THE OFFICIAL PUBLICATION OF THE FLORIDA CHAPTERS OF THE STMA

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Winter Weeds in Bermudagrass Sports Turf

KEPING IT GREEN

Q&A with Joe Burmeister Florida Christian School

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PRESIDENT'S MESSAGE

CENTRAL FLORIDA SPORTS TURF MANAGERS ASSOCIATION

ello Turfers,

Well, we have another growing season almost behind us. I hope you all had great success and tried some of the new suggestions that we have heard and read about from our excellent speakers and authors.

There are several upcoming educational sessions that I encourage you to attend. If you are a supervisor, please send your employees so they can increase their knowledge base and become your inhouse "Subject Matter Expert(s) (SME)".



The first educational event is the **Annual Florida Turf Grass Association (FTGA) Conference** held in Tampa on September 26-28, 2016 at the Innisbrook Golf & Spa Resort. To find out more, visit the event web page at www.FTGA.org.

We also have the **Citra IFAS Field Day** coming up on October 5, 2016 from 8am-5pm. Visit http://turf.ufl.

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And, let's not forget our **National STMA** event in Orlando at Disney's Coronado Springs slated for January 23-27, 2017. For more information, please visit http://www.stma.org. Registration opens October. If you click the conference tab now, you will see the following information on free registration. I strongly suggest if you haven't taken advantage of this great national membership benefit in the past, you do so this year.

ELIGIBILITY FOR A FREE NATIONAL STMA CONFERENCE REGISTRATION

"If you are a new, national member of STMA, (have never been a member since 2000) you are eligible to receive a free conference registration to be used within three (3) years. Registration opens October 1."

Hope to see you at one or more of these upcoming events,

CFSTMA President

Dale Croft

Correction: In the Summer edition of ON THE TURF, in the article "Major League Dreams on a Parks and Rec Budget", an incorrect URL for Weed Watch was published. The correct one is as follows: http://digital.landscapemanagement.net/weedwatch2014#&pageSet=0&contentItem=0 or scan the QR code to gain access.







AN INTERVIEW WITH JOE BURMEISTER, FLORIDA CHRISTIAN SCHOOL



Joe Burmeister has been the Sports Field Manager at the Florida Christian School for three and a half years. On top of being the Sports Field Manager, Joe also has facility maintenance duties within the school. He is known as Coach Joe throughout the school, coaching Football, Basketball and Lacrosse.

We sat down with Joe to get a feel for his neck of the woods.

Question: What sports are played on your fields?

Well, our fields are all combined as one. Our football field runs down the middle, we have a softball field on one end and a baseball field on the other end. The football field area is used for football, soccer and lacrosse. Physical Education will also use our game day and practice field throughout the school year.

Question: How many acres of fields do you manage?

We have 4.5 acres of game day and practice fields spread out over two campuses. We have approximately 3.5 acres of game day fields at our Main Campus and a 1 acre practice facility located at our West Campus.

Question: What Equipment do you have to maintain the fields?

We have a couple of utility carts, a pull behind spray rig, a pull behind fertilizer spreader, a reel mower, a rotary mower and an infield drag machine. We do not own a tractor or any attachments. All of the cultural practices are substituted out to Ballpark Maintenance.

Question: How have you managed field usage?

Well, great question. The name of the game is controlling traffic and communication with the teachers and coaches. When I took over as the Field Manager, our Physical Education classes were always utilizing our game day fields for all their classes. They also travelled the same path to and from one area, which was an area not maintained by the school that was loaded with weeds. The path the kids consistently travelled wore away the grass and transported weeds from the area to our fields. Something as simple as moving a gate and changing foot traffic can make a huge difference. I also worked with the football and soccer teams to cut down the usage of the game day field for practices. They utilize our practice field more often. They will still throw in a practice on the game day field so the kids can get used to the dimensions. Another practice we have implemented is to keep traffic off of our game day field when it is wet. Little changes will make a huge impact!

Question: What is your irrigation water source?

Our water is well water. We have 3 irrigation stations. One is solely for the baseball field. That is a 5 hp pump with a new system of Rainbird heads and controller. Our main football field and softball field is controlled by another pump which is a 7 hp and drives Rainbird heads, as well. Our last system is for the practice field; it is driven by a 3 hp pump and is all Hunter irrigation heads

Question: For two summers you went through field renovations. Each summer was done by a different contractor. Please tell us some of the things you learned over those two summers.

The biggest thing I learned was that each company does the field renovation process differently. So, when choosing a contractor, go with the one that aligns to what you're trying to create, control and maintain. I also learned there are many things that you must be cautious of during the renovation projects. Make sure you have an agreed upon plan by everyone before the project ever starts. I came to the realization of the importance of the final grade of the ground, using the right soil/sand blend and applying pre-emergence. All of these affect the finished product and could create problems that are more difficult to fix after the fact. Communication with the contractor throughout the project will keep everyone on the same page and help to achieve the desired outcome.

Question: What are some of your biggest challenges?

My two biggest challenges are keeping people off the field to keep the grass up to par. My other challenge is twofold, not enough time on the field with the right products. I have other facility maintenance duties I need to do during the week that takes away from the time I can spend maintaining the fields. It is an ongoing battle with traffic control. It boils down to communication and

education. When new teachers and coaches come on board, the education and communication process is started all over. Sometimes it takes people to see it to believe.

Question: Have you always been in sports turf?

Actually no, I spent many years in the tropical plant nursery business. All told, 17 years in the Green Industry. Although knowing the chemicals, growth patterns, and insects/issues comes in handy. Turf and plants are two different animals. So I'm still learning a lot thanks to some key people/suppliers in the business.

Question: Are there any products that have helped your fields perform better?

There are many good products out there. Having a good distributor rep and a good relationship with that rep will make your job easier. Traffic is a turf killer, look to use a Controlled Release Potassium product. I specifically use a Harrell's Polyon product. Bayer, Syngenta and Dow products have helped me to control the weeds.

Question: Do you have any advice for other field managers?

Protect your fields, control traffic, educate yourself and others and communicate. ●



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This Chapter Meeting is open to any Florida STMA member.

Keeping It Green

with Overseed and Turf Colorants



By Jason Kruse, Ph.D. Associate Professor University of Florida

When it comes to selecting a grass species for use on athletic fields in Florida there are two or three grass species that might be considered based on the installation and maintenance budgets of the facility. More times than not, the grass of choice is bermudagrass.

Improved cultivars of bermudagrass offer a great balance of aesthetic quality, wear tolerance, and recuperative capacity that is tough to match. One of the challenges faced by field managers with bermudagrass is the fact that growth slows and it can become to go off-color as temperatures drop and day lengths get shorter in the fall/winter months.

In central and south Florida the climate tends to be a little more mild and, as a result, the most dramatic impact on bermudagrass fields may be a reduction of the growth rate as it rarely goes dormant in these regions of the state. As you move further north and low temperatures are more prevalent the bermudagrass has a higher chance of going dormant and losing its green color. It doesn't matter whether the field is used for soccer, football

(continued pg. 8)



Picture 1: This picture of Florida Field was taken in early November 2011. The field at this time was Tifway 419 and it was not overseeded. Note the thin/worn areas down center of field.

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Picture 2: This picture of Florida Field was taken in late October 2014. The field is Celebration bermudagrass overseeded with perennial ryegrass. Note the uniform density of the field as well as the improved striping that is evident with overseeded ryegrass.

or baseball, the goal of the field managers is to provide a safe field that also meets aesthetic expectations.

As a result, field managers through much of the south have relied on a winter overseeding program to establish and maintain an annual or perennial turf-type ryegrass in the bermudagrass base to provide the desired color and improve the aesthetic qualities of the field. This can be particularly important in cases where field receive considerable traffic. More on that later.

When deciding to overseed a bermudagrass athletic field there are a number of things to take into consideration. Overseeding bermudagrass is problematic from an agronomic perspective since you are essentially growing two different plants with different management requirements at the same time in the same location. During periods of cooler temperatures and shorter day lengths, ryegrass will out-compete the bermudagrass for light, nutrients, and water. This is particularly a problem if you are located in regions where the bermudagrass does not go completely dormant. Another challenge with establishing overseeding is scheduling the planting within the optimum window without interfering with use of the field. Field managers will often try to identify a break in scheduled use as a date for planting. If that date is too early in the fall you may experience a reduction in ryegrass establishment due to the growth of bermudagrass outcompeting the ryegrass seedlings. Additionally, the warmer temperatures and higher humidity can lead to higher risk of disease development in the ryegrass seedlings. Planting too late can lead to reduced germination and delayed seedling development as a result of the cooler temperatures.

The primary species used to overseed athletic fields is perennial ryegrass. Perennial ryegrass is capable of producing a high-quality playing surface, tolerates traffic, and establishes easily in overseeding conditions. Recent

breeding efforts have made significant advancements with regard to genetic color, texture, and leaf density. At the same time, plant breeders have been working to improve the disease resistance and heat tolerance of perennial ryegrass species. While heat tolerance and disease resistance may be beneficial for areas where these grasses are being grown as a perennial plant community, they are problematic in southern climates where we hope that the grasses will behave as annuals and die in the spring as temperatures increase. This results in the perennial ryegrass becoming a persistent weed that may need to be managed through the use of an herbicide, which can add significantly to the cost of the overseed program.



Picture 3: Overseed trial conducted at the University of Florida Plant Science Research and Education Unit in Citra, FL. Note differences in genetic color between plots.

There are other species that can be considered for overseed programs. Annual ryegrass germinates quickly (3-5 days) and is relatively inexpensive. However, when compared to perennial ryegrass it does not produce the same shoot density and is characterized by a coarser leaf texture and a light-green genetic color. As a result of its rapid vertical growth it requires more frequent mowing than perennial ryegrass. Intermediate ryegrasses are a hybrid species that is produced by crossing an annual and perennial ryegrass plants. These have been developed and marketed to turfgrass managers in direct response to concerns with the long persistence of perennial ryegrass

(continued pg. 10)



Picture 4: Dorman bermudagrass plot in middle of plots that have been overseeded with perennial ryegrass.

in overseeding programs due to their improved transition characteristics. Intermediate ryegrass has improved genetic color when compared to annual ryegrass and has a higher mowing requirement than perennial ryegrass due to the higher vertical growth rate.

Overseeding is a year-long process that requires significant planning and coordination with regard to the use and management of a facility. In Florida, it is common for turfgrass managers to apply a mid-summer application of pre-emergent herbicides to aid in control of warm-season weeds. Care should be taken to consider the date planned for planting overseed as it relates to the efficacy period of the pre-emergent herbicide selected for use. Using a pre-emergent product that has an efficacy period of 8-12 weeks when you plan to plant in 8-10 weeks is a sure-fire way to set yourself up for failure. Once the seed is planted it is critical that it receives frequent irrigation or rainfall during the first two weeks, making sure that the surface where the seeds are located does not get dry until they are germinated and have established a root system that will allow them to extend time between irrigation events without showing signs of wilt. Do not fertilize the overseed until the underlying bermudagrass is dormant. In most cases there will

be adequate fertility present in the profile for the ryegrass plants during the first month or two after planting. Fertilizing too soon could force the bermudagrass to grow instead of going dormant and could increase your risk of winterkill.



Picture 5: In cases of extreme traffic/wear it may not be possible to maintain cover, even when overseeded with ryegrass. A portion of this field has been resodded with bermudagrass that was not overseeded. Just beyond that there are areas that have been worn through even though it was overseeded.

From golf courses to athletic facilities, I have noticed an increasing number of turfgrass mangers opting out of their traditional overseed programs in favor of the use of turf colorants. Facing challenges associated with spring transition as well as the added costs associated with planting and maintaining a stand of overseed on an athletic field, turf colorants offer an alternative option that can provide an attractive playing surface during the fall and winter months. Often referred to as "instant overseeding" – this practice is as simple as selecting a turf colorant, mixing it with water and applying with your sprayer. If the color is a little uneven or if the color is not dark enough, simply apply more. As with anything that seems too good to be true, there is a catch. One of the biggest issues with the use of turf colorants on high-use athletic fields is the fact that it does not provide a playing surface that can withstand/recover from wear. Once the bermudagrass base is worn down exposing the soil there is no regrowth until the following spring. No matter how hard you try, it is tough to paint soil.

(continued pg. 10)



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Picture 6: Turf colorants come in many different shades of green. Some cast more of a blue color while others can produce a dark green color reminiscent of perennial ryegrass.

Research has shown that it is necessary to make repeat applications with turf colorants if you hope to achieve seasonlong color. Most products fade significantly after a month and half or two months, often taking on a bluish tint. Repeat applications will extend the color and mask any fading that has occurred.

Finally, another option to consider is combining an overseeding program with use of turf colorants. In the instances where I have seen this used the field managers often seed at a lower rate to reduce competition between ryegrass and bermuda and then supplement color with turf colorants. They feel that this aids the bermudagrass during spring transition and

still gives aesthetic benefit (striping) that they want out of the ryegrass.

Which should you choose? Overseeding? Turf colorants? I can't think of a better example where the best answer for this question is: "It depends." Where is your facility located? Do you host a large number of events that

To contact (via email)
Dr. Kruse, scan the qr code.



create significant amounts of wear on your fields during the fall/winter months? Is the wear from those events extensive, often wearing away the turf surface and exposing the soil? Do your bermudagrass fields typically go dormant? If you answer "yes" to any of these questions, it might be worth sticking to

an overseeding program. However, if you are managing fields that do not receive extensive damage due to traffic/wear or if you are located in a region where winter temperatures are warm enough that bermudagrass stays green and continues to grow, albeit slowly, it may be worth considering the use of a turf colorant as an alternative to overseeding. •



Winters in Florida present different kinds of weed challenges for the sports turf manager. Winter gives some relief from the constant attack on our fields by the most serious weed, goosegrass. But slowed winter growth of bermudagrass exposes the turf to invasion by other, cool-season adapted weeds.



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

Weeds orts Turf

The fall months are generally months of the most intense sports field activity, causing bare spots (Fig. 1) which can set up winter turf for weed invasion. A warmseason turfgrass such as bermudagrass has weak recovery in cool weather, and fertilization to accelerate growth when it is not capable of rapid growth, may benefit the weeds.



Fig. 1. Soccer goal mouth in high school athletic field in November showing wear damage and a bare area open for Winter weed invasion.

Another warm-season turfgrass, seashore paspalum, has slightly better winter growth than bermudagrass, but it is uncommon in sports fields in Florida, is much more susceptible to many kinds of herbicides, and would require a completely different article on weed management. So I am limiting this article to bermudagrass, including bermudagrass overseeded with perennial ryegrass.

Florida has no "average" winter

Besides traffic and slow growth of bermuda, a big winter weed challenge in Florida is uncertainty about the weather. Year-to-year variability in climate is greatest in Florida's winter. One winter, 2015-2016, was extremely wet, which caused big problems from annual bluegrass, Poa annua, which likes it wet. The next winter may be dry. Or wet. Or warm. Or cold.

When snowbirds flock here for our mild winter, variability in temperature is actually the greatest. As a sample location from the middle of Florida,

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I compiled data from Lake Alfred, from 1999 to 2015. The average temperature in December varied five times as much as September throughout those same years.

Lower maintenance

In the winter, the sports turf manager's perfect plans may have to take a back seat to the unpredictable weather, affecting overseeding, resodding, irrigation tune-up, and other catch-up projects. Weed problems in the summer are expected. Weed problems in winter differ every year.

Summer and winter weeds

The most serious weeds in summer are goosegrass, crabgrasses, and tropical signalgrass. They all grow best in hot weather, although in South Florida crabgrasses and tropical signalgrass spread vegetatively throughout the year and clumps of goosegrass can persist through winter. In spring and summer these warm-season grass weeds predictably try to establish from seed which germinates well in divots, depressions, and wherever the turfgrass is thin and worn. There are many other summer weeds, including other annual grasses, except for annual bluegrass, that are more summer weed problems.

Some other serious grass and sedge weeds, including strong perennial plant species such as torpedograss and purple nutsedge, grow throughout the year. Because seed propagation either does not occur or is less important for these two spreading perennials, this group of weeds is a similar problem in the winter as in summer and can be dealt with when convenient.

Summer weeds give us a model for understanding winter weeds. Dr. Roy Nishimoto and Dr. Bert McCarty showed that goosegrass germinates best under conditions of fluctuating temperate and light, as expected in a thin area in a sports field in Florida's summer. Allowed to mature and go to seed, goosegrass plants add to the seedbank in the soil which keeps germinating for probably a few years. A steady program of preemergence herbicide applications, three to five per year, wall-to-wall applications, is effective in preventing goosegrass emergence, stops seedbank redeposits, and prevents recolonization. With diligence you might even lessen the seedbank over



Fig. 2. Creeping indigo in February near the warning track in a baseball field. This weed is in the Fabaceae, the pea family, is perennial, but is conspicuous in winter.

the years and not be seriously bothered by goosegrass, or at least not have to use postemergence herbicides.

The winter weeds are generally cool-season plants, they are generally broadleaf plants, dicots, and represent many different families with different life cycles. Some are perennials and biennials that grow year-round but are conspicuous in winter because the turfgrass is growing slowly or brownish. Many are winter annuals in our region.

Depending on how far north or south you are in Florida, Winter weeds in sports fields may include black medic, burclover, common chickweed, corn speedwell, creeping indigo (Fig. 2), cudweeds (Fig. 3), dollarweed, henbit, hop clover, lawn burweed, Old World diamondflower, swinecress (Fig. 4), wild geranium, and many other species especially in the Asteraceae (sunflower family), Brassicaceae (mustard family), and



Fig. 3. Cudweed in a football field in February. This weed is in the Asteraceae, the sunflower family, and can be a problem in both winter and summer.

Fabaceae (pea family). Most are bunch type weeds. If it's a cold winter, even in South Florida, some, such as Old World diamondflower, will die back. Others are summer annual weeds in the southeastern U.S., but act as winter annuals in Florida. Any list of potential broadleaf winter weeds will be incomplete because there are so many.

Unlike grasses, which can be controlled by wide variety of preemergence herbicides, preemergence herbicides are



Fig. 4. Swinecress was seen in football field in spring as it had grown through the winter. This weed is in the Brassicaceae, the mustard family, which includes mainly winter weeds for Florida sports turf fields.

generally not very effective against broadleaf weeds, which dominate in winter. An exception is the preemergence active ingredient isoxaben, trade name Gallery 75W. Another is simazine, trade name Princep, but it is only intermediate in safety for use on actively growing bermudagrass.

If you use any herbicide, and there are folks who don't, make sure that you are properly certified to use the product in the particular license category and applicator class, for the type of property and employment or contractual situation. Make sure that you follow the EPA label instructions on the pesticide container as to turfgrass species, type of site, and other details of application, and that you are aware of and follow all other laws, rules, regulations, and ordinances at all government levels. Don't apply herbicide to the wrong turfgrass species, or the wrong site (e.g., athletic field vs. golf course), or under any other conditions that are not allowed. The EPA label is "the law," but it is not the entire "law," just a first source of information. There are other laws and rules to follow, particularly at the State of Florida level.

Many cool-season, broadleaf winter weeds can be controlled using organoauxin (phenoxy) herbicide mixtures, such as three-way mixtures of 2,4-D, mecoprop, and dicamba. The use of mixtures of these and related chemicals is governed by Florida's Organo-Auxin Herbicide Rule, because of their high drift and volatility potential, and risk of killing neighboring plants. You are required to use a wind meter to measure and record multiple wind speed readings at the beginning of spraying and at 1-hour intervals during the spraying, and not apply at wind speeds exceeding certain limits, depending on the nearness and direction (crosswind, downwind, or upwind) of sensitive crops. The Florida Department of Agriculture and Consumer Services has table listing details. Make sure you record wind speed measurements if you apply any organo-auxin herbicide.

Simazine is also effective as a preemergence and postemergence herbicide to control broadleaf weeds, but again, safety in bermudagrass is only intermediate. Newer herbicides including sulfonylurea herbicides can control many kinds of cool-season, broadleaf weeds, assuming the areas are not overseeded.

The one important winter weed in the grass family (Poaceae) is annual bluegrass which can be a small bunch grass. There is also a spreading variety with stolons. Annual bluegrass is becoming a bigger problem, and annual bluegrass is evolving into stronger, herbicide-resistant ecotypes.

To overseed or not to overseed

In the past, overseeding, typically with a perennial ryegrass blend, was a reasonable thing to do to keep fields strong through winter. But we have not had severely cold winters lately and overseeding has reduced greatly, almost vanished, from South Florida. The gamble is both whether to overseed and, if the answer is yes, what seeding rate to use. Too high a seeding rate makes for a difficult transition in the spring.

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From a standpoint of weed control, besides the cost of overseeding and the spring transition problem, is the complication of controlling weeds in overseeding. The irrigation used to help perennial ryegrass germinate also helps weeds germinate. How can we prevent weeds, of which annual bluegrass is a common winter annual problem, without damaging the overseeded ryegrass? The last preemergence herbicide application before overseeding should be no later than 6 weeks to 12 months before overseeding, depending on the half-life of the preemergence herbicide, the weather, and the rate applied. All of this is specifically stated in the herbicide label.

By itself, annual bluegrass in bermudagrass would be relatively easy to control. Any of a number of different sulfonylurea herbicides wipes out annual bluegrass. But these compounds are also harmful to other coolseason turfgrasses including perennial ryegrass.

There are now some new products showing hope and limited success in preventing or removing annual bluegrass even in young plantings of perennial ryegrass. But year-to-year variations occur in the results, and the products are not completely safe for bermudagrass and perennial ryegrass. And it's easy to make a mistake. Managing all three, perennial ryegrass, annual bluegrass, and bermudagrass growing in the same field is complex.

Managing through winter

Throughout Florida, except in the coldest winters, there is no hard dormancy that would allow some nonselective herbicides to be used. Turfgrass will try to keep growing although at a slow rate. Checking the number of mower baskets will show that growth in winter is a fraction of the growth in summer, but it's still growing. Despite the high expectations of snowbirds, it is common to under-appreciate the seasonality of Florida's climate effects on plants. Any operation such as aerification, slicing, verticutting, and fraze mowing will slow recovery in winter compared with summer.

Evapotranspiration, water used by turf, is reduced so winter can be a good time plant crops that might be under water stress. Until March there is a generally a soil moisture surplus. Recovery and establishment will be steady, but very slow. But because moisture conditions in Florida's winter tend to be more favorable, soils can also be too wet and there is more opportunity for weed germination. Often the places for winter weed establishment are along the edges of fields and near shade structures such as fences where there are microclimatic differences. This may be because moisture conditions are more favorable in these areas.

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Despite favorable moisture conditions, an operation requiring grass to be established or in good condition by a certain date in winter is risky. The eight weeks of minimal required establishment time that I expect for new sod to be generally strong enough to play applies only to summer, not winter. And the problems in miscalculating on winter weather and winter growth are weeds and player safety. So be careful not to get stuck in a situation in winter where there is a large expectation of fields being ready after resodding or after extensive renovation or cultivation.

Recommendation: Prepare for the unexpected

The basic concepts of cultural management of weeds apply just as strongly in winter as summer. In winter as well as summer, grow a strong, weed-resistant turfgrass by thoughtful, consistent mowing, fertilization, and irrigation. Avoid disrupting the canopy unnecessarily in the winter, but especially in winter. And in winter, expect the unexpected. •





Here are a few tips from STMA on the care of your seasonal turf (Bermudagrass). Please keep in mind that they are just tips and you will need to develop a plan that works in your climate.

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 turgrasses 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.

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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.

Member Spotlight John R. Piersol

Commercia

For almost 50 years, Florida Gateway College (formerly Lake City Community College) offered an Associate in Science (AS) degree in Golf Course Operations (turf program) that developed a national and international reputation for excellence. For most of that time, admittance to the program required a year of work experience and an extra year of turf equipment education. Still many students waited a year to be accepted.



This started to change during the economic collapse in 2008. Enrollments in the AS degree program began to decline as students who wanted to enroll could no longer afford to quit their jobs to attend on campus. At the same time, online courses were becoming more popular making it possible to continue working while going to college.

To meet this changing student demand, Florida Gateway College developed an 18 credit all online certificate that includes six 3-credit plant science courses. The college began marketing this program about three years ago to employees in the golf, landscape, and sports turf industries. These employees who like what they are doing but who have no plant science background now have a way to continue working and complete a certificate that includes some pertinent courses: Principles of Plant Growth (botany), Agricultural Chemistry, Soils & Fertilizers, Turfgrass, Irrigation, and Landscape Plants.

The 18 credit certificate is all some employees may need, but for those who want more education, it is recommended they pursue a Bachelor's in Business. The combination of work experience, the plant science courses, and a business degree is an effective education program for industry. The college is planning more online courses in the future that will lead to an AS degree.

(continued pg. 28)

Costs for this certificate are very reasonable with in-state fees at about \$105/credit and out of state fees at \$235/credit. The college also has scholarship money available that is being awarded as reimbursement scholarships. The student pays for the courses taken, and for students who completed the federal financial aid form (FAFSA) while applying, scholarships to reimburse tuition for the courses taken are available if they receive a "C" or better. One can go to www.fgc.edu click on academics, then horticulture to see the certificate page. See below certificate advertisement in "On The Turf".

Turf student enrollments at many colleges are down compared to ten years ago, so some employers are having a more difficult time finding summer interns and assistants. A way to mitigate this situation is to educate and promote good employees who are working at the site, and our online certificate provides an education opportunity for employees who can go to college at FGC while continuing to work full-time.

I came to the college in 1974 as the landscape instructor and was fortunate to be involved in the AS degree programs when the golf and landscape industries and our on campus programs were very strong, and it was a lot of fun. Students came to campus from all over the country and other countries because of the golf program reputation. Some of the golf graduates went into

the sports turf industry which was a very good alternative career.

The change to the new online format was necessary to meet student demand, and the certificate is doing well with 13 graduates after the summer, 2016 semester and usually about 15 to 17 students taking courses in any semester. Since our certificate students are working fulltime, they usually take only one or two courses per semester allowing a student to complete the certificate in one year: a fall, spring, and summer semester. The new online certificate allows the college to continue providing quality education to employees working in industry.



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Background

John R. Piersol has a Bachelor's degree in Plant Science from the University of Delaware and a Master's degree in Horticulture from Colorado State University and has been associated with the golf, landscape, and sports turf oriented programs at what is now Florida Gateway College for 42 years.

Member Spotlight Lee anderson

Professional

I have had the privilege of being the superintendent for the Montgomery Botanical Center (MBC) in Coral Gables for the past twenty-two years, and the assistant superintendent at Fisher Island in Miami for ten years before that. At MBC our mission is to advance research, conservation and education through scientific plant collections. One critical element supporting this mission is to present these



collections on a palette of high quality turfgrass greenswards. To this end, I have had the honor of working with some of the most renowned turfgrass agronomists in the nation, locals such as Drs. Phil Busey and George Fitzpatrick from UF, Kevin Hardy, CSFM, Ballpark Maintenance Inc., Pete, Perry and PB Dye back home in Indiana, as well as being mentored in my younger years by the late Dr. Bill Daniel, developer of the "Prescription Athletic Turf" system at Purdue University.

Here at MBC, besides the satisfaction of hands-on horticultural operations, (guess who operates the heavy machinery when the equipment operator goes on vacation!) the managers and scientists are encouraged to get involved with various outreach projects. For me this entails serving on the Advisory Committee for the IFAS/ Miami-Dade County extension service, the South Florida Golf Course Superintendents Association, the Tropical Arborist Guild and the Landscape Inspector's Association of Florida as well as research and writing for publications such as *Florida Turf Digest, Golf Digest* and the *Journal of the American Public Gardens Association*.

Although MBC is not a true sports turf operation, we share many commonalities with the STMA and my association with this organization is of great assistance for agronomic information and inspiration, for instance the articles on fertilizer and compaction in the Spring 2016 edition of *On the Turf* were not only personally interesting but also highly relevant to our operations. •

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CFSTMA 2016 September Chapter Meeting

September 14, 2016 - 9am-1pm *Space Coast Stadium, home of the Washington Nationals and the Manatees, Viera, FL*

Annual FTGA Conference

September 26-28, 2016 - 8am-5pm Innisbrook Golf & Spa, Palm Harbor, FL

Citra IFAS Field Day

October 5, 2016 - 8am-5pm
UF/IFAS Plant Science Research & Education Unit, Citra, FL

National STMA Conference and Exhibition

January 24-27, 2017 Disney's Coronado Springs Resort, Orlando, FL



Pictured: Disney's Coronado Springs Resort



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Florida STMA Chapter Application Form

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Zip:	Email :			
If vendor, type of business:				
and have a membership category for an field management. \$50 Sports Turf Manager - If yo	members. We are a very inclusive organization by one interested in learning more about sports u are primarily responsible for managing or	North Fiorida STMA		
maintaining a sports field(s). This positi elective office.	on is an eligible voting member and hold	STMA STMA		
managing or maintaining a sports field Florida STMA chapter member employe	d. The Associate(s) has the same benefits and ues are lower because of multiple members	South Florida STMA		
\$50 Academic - If you are in teach hold elective office.	hing, extension or research. This position is an e	ligible voting member in the Chapter and		
\$75 Commercial - If you work for a company engaged in a commercial enterprise providing services and/or products to the sports turf profession (consultants, architects, designers, contractors, management companies, distributors and manufacturers, etc.). This position is an eligible voting member and can hold elective office available to the commercial category.				
\$50 Commercial Associate - If you are the 2nd person (or more) from a commercial company. All Commercial Associates must first have a Florida STMA Chapter commercial member at their company before the lower dues category can be selected. This is a non-voting member and not eligible to hold office.				
\$35 Affiliate - If you are indirectly or on a part-time basis involved in the maintenance/management of sports field(s) (coaches, athletic directors, volunteers, or full-time students). This is a non-voting member and not eligible to hold office.				
chapters except the right to vote and ho	nembers of any Florida Chapter have the same n old office.Voting rights and right to hold office ar er's dues are paid. Members may only claim Hom	re restricted to a member's home chapter,		
North Florida	Central Florida	South Florida		

Make checks payable to: North Florida STMA and mail to NFSTMA 1471 Capital Circle NW, Ste. 13 Tallahassee, FL 32303 Make checks payable to: Central Florida STMA and mail to ATTN: Rob Julian 3302 W. Martin Luther King Blvd. Tampa, FL 33602 Make checks payable to: South Florida STMA and mail to ATTN: Phil Busey 837 SW 120 Way Davie, FL 33325 Paypal go to http://sfstma.com/ members



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