF* (Broadleaf, Grasses) ♦	
FUNGICIDES		<b>BETTER</b> Atrazine 1.15% Weed & Feed 25-0-5 ●							<b>BEST</b> Strobe Pro G ●	<b>BETTER</b> Pillar G Intrinsic ●		
INSECTICIDES			<b>BEST</b> Strobe Pro G ●	<b>BETTER</b> Pillar G Intrinsic ●					<b>BETTER</b> Pillar G Intrinsic ●	<b>GOOD</b> T-Methyl 2% ●		
			<b>BEST</b> Arena 0.25G ●	<b>BETTER</b> Bifenthrin ●				<b>BEST</b> Talstar Xtra Verge ●				

This turf maintenance calendar is a general guide that covers a large geographical area. It is the responsibility of the end user of this program to be in compliance with all laws and ordinances regarding pesticide and fertilizer use. ATTENTION: THE LABEL IS THE LAW. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

**EMPRO** Available exclusively at **EWING**

STTX.SV.01132020

KEY: ● Granular    ◆ Liquid    \*Dry Product for Liquid Use

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
FERTILIZERS				<b>BEST</b> EMPRO® 28-3-10 50% UFLEXX WOLFTRAX ● <b>BETTER</b> GreenTRX 16-1-2 17S 2% FE ●									
		<b>BEST</b> Proflammine 0.37% 18-0-4 25% PCSU ●		<b>BEST</b> Dithiopyr 0.172% 22-0-6 25% UFLEXX ●									
PRE-EMERGENTS													
				<b>BEST</b> Timec 0.53% Weed & Feed 15-5-10 ● <b>BETTER</b> Viper 1.58% Weed & Feed 15-3-5 20% PCU ●									
POST-EMERGENTS				<b>BEST</b> Avenue South (Broadleaf, Yellow Nutsedge) ◆									
							<b>BEST</b> Blindside* (Broadleaf, Yellow Nutsedge, Grasses) ◆ <b>BETTER</b> MSM Turf 60 DF* (Broadleaf, Grasses) ◆					<b>BEST</b> Speedzone Southern EW (Broadleaf) ◆ <b>BETTER</b> 3D (Broadleaf) ◆	
FUNGICIDES													
				<b>BEST</b> Strobe Pro G ● <b>BETTER</b> Pillar G Intrinsic ● <b>GOOD</b> T-Methyl 2% ●									
									<b>BEST</b> Strobe Pro G ● <b>BETTER</b> Pillar G Intrinsic ● <b>GOOD</b> T-Methyl 2% ●				
INSECTICIDES													
								<b>BEST</b> Talstar Xtra Verge ● <b>BETTER</b> Bifenthrin ●					

**DO NOT USE WHEN OVERSEEDING**  
**BEST** Proflammine 0.29% 16-0-16 40% UFLEXX 3% FE ●

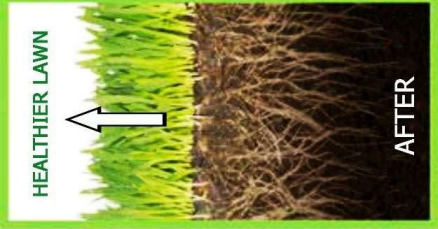
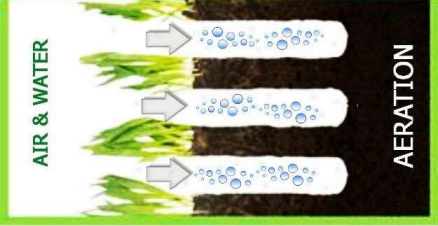
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**EMPRO**

Available exclusively at



# Mechanical Aeration



# Liquid Aeration

- Unlike traditional aeration that involves removing plugs from, or poking holes in, a lawn's soil, liquid aeration simply involves applying a fortified liquid solution to the lawn. ... The solution **breaks down dense particles in the soil and loosens it up**, creating beneficial airways
- After spraying the lawn, the solution will get to work **by breaking down the dense soil particles creating small pores in the profile to help loosen the soil**. The pores allow more air, water, and nutrients to reach deeper, which promotes healthy root growth. Aeration is about more than just creating airways in the dirt.
- How long does liquid aeration take to work? It takes a **minimum of 45-60 days** for these enzymes to make a difference in your soil. After the first treatment, you should re-treat every 45-60 days during the growing season. While temperatures are above 50 degrees Fahrenheit, to continue to enrich and feed the soil.
- How often do you apply liquid aeration? In general, **2 applications** of liquid aeration Air8tion are sufficient for most lawns. Spring and fall. However, if your lawn is severely compacted, then 2 applications in spring and 2 applications in fall are recommended
- Is liquid aeration better than core aeration? **Core Aeration** will have a more **immediate impact** on your soil and the look of your grass. But, the effects are **not very long lasting**. The **Liquid Aeration** will have a **less immediate impact** on your soil, but the effects are **longer lasting and cumulative**, so your result gets better over time.

**Before**      **After**

**Water**      **Oxygen**

**Shallow Roots & Compacted Soil**      **New Deeper Roots & Conditioned Soil**

**Nutrients** (N, P, K)      **Nutrients** (N, P, K)

**CORE AERATION VS LIQUID AERATION**

**45%**      **100%**

- Only 45% coverage
- Messy plugs
- Risk of damage to property
- No long-lasting effects
- Requires preparation

- Provides 100% coverage
- No messy plugs
- No risk of damage to property
- Long-lasting results
- No preparation

# What do the terms mean?

- Pre-emergent
- Post-emergent
- Control
- Suppression

**Pre-emergent** : A form of chemical weed control which prevent germinated weed seedlings from becoming established.

**Post-emergent**: A product that is used to kill weeds after they have germinated.

Weed **control** is the prevention or control of unwanted and invasive plants. By effectively controlling unwanted plants. This term is what is used when we talk about killing

When a herbicide lists that it will **suppress** a weed rather than control it, it just means that the research provided from testing did not kill a high enough percentage of the weed in one application to receive a “control” approval, which is usually higher than at least 80%. So usually it means you need multiple application and/or other chemical treatments to completely eradicate the weed.

# Coastal Herbicide

Great pre and post emergent

Meet the most all-encompassing and easy-to-use herbicide for southern turf. With powerful resistance management and broad-spectrum control, Coastal™ Herbicide can be used safely on **all the four major warm-season turf grasses** without the need to tank mix. This makes Coastal a smart choice when treating multiple lawns. And Coastal outperforms the current industry leader on hard-to-control weeds, including crabgrass and Poa annua.

Pre and post emergent on:

- White Clover
- Dollar weed
- Henbit





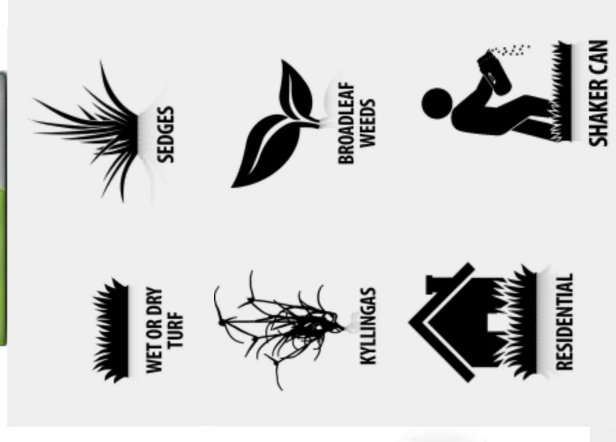
# Vexis

## Herbicide Granular

Vexis® Herbicide Granular uses the proprietary new active ingredient **pyrimisulfan to deliver exceptional control of sedge and kyllinga species, plus listed broadleaf weeds**. The granular formulation reduces the potential for drift or off-target application and can be applied to wet or dry turf.

### Controls

- Sedges
- Dollar weed
- Virginia Buttonweed



# Caravan

## Insecticide / Fungicide



Use Caravan to **treat for turf pests like grubs, chinch bugs, and sod webworms** as well as to treat diseases like brown patch, leaf spot, and Pythium blight. To use Caravan G you will need a granular spreader to broadcast the granules evenly over the treated area. A broadcast spreader would work best.



GROUP 4A INSECTICIDE GROUP 11 FUNGICIDE

# Caravan™ G

syngenta.

### Insecticide Fungicide

For systemic control of both insect pests and diseases with one product applied to turf grasses on residential lawns, commercial grounds (office and shopping complexes, airports), parks, playgrounds, golf courses, and athletic fields.

Active Ingredients:  
Azoxystrobin (CAS No. 131660-33-8) . . . . . 0.31%  
Thiamethoxam (CAS No. 153719-23-4) . . . . . 0.22%  
Other Ingredients: . . . . . 99.47%  
Total: . . . . . 100.00%

This product contains 0.05 oz. of azoxystrobin and 0.04 oz. of thiamethoxam per pound.

**KEEP OUT OF REACH OF CHILDREN.**  
**CAUTION**  
See back panel for additional precautionary statements.  
EPA Reg. No. 100-1415 EPA Est. 67572-GA-1  
SCP 1415A-L1 0112 4010620

PRODUCT ID  
**47129**  
**30 pounds**  
Net Weight

**Label**  
This product is a granular formulation of the active ingredients listed on this label. It is intended for use on turf grasses. It is not intended for use on other plants or animals. It is not a food product. It is not for use on lawns, lawns, or other areas where people or animals may be exposed. It is not for use on lawns, lawns, or other areas where people or animals may be exposed. It is not for use on lawns, lawns, or other areas where people or animals may be exposed.



**SELECTIVE HERBICIDE FOR CONTROL OF ANNUAL AND PERENNIAL GRASS AND BROADLEAF WEEDS IN HIGHLY MANAGED TURF SITES.**

Why would we recommend this product?

- It controls several sedge types

<b>Active Ingredient</b>	Sulfosulfuron - 75%
<b>Target pests</b>	Kyllinga (green, false green, fragrant), Purple Nutsedge, Yellow Nutsedge, Globe Sedge, Annual Sedge, Tall Fescue, Annual Bluegrass (Poa Annua), Barley (little), Bedstraw, Bentgrass, Bluegrass, Burweed, Buttercup, Chickweed, Clover, Crowfootgrass, Dandelion, Garlic (wild), Geranium, Henbit, Ivy (ground), Johnsongrass, Mustard (wild), Pennycress (wild), Quackgrass, Ryegrass, Shepherds purse Supresses Dallisgrass in Bermudagrass. Suppresses Buttonweed
<b>For use in</b>	Warm Season Turf, Ornamental and native grass sites
<b>Application</b>	3 - 5 small scoops or 1 - 2 large scoops per gallon of water per 1,000 sq. ft. * Use a Surfactant to Increase Effectiveness * See label for complete application instructions
<b>Yield</b>	One 1.25 ounce bottle is equal to 35.44 grams The bottle comes with a small scoop (.16 grams) and a large scoop (.8 grams)
<b>Coverage Area</b>	treats from 10,000 to over 35,000 sq. ft. (depending on the weed and grass)

# Fahrenheit

Fahrenheit is a 38% water soluble granular herbicide for the control of broadleaf and grassy weeds in labeled warm-season turfgrasses. It can be applied in spring, summer and fall with temperatures above 50 degrees. Fahrenheit's easy to use formulation produces visible results in 7-10 days

What would we recommend this product for?

Virginia Buttonweed



<b>Active Ingredient</b>	Potassium salt of Dicamba 33.00% Metsulfuron-methyl 5.00%
<b>Target pests</b>	Annual & Perennial Broad-leaf Weeds & Grasses
<b>For use in</b>	Commercial & Residential Turf-grass: Golf Courses, Sports Fields, Parks, Campsites, Recreational areas, Roadsides, School grounds, Cemeteries, Sod Farms
<b>Application</b>	To be applied in Spring, Summer and Fall with temperatures above 50 degrees
<b>Pet safe</b>	Yes, if used as directed on Label
<b>Formulation</b>	Professional Product Group 2 & 4 Herbicide
<b>NOT FOR SALE TO</b>	AK, CA, CT, DE, ID, IA, MD, MA, MI, MN, MT, NH, NJ, NY, ND, OH, OR, RI, SD, UT, VT, WA, WV, WI
<b>Shipping Weight</b>	0.45 lbs
<b>Manufacturer</b>	<a href="#">Quali-Pro</a> (Mfg. Number: 83013883)

# Trimec Southern

Trimec Southern Broadleaf Herbicide  
 Trimec Southern is a broadleaf herbicide for sensitive southern grasses. It is designed to minimize risk to southern turfgrasses. Trimec Southern is formulated to accommodate sensitive warm-season grasses. Trimec Southern provides dependable control of more than 90 broadleaf weeds, including dandelion, clover, and spurge



<b>Active Ingredient</b>	2,4-D, dimethylamine salt 18.74%, Dicamba, dimethylamine salt 3.85%, MCPP-P, DMA salt 17.37%
<b>Target pests</b>	Clover, Chickweed, Dandelion, Dollarweed, Henbit, Plantain, Poison Ivy, Poison Oak, Ragweed, Spurge, Thistle, Wild Carrot, Wild Garlic and others * See label for complete list
<b>For use in</b>	Southern grasses, Bermudagrass, Bentgrass, Bluegrass, Fescue, Zoysiagrass, Centipedegrass and St. Augustinegrass
<b>Application</b>	0.37 - 0.75 oz per 1,000 sq. ft. (2 - 3 pints per acre) * See label for complete application instructions
<b>Pet safe</b>	Yes, when used as directed on label
<b>NOT FOR SALE TO</b>	AK, CA, CO, CT, DC, ID, IL, IN, ME, MI, MN, MT, NE, NH, ND, PR, RI, SD, VT, WV, WI, WY LA, TX (1 Gallon & 2.5 Gallon Sizes Restricted To Licensed Applicators Only) WA (2.5 Gallon Size Restricted To Licensed Applicators Only)
<b>Manufacturer</b>	<a href="http://www.pbjgordon.com">PBI Gordon Corporation</a>

# EWING COCKTAIL

This is great bang for buck treatment .  
Contractors need something for a wide range of  
weeds that is safe in common grass types.



# What does weed and feed do?



## 25-0-5 with Atrazine

Preemergent weed and feed fertilizer

Total Nitrogen..... 25%  
Available Phosphate..... 0%  
Soluble Potash..... 5%

Active Ingredients  
Trimec..... 1.15%



## 15-5-10 with Trimec

Gardenline weed and feed fertilizer

Total Nitrogen..... 15%  
Available Phosphate..... 5%  
Soluble Potash..... 10%

Active Ingredients  
Trimec..... 0.53%

generally improves your lawn's ability to absorb water and food and adds necessary nutrients which promote healthy growth.

- Think of this as a broad spectrum antibiotic.
- Atrazine is a common herbicide that acts as both a pre-emergent (kills weeds before they sprout) and post-emergent (kills mature weeds) weed control. Not only does Atrazine kill most weeds, but it **also kills most grasses**. This is great for controlling pest grasses but is harmful to many species of turfgrasses.
- It works by disturbing photosynthesis
- It can take 4 to 6 weeks to work.
- In a healthy lawn it is not necessary to apply this product every season.
- It can damage the roots of trees if applied incorrectly
- The best when the temperature is over 65 degrees.
- Best when applied under 90 degrees.

# Where Can I find More information?

[Ewing Irrigation](#)

<https://www.youtube.com/c/ewingirrigation>

[Lawn Dork™ - Take the guesswork out of lawn work.](#)







**I hear and I forget. I see and I  
remember. I do and I  
understand.**

Confucius