FALL 2017

ON THE TURF™

THE OFFICIAL PUBLICATION OF THE FLORIDA CHAPTERS OF THE STMA

Painting NATURAL GRASS

Water Capacity and Irrigation IN SPORTS TURF FIELDS

Where STUDENTS Learn A Lot About Turf

At Bartram Trail High School

ON THE TURF™

FALL 2017
Volume 3 - Issue3

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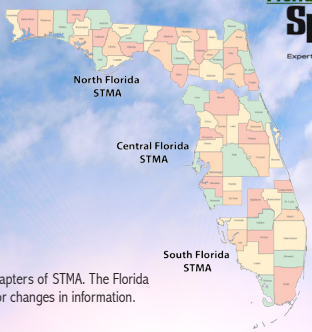

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SportsTurf Managers Association
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North Florida STMA
Mark Clay, President

Central Florida STMA
Dale Croft, President

South Florida STMA
Tom Curran, President

PRESIDENT'S MESSAGE

SOUTH FLORIDA SPORTS TURF MANAGERS ASSOCIATION

Hello Turfers,
Last month, we heard from Mark Clay, president of the North Chapter and this month Tom Curran, president of the South Chapter has some words of wisdom for us. Take it away Tom.

Dale Croft, president of CFSTMA.

Having just cut the outfield of one of our local baseball fields, I looked at that nice green grass with it's sweet aroma.

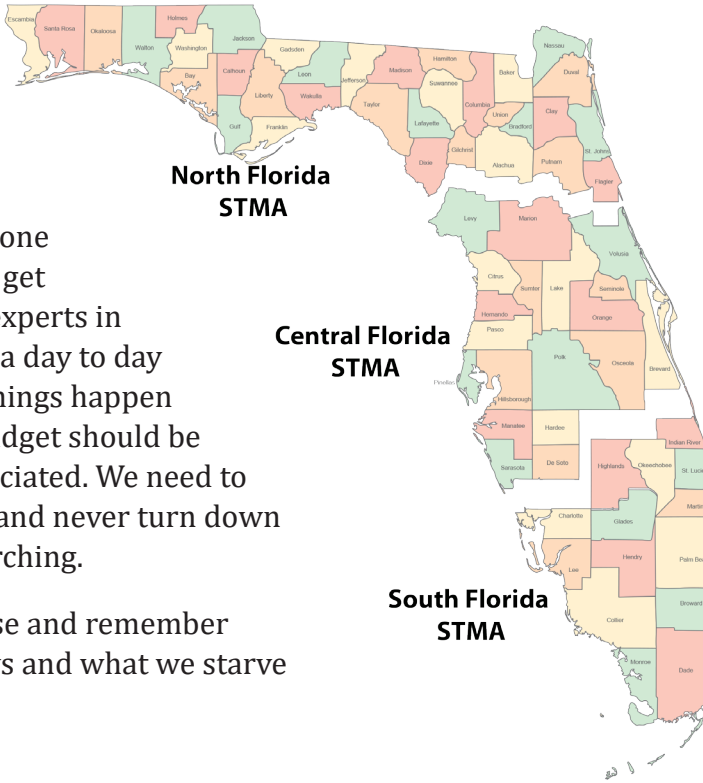
I thought how much longer will we have that sight and smell with us? It seems like "experts" are robbing our quivers of arrows to defeat our foes. Having been in turf grass and other related businesses for the last 46 years, a lot of things have changed.

Some for the good and some for, let's say it, the bad. Our industry has, I feel, been under heavy attack for the way we work. I remember when Round Up® first came out and it was like no more digging out torpedo grass by hand. Now some say it's evil, let's drive a stake in its heart. As you browse the Internet, every one is a Ph.D. and has a platform to say their peace right, wrong or indifferent. You might say this writer is an old angry turf guy who is mad at the world but I'm not saying let's unplug our computers and go live in a cave. Use the brain God gave you. Look up all types of information in books or go to your next STMA chapter meeting.

As the President of Florida's number one chapter, I love when

members talk amongst themselves about what's going on in the turf world. This is one of the best ways to get information from experts in the field. Those on a day to day journey to make things happen on a shoe string budget should be thanked and appreciated. We need to inform each other and never turn down anyone who is searching.

Let's stay the course and remember what we feed grows and what we starve dies. ●



Tom Curran

SFSTMA President

FLORIDA CHAPTER NEWS

Another great CFSTMA event is now in the record books. I am going to keep it short and sweet and thank **Daniel Thomas**, part of the Orioles management staff; **Luis Lauretti** of World Spots USA, and **Dr. Crow** for his presentation on nematodes.

Oh, one more item. CFSTMA has the honor of **Mr. Glen Thompson** as VP for the Commercial Members. Thank you, Glen, for stepping up!

I am now going to turn it over to Daniel.

Last June, we brought in the Koro Recycle Dresser courtesy of **Luis Lauretti** of World Sports Turf to Ed Smith Stadium in conjunction with the Central Florida STMA chapter meeting. Originally planned for just a demo, I decided to have it done over the entire grass playing surface. Though rain delayed our original plans and made our lives a little more difficult, we finally got it accomplished. We were very impressed with the Dresser and the results of the process.

Each year our field plan goals consist of aerating and verticutting every month of the growing season. Most years this is more of a dream than a realistic goal considering the rainy season and field usage demands. With that in mind, I looked at the Koro Re-Dresser as basically an aerator on steroids, or a way to open up the rootzone better than a traditional aerator would do.

We had the machine set at 4 inch depth and it pulled an impressive amount of rootzone material to the surface. It works by slicing channels into the surface and pulling up material from below. The material was a bit on the wet side due to the rainy conditions leading up to this day. So we waited to allow for drying before we spread it around.

We used our turf groomer to work the material into the channels that were created from the Re-Dresser along with a metal mesh drag pulled behind our Toro Sandpro®. It took a couple hours for the field to be recognizable again, only with channels visible to the eye. Day two we double cut reel mowed the entire field which helped work

more of the material in and level off the playing surface. We then sprayed a "Mirimichi Cocktail" which consists of Mirimichi Green Nutri-Turf, Nutri-Kelp, and Nutri-Release 9-0-1. We did not apply anything else to the field for the next 3 weeks and saw an amazing transformation. The 419 Bermuda came back stronger and with better color.

Looking back I would recommend allowing more time as we held a high school game on the field one week after the Re-Dresser. The field still played well, just a few hops here and there from the channels.

For baseball field applications, I would recommend the machine perform the work in relationship to the player positions in the outfield. So that the channels would be toward the player, to eliminate cross channeling and bad hops.

Overall we were very pleased with the results and will be incorporating this process into our annual budget going forward. Special thanks to Luis Lauretti of World Sports Turf for the professional quality of work and to **Dale Croft** of the Central Florida STMA, who is always a class act! ●

WHERE STUDENTS LEARN

A LITTLE 'BOUT LIFE AND A LOTTA 'BOUT TURF

Many school districts face the same problem, over use of fields and not enough money to maintain the fields. It seems each district takes a different approach to athletic field maintenance. From 2000 until 2002, I worked for Duval County Schools where I was responsible for fertilizing and spraying 16 high schools and 23 middle schools. The irrigation repair and mowing were in different departments. In recent years, all field maintenance practices are in one department under the direction of Kevin Morgan. They have also increased maintenance practices. In St. Johns County, the athletic directors or coaches are responsible for maintaining the fields at most schools. At Bartram Trail High School we take a different approach to providing safe athletic facilities. We offer a program where students learn turf management.

At Bartram Trail High School we take a different approach to providing safe athletic facilities.

We offer a program where students learn turf management.

I started teaching here in the Fall of 2002. We offer three levels of Turf Science where students learn how to mow, fertilize, irrigate, and paint athletics fields. We also assist with the maintenance of the common grounds. We are a public high school of approximately 2,500 students near St. Augustine. There are about 50 students signed up for Turf in the 2017-2018 school year. We have varsity and junior varsity teams in the following sports where students prepare the fields: football, soccer (boys and girls), lacrosse (boys and girls), track, and softball. The baseball coach likes for he and the players to maintain their field but we do assist when needed. In the mornings, I am the parking lot supervisor but have student interns who work on the fields during that time. They are the most advanced students. We have former students who have gone on to college to earn a degree in Turf Management or Agriculture. Some are now at golf courses or larger lawn maintenance companies. A few have started their own business. A couple are now sales representatives for chemical and

By **Ronald Griffin**
Turf Instructor

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fertilizer vendors. Mark Clay and Nick Fedewa with SMG are great contributors to the program. They allow a group of students and me to work during a Jacksonville Jaguar game each year. Some former students are now working for SMG at Ever Bank Field in Jacksonville.

George Toma and Ron Griffin

In 2005, we were a practice site for Super Bowl XXXIX. The New England Patriots practiced at our school during the week before the game. In the summer of 2004, our football stadium field was renovated and a new 70-yard field was built near the stadium. I was very fortunate to work with Mr. George Toma during that time. It was a valuable experience that I will never forget. We remain friends and he sends me a cap from each Super Bowl since.

The first step in renovation was removal of the old surface. It was built with local soil containing a lot of roots and hardpan. The contractor dug out about two feet of material and replaced it with a 90% sand and 10% peat moss mix. Also drain lines were installed around the track and another around the sideline and back of the end zones. A new irrigation system was also installed. The renovation was delayed several times because several hurricanes came near or through our area in 2004. Finally it was sodded with thick cut Tifton 419 Bermuda grass sod just in time for our first home football game. It was over seeded before our soccer season and the again before the Patriots started practicing. We have only sodded lacrosse goal areas and the center of the field since. We also hosted a Monday night Jaguar practice several years ago.

A typical day in Turf class changes from each season and sport. We have more equipment compared to most schools. Most of our budget comes from our athletic department and booster club. We

Ron and his league of extraordinary turfers

also borrow equipment from other schools, local golf courses, and the parks and recreation department. We have two Toro Triplex mowers for the game fields. Also a 5 gang reel mower with a 4300 John Deere tractor for the practice fields and the baseball outfield. The students use two ZTR mowers for the common grounds. We also have two John Deere Gators for transporting equipment and trash. There are several string trimmers, edgers, and back pack blowers. We also have a Kubota tractor with a front end loader. Safe use of the equipment is an important part of their education. A contractor provides herbicide and insecticide treatment on all of the athletic fields. The students and I still fertilize the fields. Most of the time we use 24-02-11 or 18-0-35.

During football season, we paint the practice field lines every Monday after the fields have been mowed. The practice fields are mowed at 1.25 inches. The stadium field is mowed at .75 inch every day during the season except game day. The practice fields are painted using Pioneer Aerosol Maxx and the stadium is painted with Pioneer Britestripe Airless. On Wednesdays, we paint the numbers for home varsity games. On Thursdays, we paint the lines and any

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white parts of the logo. On Fridays, we paint the blue and gray bear logo. Also students put bags in the garbage cans, put out the sideline tarps, set up the benches, pylons and padded numbers. There are usually five or six students there on Friday nights to help pick up the garbage and help where needed during and after the game. Our football coach has the players take the sideline tarps off of the field for us. We then spread them out to dry on the track. The tarps help protect the bench area on our sidelines. For junior varsity games we paint lines but not number or logos. We over seed in late October with an annual/perennial ryegrass blend at a rate of about 350 pounds per acre.

The baseball infield is also over seeded. This year, we are going to over seed all of baseball as well as softball. For soccer season we still mow every day. Typically we paint the lines on the practice fields once per week and the stadium on game days. Sometime football and soccer season overlap and we use blue paint early in the soccer season. Most soccer games are played away early in the season. We have plastic markers in the ground for football and soccer corner and midfield markers. They also serve to put flag poles in during soccer matches. Soccer season is typically late Fall through Winter. We have boys and girls junior varsity as well as varsity games at the football stadium. We usually paint the lines on the day of a home match. In the Spring, we start lacrosse season. One of the girl's lacrosse

coaches help us paint their field at the beginning of the season. One of the challenges with lacrosse is that boys and girls have different lines. We do use a common sideline. Blue paint is used for the boy's lines and white is used for the girl's lines and other common lines. Visiting soccer and lacrosse teams compliment the condition of our field because of the over seeding and gentle slope of the crown.

In late Winter and early Spring, we start baseball and softball seasons. On a typical day we start by watering the clay and conditioner on the softball field around 1:00. We then use a nail type drag to loosen the material. The next class will then drag the skinned area with a mat drag after is has dried some. We then paint the lines during the last class. We will also water the clay again on a hot day. Students also mow the grass, blow out the dugouts, paint the bases, and empty the trash cans throughout the week and especially on game day. If we have a JV and varsity double header, several students will come in around 6:00 and help repair the field between games. We will mat drag and repaint the lines before the second games. Sometime we will water the field again. There are some days where students have to pump water off of the field because of heavy rain.

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In April, we also host Relay for Life at the football stadium. Spring football starts around the beginning of May. We usually spray out the ryegrass after the last lacrosse match. During the Summer months, a former student and I maintain the fields.

I can't imagine maintaining our fields without the hard work of the students. Some students go above and beyond what is expected.

On a recent Saturday, I needed extra help because of all the rain. I sent a text to two recent graduates who said they would help if needed. I had four former and one current student show up to help mow and break up grass clippings. There are days when they test my patience but most of the time they are hard-working teenagers. ●

ASK THE DOC

With Travis Shaddox, Ph.D

Q Hey Doc, Do Pre-Emergent Herbicides Reduce Turfgrass Recovery?

The ability of turfgrass to recover from damage continues to be at the forefront of sport turf management, and perhaps the most common question I receive from sport turf managers is about pre-emergent herbicide and their influence on turfgrass recovery from damage. It is well known that certain pre-emergent herbicide result in significant root-pruning whereas other pre-emergent herbicides do not. Logically, it seems to makes sense that the application of a product that is known to prune roots would also delay the reestablishment of worn areas such as soccer goals, football field centers, etc. Common questions are, "Will applying a pre-emergent delay recovery? Should I avoid DNAs? What rate and timing should I use?" These are all valid questions. However, the evidence we have indicates that pre-emergent herbicides do not increase recovery time.

By **Travis Shaddox, Ph.D.**
Assistant Professor
University of Florida
Ft. Lauderdale Research
and Education Center

However...most turfgrass recovery studies have been conducted under golf course conditions and measured divot recovery. While these studies provide some insight into what may occur on sports fields, sport field conditions are very different from golf. For example, golf divots are normally much smaller than the damage on sports fields. In addition, the turfgrass surrounding a golf divot may be much more dense and healthy than turf surrounding a worn

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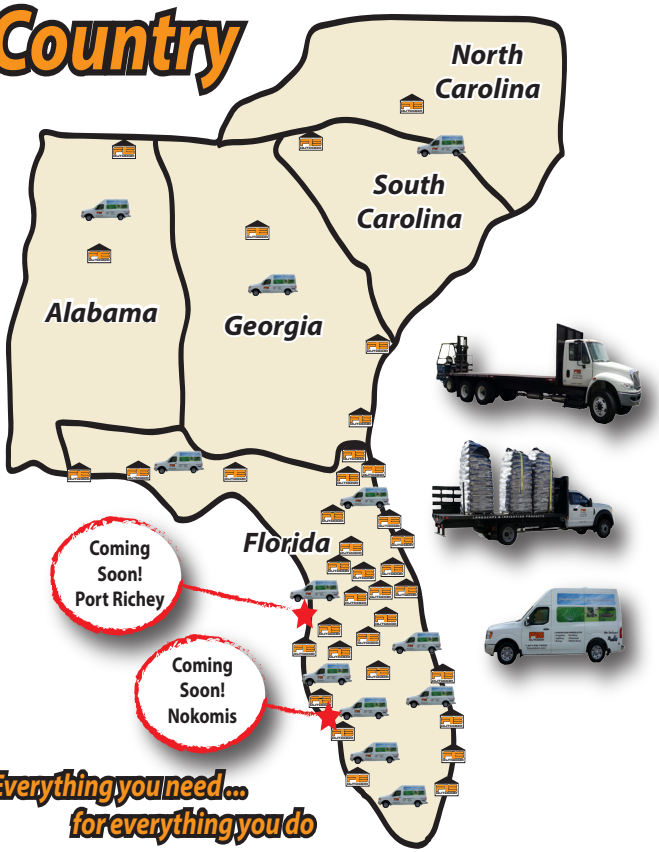

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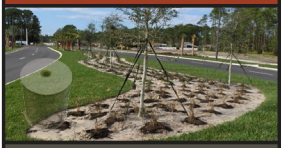

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out soccer or lacrosse goal. These differences may indicate that the results found on golf courses may not represent the results that may be found on sports turf. However, because few if any studies have been conducted on sports fields we must use the evidence we have and that means using research conducted under golf conditions.

In 2014, researchers at the University of Tennessee investigated divot recovery of 419 Bermudgrass following the application of dithiopyr, indaziflam, oxadiazon, pendimethalin, and prodiamine and concluded that none of the pre-emergent herbicides influenced turfgrass recovery compared to untreated turfgrass (HortScience 49(11):1449–1453, 2014). Previously in 2011, the same researchers conducted a similar study under athletic field conditions and reported the same results.*

So how is this possible when we know that many of these compounds inhibit root development? We do not have a clear answer to that question yet. The current hypotheses are that either the turfgrass is simply able to grow through the herbicide damage or that the cleat physically removes the herbicide during the creation of the divot or damage. In either case, we have no evidence to indicate pre-emergent herbicides reduce turfgrass recovery. However, it is important to acknowledge that none of this research was conducted in Florida's unique environment. The University of Florida maintains athletic turf at three research locations Jay, Citra, and Ft. Lauderdale. When and if research funding becomes available to address this issue, the University of Florida will answer the call. ●

*Check out the 2011 researchers report

https://dl.sciencesocieties.org/publications/ats/pdfs/8/1/2011-1128-01-BR

Painting Na

THINGS TO CONSIDER

So you have your field in prime shape and are ready to take on the challenges of the season ahead. You've done all your maintenance practices: aerated, fertilized, and watered. Now it's time to see your field shine with the last step, painting it. Painting can make your field stand out by accenting it for the big games under the lights.

One of the first things to consider is what type of staffing and time is necessary to complete the job. This is an important question to figure out because it will help steer you in the right direction when it comes to selecting paint. Not all facilities have dedicated sports turf managers on their staff. Fields are also maintained by coaches, athletic directors, facility staff, boosters, etc., so time may be more limited for some.

Another factor to consider is your athletic field inputs – such as fertilization, watering, mowing frequency, and mowing heights. Knowing your plan for these inputs can also be a factor in helping you decide your paint choice.

By **Lance Tibbits**

Keeping these factors in mind, there are two options to choose from: bulk paint and aerosol.

Bulk paint looks great on your field and provides you with many options. Most athletic field marking companies have several different options from very high-end paints to good economy paints. This gives you several options to fit your budget. With that being said, you also have different options for diluting your paint. Some paints can be diluted back further than others. Sometimes this lets you take a step up in paint quality. Bulk paints can often be made into pretty much any custom color. This gives you the ability to have logos with your school's or organization's exact colors.

There are other considerations to keep in mind with bulk paint as well. One is that you need to make an investment into more expensive striping equipment. These machines also factor into your decision because you need to consider machine maintenance, time to load the paint and clean up time. Another consideration to keep in mind is that bulk paint often needs to be mixed prior to using it. Although, this is becoming less of an issue as manufacturers are now offering ready-to-go, pre-diluted paints. Each one of these factors is

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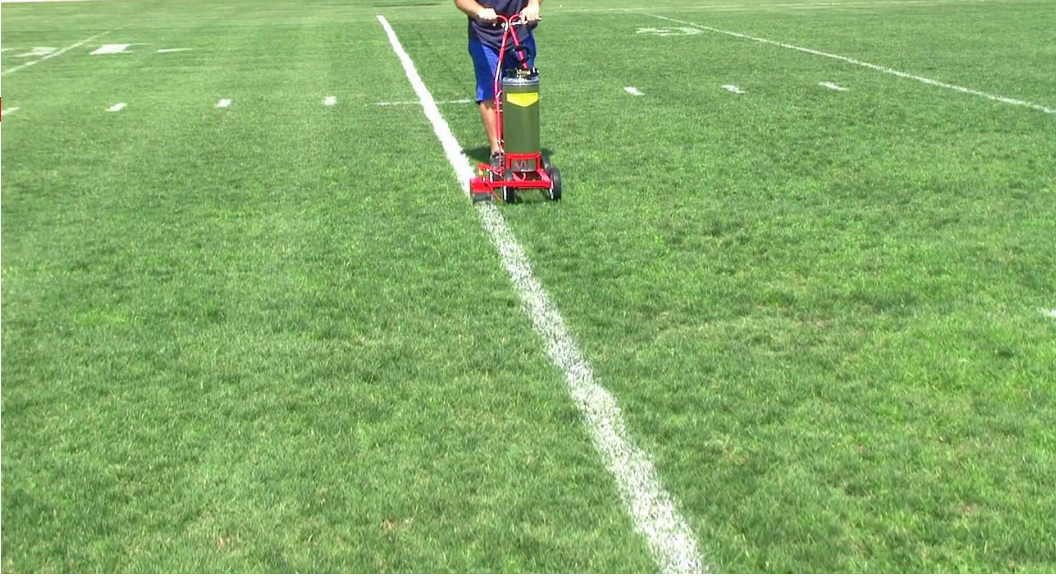
an input in time and staffing that you need to consider prior to lining a field with bulk paint.

Aerosol paints are also very versatile for making your field look great for the big tournament or game. Aerosol cans are great for situations with limited staffing and time. Also, the prep work that goes into aerosol is pretty simple – shaking the can prior to use. Aerosol paints also have a smaller startup cost compared to bulk paints because the machines are less expensive. An advantage of aerosol is that it can be used in inclement weather due to how quickly it dries. If you are a bulk paint user, this can help get you through those bad weather games. Unfortunately, custom colors are not an option with aerosols. But, most of the bigger athletic field marking companies offer a large pallet of color choices.

The next decision you need to make is one of the most crucial… equipment for your painting operation. You need to consider how many fields you are going to be painting over the course of a season and how often. Most machines are built to push a particular range of paint volume per year. As an example, let's pretend that you bought a striping machine that is built for the paint volume you use for 2-3 fields a week. But, you are using this machine to paint 15-20 fields per week. This machine will likely wear down prematurely. This in turn could lead to some in-season breakdowns or the need to replace the machine before you have it budgeted for replacement.

There are two different types of striping machines used to spray bulk athletic field paint: airless and low pressure. Airless machines have become one of the most common machines in recent years. But, there are still a lot of low pressure machines in use because they put down a great line of paint. Striping machines are available as gas powered as well as electric – offering the painter many different options to consider. Some manufacturers have also developed "paint-in-the-box" systems. These systems are great for smaller staffed organizations as they are easy to load up as well as clean up. They only have a few components, so maintenance is rather easy.

Aerosol machines come in different sizes, usually based on the can size that you are spraying. They usually have guides built in for easy



lining and they are extremely low maintenance. Aerosol striping machines are also available with different tire options, such as hard tires or pneumatic, to fit the different situations or preferences of end-users.

Recently, wheel-to-wheel machines have been popping up in the marketplace. This technology has existed in Europe for quite some time and was more recently brought over to the US. These paint transfer machines are very low maintenance and have gained a lot of popularity in the soccer and baseball markets.

As you can see, there are many machine options for striping your athletic fields. If you choose to purchase an airless striping machine, it's important to understand tip selection. Tip choices are very important to the overall painting process because they can positively or negatively affect your turfgrass health.

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First, you need to know that the first digit on a tip size represents half of the fan width. For example, the "4" in "415" equals an 8 inch spray fan width (4 x 2 = 8). The last two digits are the size of the tip opening in thousandths of an inch. As an example, the "11" in "311" means the tip hole size is .011 inch. It's important to choose the appropriate tip size for the area you are painting. For small intricate work in logos (i.e. midfield or other small logos) choose tip size 315 or below. For painting larger areas (end zones or large midfield areas) using a 317 tip or above works well. As a tip wears, the orifice size increases and the fan width decreases. This will give you a weak coat of paint and it uses more paint than necessary. Keep in mind that these tips can be expensive, so it's important that the tips are properly taken care of after each painting. The tips should be soaked in a cleaning solution. Do not try to clean them with metal brushes or other objects, as you run the risk of damaging the tip orifice.

Read Lance's profile in the Summer 2017 issue of ON THE TURF.

I know my topic is natural grass field painting, but I would also like to touch on using natural grass paints on infield skins. There are two paints that have been used in baseball: aerosols and "paint-in-a-box" systems. These approaches are both used by lightly wetting the infield areas prior to application. This helps the paint adhere better to the dirt. For some, this practice has replaced traditional chalking of lines.

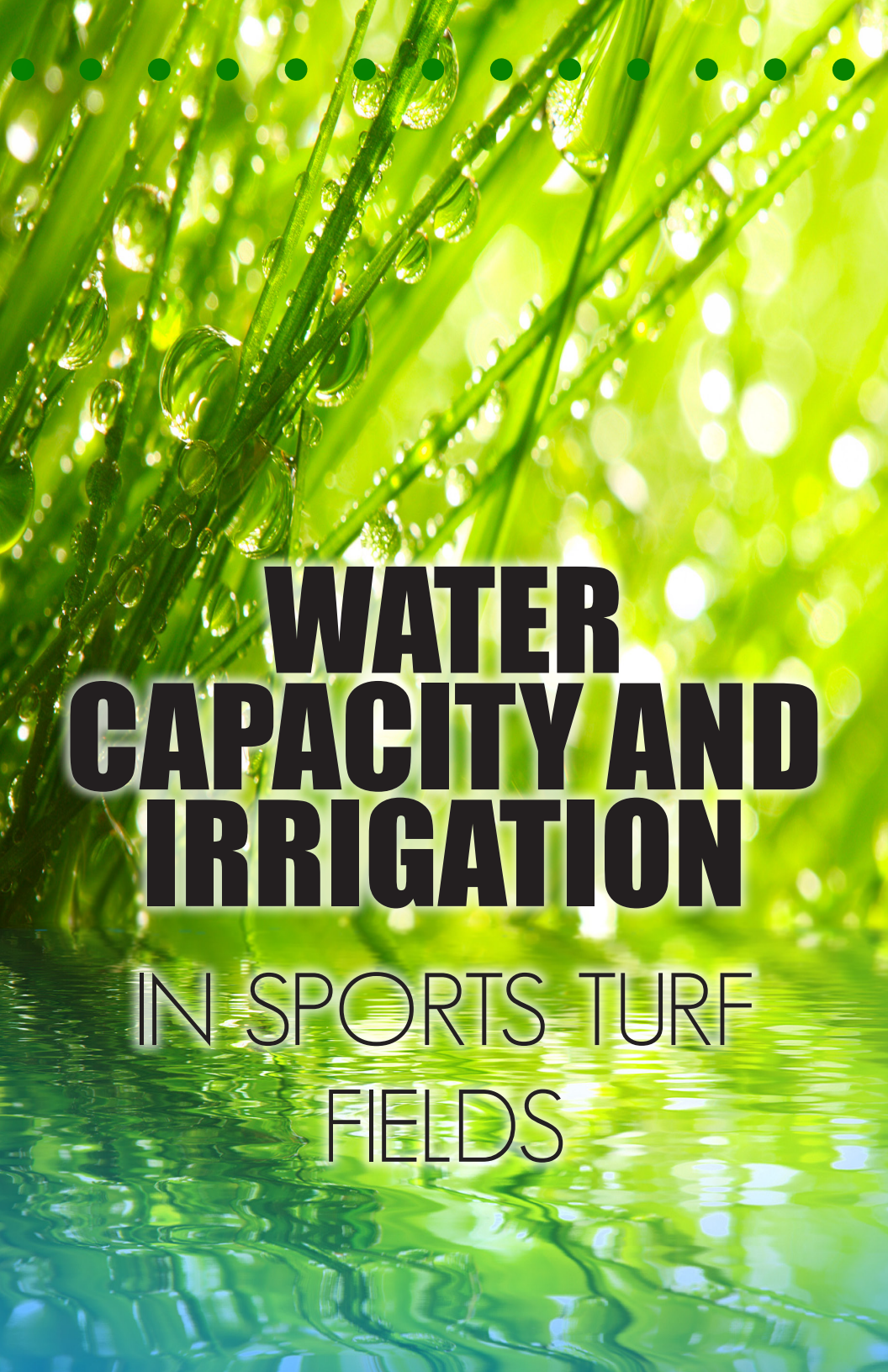
One of the last purchases you need to consider for your field is stencils. For a football field, the basic stencils you should have are hash mark and number stencils. Both number stencils and hash mark stencils come in plastic and aluminum. Both materials have their benefits. But keep in mind the availability of labor when choosing your stencil. Plastic stencils can be moved by one or two people, but have to be replaced after a certain period of time. Aluminum hash mark stencils can be moved by one or two people, but aluminum numbers require two people due to their size. Aluminum should be considered a long-term investment, as they should last a long period of time.

As far as logo stencils, you can purchase lightweight tracing pattern stencils or a heavy plastic version. A big factor to consider is the size and how complicated the logo is. Some find that the intricate parts of

wording, lettering, or shapes are best suited for a more rigid plastic stencil. Remember that the thick plastic will require two people to move it. Tracing patterns are perfect for large logos and end zones. They are easier to move and can be done using a few people. These are all factors to consider before purchasing your stencils.

Here are some final pointers to consider and apply if possible to your program in order to achieve great paint jobs. The first is to mow your turf prior to paint application. This ensures that your turf is at its lowest height, helping your paint to last longer. Second is to try and water the days leading up to paint application. This way you do not have to try and run your irrigation the night after painting.

Lastly, have fun with it and get creative with logos as paint is a great way to showcase your field to everyone! ●


WATER
CAPACITY AND
IRRIGATION
IN SPORTS TURF
FIELDS

The main reason we irrigate sports turf fields is to refill available water capacity. "Available" here refers to the part of the water in the soil that is available for plant roots to take up.

You can think of available water capacity as your gas tank. The gas tank is always the same size, say, 15 gallons, but it can vary between being full, to empty, or to somewhere in between. For obvious reasons, you don't want the tank to go dry. You don't want to overfill it. You want to just drive a reasonable number of miles until the next refill. If you get 20 miles per gallon, you can plan to refill the tank in less than 300 miles and everything should be okay.

It's the same way for available water capacity and irrigation in sports turf fields. Don't go dry and don't overfill.

The available water capacity is a particular amount, say 0.75 inch depth of water, which is fairly constant for a particular soil and turfgrass. But the actual amount of water within that available water capacity goes up and down. Depending on how much actual water is in soil on a particular day, the "tank" (*available water capacity*) can be full, empty, or somewhere between.

In the soil root zone, turfgrass roots absorb water from the soil, water is evaporated out of the leaves, and the available water in the soil goes down. The process of evaporation out of the leaves is called "transpiration." A very little extra water evaporates directly out of the soil surface. Although transpiration is much greater than soil evaporation, these two processes are talked about together as "evapotranspiration" or ET.

By **Phil Busey, Ph.D.**
Agronomist
Phil Busey Agronomy Consulting

If there is rain or if you irrigate, the available water, the part of the available water capacity that is filled, goes back up. If the available water capacity is overfilled, water runs off or percolates down. If available water capacity is empty, turfgrass plants wilt and begin to die.

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To summarize, you can think of available water capacity as a container around the roots of the turfgrass. Water enters the container as rain and irrigation. Water exits the container by ET, runoff, and percolation. If you knew with some precision available water capacity, rain and ET, you could perfectly time irrigation.

Irrigation

The most efficient management of irrigation, in most circumstances, is to use irrigation to replace water that exits as ET that is not already replaced by rain.

University of Florida / IFAS Florida Automated Weather Network

It is easy to look up reported ET values for particular dates or intervals throughout Florida on the University of Florida / IFAS Florida Automated Weather Network, fawn.ifas.ufl.edu. There are other reporting networks and there are ways of having a local ET monitor as part of a smart irrigation controller system.

Available water capacity and ET are both consistent in a particular soil and a particular weather condition. In the sunniest months in the driest parts of Florida, maximum daily ET is not more than 0.18 inches.

So if a soil had 0.75 inches available water capacity, by multiplying 0.18 inches by 4 to get 0.72 inches, we should expect the sports turf field to survive 4 days between irrigations, but wilt on the 5th day. So as a benchmark, one would plan to irrigate in the sunniest months, when ET is highest, every 4 days, and use a soil moisture sensor to disable irrigation whenever rain or other conditions cause there to be some remaining available water in the soil.

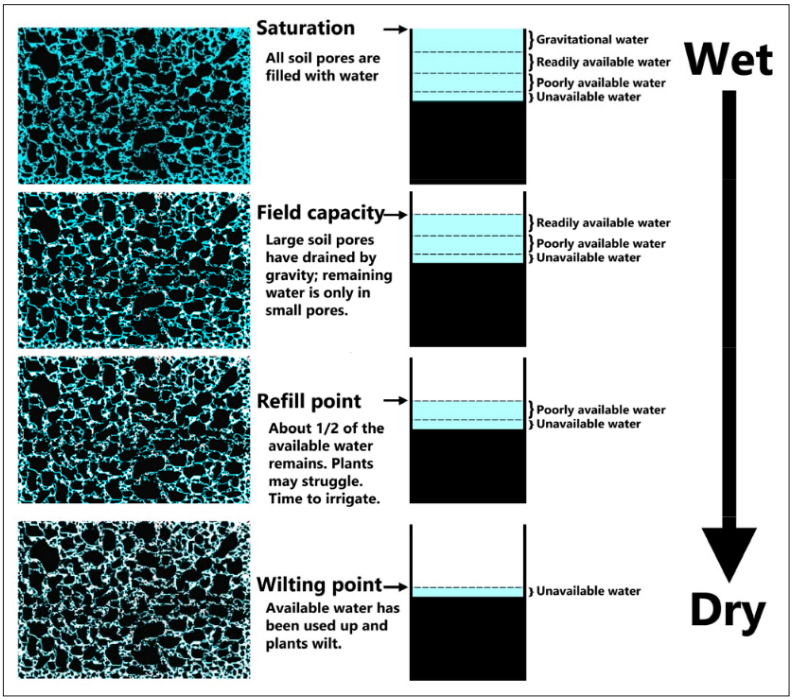
While I mention an available water capacity of 0.75 inches as an example, available water capacity varies among soils and turfgrasses and is the most difficult thing to estimate. Rain can be measured directly. ET can be accurate estimated and/or predicted. Other ways water exits the root-zone, runoff and percolation, can be accurately accounted by a “water balance” equation. Which is as simple as balancing your checkbook. If only we knew the available water capacity!

Available water capacity is often smaller than 0.75 inches. A sports turf field that is under stress from traffic or that is planted in sand with no organic matter amendment may not even go 3 days between irrigations. And newly established sod that has no roots in the soil may need to be irrigated once per day.

So I propose you think about available water capacity as a fixed quantity that you would like to know but can only estimate indirectly. One way to estimate it is if a sports turf field goes to the point of wilt, and you count the number of days back to the last complete irrigation or major rain event, that will give you a number, whether it is 2 days, 3 days, or 4 days, that you can work with to estimate available water capacity. Multiply the number of days between the last major rain event and the date of wilt, by the average daily ET during that period, and the product should be close the actual available water capacity of your soil.

Complications

To put available water capacity in a bigger context, I will explain some other terms about water and soil (see illustration below). The total water in soil can be thought of as three parts, gravitational



water that will percolate down on its own within about one day, readily available water that plants absorb through their roots, and unavailable water that clings too tightly to soil particles for even the roots to get.

Gravitational water exists in soil after a heavy rain when the soil is saturated and when the sports field should not even be played on. Gravitational water is mainly not available to plant roots because it fills the large "macropores" in the soil, and prevents the roots from getting oxygen, and is only around for a day or so. Available water is in the small "micropores" in the soil and is at maximum when the soil is at a stage called "field capacity." Between the degrees of soil wetness called "wilting point" and "field capacity" is the available water capacity.

To complicate it further, crop producers including farmers and nursery growers try not to let their crops go near the wilting point so they irrigate at about the halfway mark. In the accompanying illustration I show two different kinds of "available water," one which I call, "readily available water" and the other "poorly available water."

Improvements

Available water capacity, as I said, is fairly constant for a particular soil and turfgrass. At the time a new field is constructed, or when a field undergoes extensive renovation, an appropriate amount of organic matter amendment can potentially increase available water capacity in the soil. Fibrous peat is usually the most consistent and effective organic source for improving sports turf fields.

During periodic maintenance an appropriate amount of core cultivation or other aerating methods can improve available water capacity by fostering more oxygen diffusion and a deeper root system. Root growth and top growth are closely related so other factors such as mowing height can have an effect on root growth, and in consequence, available water capacity.

Another way of understanding, but not knowing exactly, available water capacity is a complete physical analysis of soil. A physical analysis, besides provide a distribution of soil particle sizes including sand sieve classes, should indicate the percent macropore and micropore volume of soil, along with saturated hydraulic conductivity. ●

COMMERCIAL MEMBER

SPOTLIGHT

Luis Lauretti

I'm originally from Brazil and there is where I started my professional career. I graduated with a B.S. degree in Agronomy in 1995 and finished my Master degree in Agriculture in 1998. I started working with sports fields in Brazil in 1996 as an agronomist and sports fields' manager for World Sports. My first job was the renovation of the soccer field for Santos FC, one of the most traditional teams in Brazil where famous players like Pele and Neymar started their careers. This project was a joint venture between World Sports and the American company "The Motz Group" to install their patented system named PAT (*Prescription Athletic Turf*) which uses a vacuum drainage system.

I worked with World Sports in Brazil from 1996 until December of 2003 where I was involved with the construction of several soccer fields for the professional and recreational levels. My other responsibilities were to manage our many maintenance crews on major stadiums and social clubs, sales of turf services (*such as mowing, topdressing and aerification*), and sales of turf equipment and seeds.

In 2004, I moved to Tampa, FL with my wife whom was hired by the University of Florida Gulf Coast Research and Education Center as a Professor of Plant Pathology to work with strawberries. I've also worked for the University of Florida for two years as a research technician in the weed science program. In 2006, my partner Roberto Gomide and I opened World Sports in Florida and built our first soccer field for the Miami FC at Tropicana Park in Miami.

In 2007, I also started working for Florida Turf Support, currently known as Trigon Turf Sciences, as their sales manager, sales representative, and agronomist. Trigon sells specific fertilizer

products for sports fields and has a major participation with golf courses. In 2013, I become a partner of Trigon Turf Science and nowadays, I provide my agronomist services to help new reps, and have many customers that I provide consulting and sell our products.

I had a great experience in 2013 when I helped World Sports as a consultant for the preparation of eight soccer fields for the 2014 FIFA World Cup in Brazil. During the Cup, I was the Head Groundskeeper for Arena Corinthians, the stadium where the opening and semi-final games were played. It's very exciting to be able to work with sports fields in two different countries, the experience and the learning is tremendous, and to be able to share these with my customers is very fulfilling.

In summer of 2017, World Sports in Florida started offering new services to the turf industry, such as Fraze Mowing and Recycle Dressing. These two machines have already provided great services to our customers this summer, the feedback from them is excellent and it is becoming very popular.

My wife Natalia and I are happy and proud of our decision to move to US and we have become American citizens in 2015. We have two lovely kids who were born here; Mariana, 9 years old, enjoys reading, swimming, tennis, and drama classes, and Lucca, 6, loves to play ice hockey, a sport we never followed before but we learned to enjoy watching the Tampa Bay Lightning games. ●

ON THE TURF TIPS FROM STMA

Here are a few tips from STMA on the care of your Spring season turf. Please keep in mind that they are just tips and you will need to develop a plan that works for you.

SEPTEMBER - NOVEMBER

Mowing

Timing for maintenance practices is dependent on weather and location. The cooler areas may need to end or perform certain maintenance practices earlier in the season versus warmer climates, which can continue maintenance practices later into the year. Recommended mowing heights for Bermudagrass is 1”-2”. Bermuda also goes dormant during low temperatures and as winter approaches, mowing height should be raised if the field is not being overseeded. Do not exceed a 2 inch cutting height. Remember the 1/3rd rule, never remove 1/3rd of the leaf blade at any one mowing.

Irrigation

Recommended amounts per week (minus any rainfall) 1”-1.5” per week. Water should be applied on an as needed basis. The proper amount of water applied at any one time is dependent on the water holding capacity of the soil, grass species, soil texture, climatic condition (rainfall, humidity, temperature, and wind movement), exposure, intensity of use, drainage and amount of moisture present when irrigation is started. Most turf grasses require between 1”-1.5” of water per week during their active growing period to remain healthy and resilient. Always water at the first signs of wilt.

Fertilizer

Recommended amount of nutrients per month

- September - 0.5 - 1 lb. N/1000 sqft.
- October - May also be the last month that premergeent can be used if you are planning to overseed in November. Read the label of the product to be used for residual factor.

Soil and Tissue testing should be conducted on a routine basis. However, their real value is realized if conducted simultaneously with a soil test since only the soil report can provide clues as to why a nutrient deficiency or toxicity is occurring. Make sure to check with your local and state agencies for any restrictions on applying nutrients.

Cultivation
Recommended time for soil cultivation keep in mind that as bermudagrass growth slows with decreased temperatures vertical mowing, dethatching, aerating in the fall should be avoided unless they are being overseeded. Doing so can cause injury to bermudagrass that will not allow plants to successfully recover before winter.

Diseases
Recommended diseases to be on the look out for Brown patch, Dollar spot, Fairy ring. Diseases occur when three factors are present and meet the correct conditions, A susceptible host, A virulent pathogen, and a suitable environment.

Insects
Protect seedlings from fall armyworm damage.

Weeds
Recommended time to apply herbicides in all Turfgrass:

- September - Postemergent control for winter annual and perennial broadleaf weeds.
- Preemergent control should only be done if you are not overseeding.
- October - Postemergent control for winter annual and perennial broadleaf weeds.
- Preemergent control should only be done if you are not applying overseed.
- November - Postemergent control for winter annual and perennial broadleaf weeds.
- Preemergent control should only be done if you are not applying overseeding.

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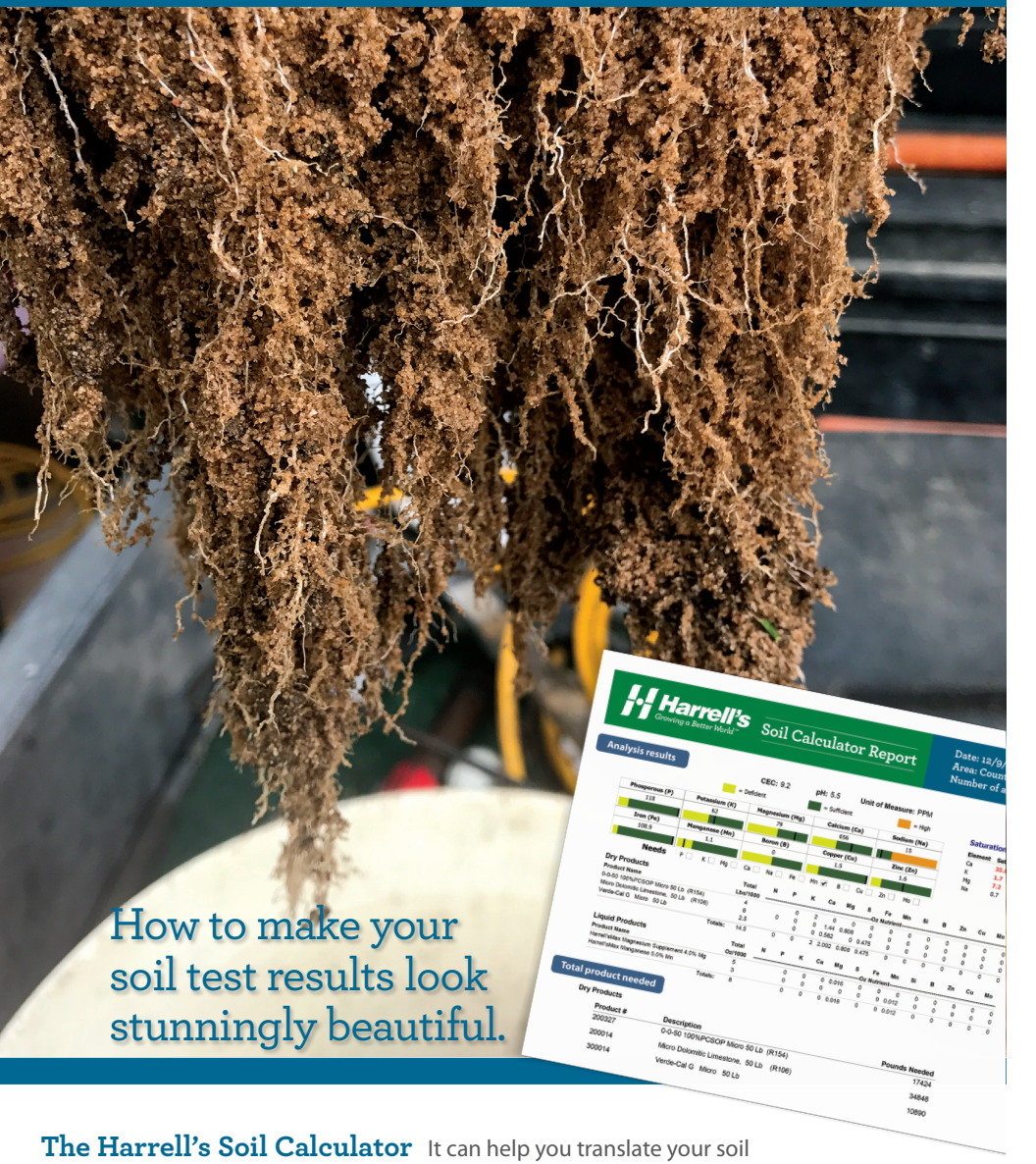

The Harrell's Soil Calculator It can help you translate your soil test results into healthy and beautiful growing results. Analyzes data from any lab, and helps you identify the right products and rates to address whatever issues your soil test reveals.

Ready to build a more precise fertility program? Contact Dave today.

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Central Florida STMA Chapter Application Form

Name: _____ Title: _____

Employer: _____ _____Contact Phone: _____

Address: _____ City: _____

Zip: _____ Email : _____

If vendor, type of business: _____

Florida's STMA Chapters welcomes new members. We are a very inclusive organization and have a membership category for anyone interested in learning more about sports field management. To register for other chapters, please visit the website at cfstma.org.

BASIC (1)	$	BRONZE (2)	$	SILVER (3)	$
Two individual Chapter Memberships in CFSTMA	$125	Two individual Chapter Memberships in CFSTMA	$125	Two individual Chapter Memberships in CFSTMA	$125
Your logo on CFSTMA website with a link to your website	N/C	Your corporate logo on CFSTMA website with a link to your website	N/C	Your corporate logo on CFSTMA website with a link to your website	N/C
Your logo on three Chapter meetings and one event signage	$375	Your logo on three Chapter meetings and one event signage	$375	Your logo on three Chapter meetings and one event signage	$375
CFSTMA will introduce your company during the three Chapter meetings as a Basic Sponsor	N/C	CFSTMA will introduce your company during the three Chapter meetings as a Basic Sponsor	N/C	CFSTMA will introduce your company during the three Chapter meetings as a Basic Sponsor	N/C
		Quarter page advertisement in ON THE TURF (four publications)	$900	**Half page** advertisement in ON THE TURF (four publications)	$1,620
Total	$500	**Total**	$1,450	**Total**	$2,120
		ALL EVENTS INCLUDED TOTAL			
Field Event Table Top Add ($150)	$650		$1,150		$2,270
Field Day 60ft x 60ft Add ($300)	$800		$1,700		$2,420

GOLD (4)	$	PLATINUM (5)	$	CHAMPIONS CLUB (6)	$
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Your logo on CFSTMA website with a link to your website	N/C	Your logo on CFSTMA website with a link to your website	N/C	Your logo on CFSTMA website with a link to your website	N/C
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CFSTMA will introduce your company during the three Chapter meetings as a Basic Sponsor	N/C	CFSTMA will introduce your company during the three Chapter meetings as a Basic Sponsor	N/C	CFSTMA will introduce your company during the three Chapter meetings as a Basic Sponsor	N/C
Full page advertisement in ON THE TURF (four publications)	$2,250	Inside front or back cover advertisements in ON THE TURF (four publications)	$3,060	Full page back cover advertisement in ON THE TURF (4 publications	$5,660
TOTAL	$2,750		$3,560		$6,260
		ALL EVENTS INCLUDED TOTAL			
Field Event Table Top Add ($150)	$2,900		$3,710		$6,410
Field Day 60ft x 60ft Add ($300)	$3,050		$3,860		$6,560

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