



TEXAS LAWN COMPANION

Summer 2019 EDITION

Here is what you'll find in this issue:

General Summer Management Recommendations and a Few New Publications to Help You

Dr. Becky Grubbs, Texas A&M AgriLife Extension - College Station

Bermudagrass Selection for Athletic Fields in the Transition Zone

Dr. Chrissie Segars, Texas A&M AgriLife Extension - Dallas

Summer Pest Considerations and New Herbicide Selection Guide for Homeowners

Dr. Becky Grubbs, Texas A&M AgriLife Extension - College Station

The Need to Overseed

Dr. Chrissie Segars, Texas A&M AgriLife Extension - Dallas

AggieTurf Research First Look: Sand-capped Fairways

Will Bowling, Texas A&M University - College Station

Follow us @AggieTurf

Twitter | Instagram | Facebook

Questions about TLC?

Dr. Becky Grubbs-Bowling

bgrubbs@tamu.edu | 979.845.0603

Planning to Copy/Paste from this Newsletter?

Hey, we're cool with it! Just please be sure to give our writers credit for their efforts. Plus, we want people to be able to know where to follow-up when they have questions. Thanks for sharing our information!

[Share](#)[Tweet](#)

Resources

Throughout this issue, you will find a number of references to other resources that we feel are beneficial to having a positive and productive outdoor experience with your lawn. Here are a few of those resources in one place for you to refer back to:

Aggie Turf Website

<https://aggieturf.tamu.edu/>

AgriLife Extension: Find Your County Agent

<https://counties.agrilife.org/>

AgriLife Extension Service Soil, Water and Forage Testing Laboratory

<http://soiltesting.tamu.edu/>

Texas Plant Disease Diagnostic Laboratory

<https://plantclinic.tamu.edu/>

General Turfgrass Management Tips for Summer



Written by Dr. Becky Grubbs-Bowling

Assistant Professor & Turfgrass Extension Specialist
Texas A&M AgriLife Extension
Dept. of Soil and Crop Sciences
College Station, TX
979.845.0603 | bgrubbs@tamu.edu
Twitter: @TXTurfGal

Watering

We are finally starting to feel the full effect of the Texas heat as we move out of July and toward August. Heavy rainfall early in the summer made it possible for many parts of the state to refrain from turning irrigation on until just recently, but you may be starting to feel that old familiar "itch" to crank up your sprinkler system.

When irrigating, take steps to use water as efficiently as possible both to conserve resources and to promote dense, healthy turfgrass growth. For a simple guide to improving water-use efficiency, check out the checklist below.

Water-Wise Checklist

Looking for a simple way to be the

TEXAS A&M AGRILIFE EXTENSION WATER-WISE CHECKLIST FOR TEXAS HOME LAWNS DR. BECKY GRUBBS ASSISTANT PROFESSOR & EXTENSION TURFGRASS SPECIALIST aggieturf.tamu.edu SCS-2019-15		
MOWING		
TASK	EXPLANATION	RESOURCES & COMMENTS
☒ Mow at the upper end of the appropriate mowing height range for your species of turfgrass.	Taller Grass = Deeper Roots. Deeper roots can improve overall water infiltration and access to water deeper in the soil.	For more information on appropriate mowing practices, check out the AggieTurf Website's publications on turfgrass management: https://aggieturf.tamu.edu/publications/
☒ Follow the 1/3 Rule. Mow frequently enough to avoid removing more than 1/3 of the total turfgrass mowing height at one time.	Scalped grass is stressed grass. Stressed grass will be less tolerant to heat and drought, and more vulnerable to other pests or fungal pathogens.	
IRRIGATION		
TASK	EXPLANATION	RESOURCES & COMMENTS
☒ Water deeply and infrequently . Try to water to a depth of approximately 6" each time you water.	Watering this way encourages deeper, denser root growth. Again, this can improve infiltration and access to water deeper in the soil.	Turfgrass can typically be maintained by irrigating 1-2x per week to provide between 1" and 1.5" of total water during summer months. Be sure to adjust based on natural precipitation.
☒ Wait to water when visual wilt is occurring, and do so late at night or early in the morning.	Watering late at night or early in the morning will reduce evaporative losses, improve water-use efficiency, and reduce length of overall leaf wetness, which reduces disease potential.	
☒ Use the Cycle Soak Method .	Because sprinkler precipitation rates usually exceed soil infiltration rates, cycle soaking improves soil water infiltration and reduces runoff by "driping" water onto the lawn in small amounts over several hours.	Check out this video from Dr. Richard White on the Cycle Soak Method: https://www.youtube.com/watch?v=vmr9Yb1Tj08&list=PL6n27s
☒ Monitor your irrigation equipment carefully .	Broken or malfunctioning irrigation equipment can both waste water and create localized dry spots across the lawn. Replace broken heads, and consider a professional irrigation audit by a licensed irrigator.	Want to check your irrigation efficiency on your own? Check out AgriLife Water University's video on the Catch Can Method: https://www.youtube.com/watch?v=1nhwZ_imrdw&list=PL6n27s
1		

most efficient water user on the block? Check out this *Water-Wise Checklist for Texas Home Lawns* on the AggieTurf website!

For other publications, click *here*.

One thing to remember is that if your warm-season turfgrass undergoes a prolonged period of drought, it has the ability to go into **summer dormancy**. Simply put, your turfgrass will cease growth, turning a tan to golden brown color, then recover when water becomes available again in the late summer/early fall. Many trees and other perennials use similar survival tactics in the landscape, shedding leaves in the summer. Allowing your grass to go dormant is always an option when you don't want to irrigate on a regular basis during these hottest and driest weeks of the year. After all, when you describe it as a "golden brown", it doesn't sound so bad! If you choose to go this route and allow your lawn to go into summer dormancy, remember to stop fertilizing, as fertilizer products are best applied when turfgrass is *actively growing*, not dormant.

Summer dormancy is contingent on your lawn's ability to develop **deep, healthy roots** during periods of active growth. Remember that many warm-season grasses have the ability to root several feet into the soil under ideal conditions. To encourage deep rooting, implement good cultural management practices that promote deep water infiltration and healthy turfgrass growth. Many of the water-wise practices listed in the factsheet above will help with this.

As we get closer to fall....

Remember that irrigation practices can have a significant impact on turfgrass diseases. This is especially true as we get closer to fall. As a general rule of thumb, water early in **the morning**. Evening watering can prolong the period of leaf wetness, and promote conditions for disease. Large Patch Disease (*Rhizoctonia solani*) becomes active as soil temperatures start to drop consistently below 70 F, so as we get closer to September and October, scale back watering and fertilizer applications to minimize disease risk. Remember that turfgrass growth begins to slow during this period anyways, and less water and fertilizer are generally required.

Mowing

Refer to the new factsheet featured below for tips

on appropriate mowing practices for warm-season Texas lawns.

Mowing requirements can vary some throughout the summer, and you may notice that your turfgrass does not need to be mowed as frequently if it is struggling with heat and drought stress. However, it is important to remember that many summer weeds are currently flowering and producing seed. Frequent mowing and removal of clippings during this time can be helpful in managing weed populations, even if you are not mowing much off of your actual turf. Annual weeds return each year from new seed, so taking steps to reduce seed populations in your landscape can go a long way toward reducing weed numbers next spring.



Mowing Recommendations for Warm-Season Turfgrass

For information on mowing heights, frequency, clipping return, and more, *check out this guide* for mowing warm-season turfgrass in Texas.

For other publications, click *here*.



Fertilization

Continue to fertilize as-needed to support healthy turfgrass growth, but remember that fertilizers will continue to promote vegetative growth. When there is insufficient water to support this growth, consider scaling back or suspending fertilizer applications until water becomes available again.

While nitrogen rates can be determined largely by turfgrass species, use, and management capabilities, other nutrient rates including phosphorous (P) and potassium (K) should be determined by your soil test. If you haven't completed your soil test yet this year, it's never too late! Soil tests will also help you to identify important soil properties like pH - which will influence nutrient availability. Remember that **knowledge is power!**

Texas A&M Soil Testing Lab Website:

<http://soiltesting.tamu.edu/>

Urban Soil Submittal Form:

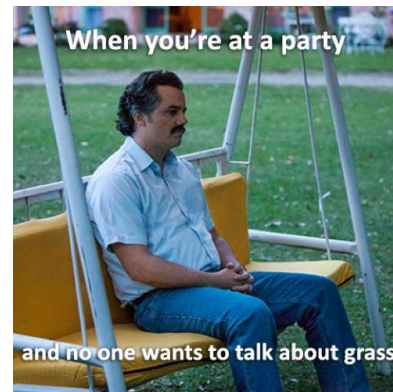
Bermudagrass Selection for Athletic Fields in the Transition Zone



Written by Dr. Chrissie Segars

Assistant Professor & Extension Turfgrass Specialist
Texas A&M AgriLife Extension
Dept. of Soil and Crop Sciences
Dallas, TX
972.952.9212 | chrissie.segars@ag.tamu.edu
Twitter: @hairyligule21

It is probably no secret among my Texas A&M colleagues that bermudagrass is my favorite turfgrass. I spent six years in grad school at Oklahoma State University where bermudagrass reigns. I must have taken ratings on thousands of little bermudagrass plots for all sorts of characteristics until my eyes were crossed. So, when I tell you that all bermudagrasses are not created equal, I mean it. When you think about it, there are really only a few ways to truly kill bermudagrass, environmentally that is. Can you guess what they are? Shade and Cold are my answers. These grasses are heat, drought, and traffic tolerant and they can grow almost anywhere! They are highly adaptable and very aggressive. They can be high maintenance or low maintenance...you can push these grasses outside of their comfort zone and they will punch back and say, "what else have you got?" So why are there so many bermudagrasses on the market? How do we choose?



What is the Transition Zone?

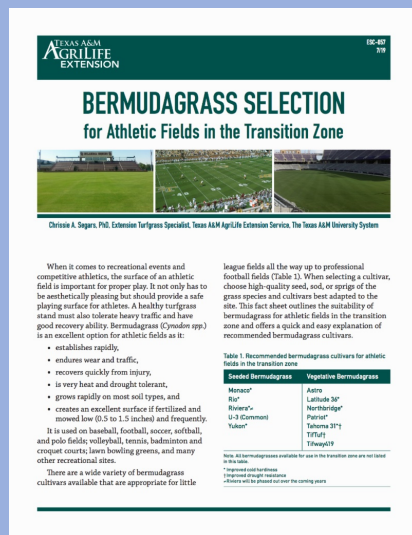


Source:
<http://gardenclub.homedepot.com/choose-right-grass-law n/>

The Transition Zone is the geographical region of the country where neither cool- nor warm-season grasses are particularly well-adapted to survive. It gets a bit too hot for cool-season grasses (e.g., tall fescue, Kentucky bluegrass), and a bit too cold for many warm-season grasses (e.g., bermudagrass, St. Augustinegrass). This makes choosing the "right" grass especially challenging. In Texas, the Transition Zone extends across the Panhandle and other parts of North Texas. This is why you will sometimes see more cool-season turfgrass lawns than you will in many other parts of the state.

This factsheet aims to serve turf managers in the **transition zone**. I have heard many people say that you can grow a lot of grass in the transition

zone, but you can't grow it well. In this zone, we can have extreme temperatures that range from over 100° to well under freezing for unknown periods of time. When this is the case, cold tolerance of the bermudagrass comes into play, especially in the northern transition zone. There are a lot of great bermudagrass cultivars on the market that are wonderful for athletic field surfaces but give them a cold winter and they are likely gone. I hope this factsheet highlights the best bermudagrass cultivars on the market for athletic fields and gives you a little more insight to what they can handle as far as environmental conditions. The best advice is to use what information is out there to your advantage. The NTEP trials for winter-kill ratings are highly useful, especially in the northern transition zone. Talk to your neighbors, your friends, your colleagues...go to conferences and push yourself outside of your comfort zone, meet some lifelong friends, and talk about grass because you know your "normal" friends are tired of hearing about it.



Bermudagrass Selection for Athletic Fields in the Transition Zone

To see Dr. Segars's new factsheet on bermudagrass selection for the transition zone, [click here](#).

For other AggieTurf publications, [click here](#).

Summer Pest Considerations

Written by Dr. Becky Grubbs
Assistant Professor & Turfgrass Extension Specialist
Texas A&M AgriLife Extension
Dept. of Soil and Crop Sciences
College Station, TX
979.845.0603 | bgrubbs@tam.u.edu
[@TXTurfGal](https://twitter.com/TXTurfGal)

Insects

A few common sights this time of year...



Bermudagrass Mites

[More Info on Mites](#)



Source: GCM Online

Bermudagrass mites will survive in hot temperatures, and be very active at this point in the year. They are not visible to the naked eye, but when severe, they will cause the turf to thin out and will create this tufted "witches broom" appearance. A hand lens with a 20-30x magnification will reveal the mites and their eggs.

There are several insecticide options for severe cases, but one effective tactic is to scalp the infested area and remove the clippings, physically displacing many of the mites. Click the link above for a little more info.



Grubs

[More Info on Grubs](#)



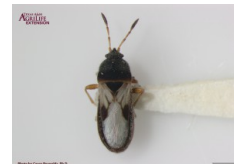
Damage from turf-feeding grubs is most visible this time of year (Jun - Aug). Grub damage appears as irregularly-shaped patches resembling drought stress. When infestations are severe, the turf can often be pulled up and rolled back as though it is "new sod." Another indicator is that animals (skunks, armadillos, possums) will start to dig up areas of your yard.

Timing is important when treating for grubs. Waiting too late in the season can drastically reduce the effectiveness of lawn insecticides. Click the link above for more info.



Chinch Bugs

[More Info on Chinch Bugs](#)



Chinch bugs are common summer pests in southern lawns. While they can occasionally be found in other turfgrass species, they cause the most damage to St. Augustinegrass. Chinch bug damage shows up as irregular-shaped patches that spread outward. If your yard has bermudagrass mixed in, you may notice tufts of bermudagrass still standing in the middle of dead or thinning St. Augustine. Chinch bugs are visible without magnification, but still somewhat small and sometimes hard to spot without help. Coffee can flooding and soap solutions can help flush insects from the thatch for easier ID. Click the link above for more info.

Can't get enough bugs?
We get it...

Check out AgriLife's *[Insects in the City](#)* page from Dr. Mike Merchant.



Diseases

Below, you will find an overview and some resources on two of our more common summer turfgrass diseases spotted in Texas lawns. Remember to always take time to properly identify a problem before applying fungicide treatments, as other things can resemble disease this time of year (drought, insect damage, etc).

For assistance with proper identification, contact your AgriLife County Extension agent or the *Texas Plant Clinic*.

Take-All Root Rot (TARR)

Take-all root rot (*Gaeumannomyces graminis* var. *graminis*) tends to be most active in the spring and early summer, but symptoms of take-all can be visible at any point during the growing season when turfgrass is under stress. Temperature extremes, poor water quality, drought, compaction, and even herbicide injury can all increase the likelihood that take-all will appear. Good cultural practices are especially important in preventing this disease.



[More on TARR](#)

Gray Leaf Spot (GLS)

This foliar disease is especially pronounced at this point in the season on St. Augustinegrass lawns. Chances are, you'll find some in the shadier areas of your yard, especially if you are in a more humid part of the state. The good news is that the problem is often more aesthetic in our lawns than anything else. Focus on keeping the area mowed (bag clippings), and aired out. Some St. Augustinegrass varieties will be more sensitive to this disease than others. In severe cases, or when dealing with this on a cool-season grass like perennial ryegrass, fungicides may be required.



[More on GLS](#)

Weeds

**"What is a weed? A plant whose virtues have not yet been discovered."
-Ralph Waldo Emerson**

I have a few friends that love looking for ways to use their weeds. If you don't believe me, check out this [*article*](#) from the Dallas Morning News featuring AgriLife's own Daniel Cunningham. If you're looking for a new hobby and tired of fighting your weeds, maybe you can start foraging and turning your weeds into fun dishes and even cocktails. If you can't beat 'em, eat 'em... am I right?

Still, if you don't feel like spending a lot of extra time discovering new virtues for the weeds in your lawn, I have a new publication for you. Probably the most-asked question I get is "What herbicide can I use to kill _____ in _____?"

A few months ago, I decided to embark on a journey to purchase weed control products through the eyes of the everyday consumer. I walked into my nearest unnamed Lawn & Garden Retailer and set out to find what I needed. What I was met with was a million products (no, not literally...but maybe almost literally) all with very similar names, packaging, and not a lot of clarity. Two products might have almost identical names and packaging, but have totally different ingredients and purposes. Two other products look completely different, but are essentially the exact same thing. More than half of the products were combination products designed to not only control weeds but also fertilize, control diseases, control insects, do your taxes, etc. I could see how it would be overwhelming to find what you need, and that's when I decided to write this publication.

The truth is that while there may be NUMEROUS products available to us at our local big box stores, the number of active ingredients used in those products is actually fairly limited. If you can learn a little more about those ingredients, you can feel a little more empowered to shop for what you need. Plus, as a bonus, you get to learn a bunch of fun names to show off at lawn parties.

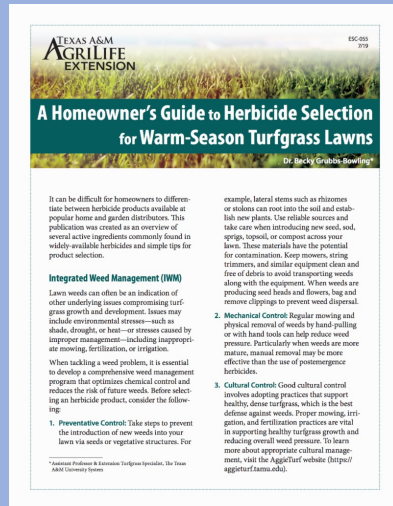
Table 3. Common Active Ingredients Found in Postemergence Herbicides for Lawn Management									
Active Ingredient	Target Weeds	Turfgrass Species Tolerance Rating*					Found in Products Like	Notes	
		BE	BU	CE	SA	Z			
2,4-D	Broadleaf Weeds	T	C	NR	C	T	Often used in combination with other active ingredients like dicamba or MCPP. (Weed B Gon, Weed Stop, RoundUp for Lawns)	Injury is more likely on Buffalograss, St. Augustinegrass, and Centipedegrass lawns. Refer to the label. Do not overapply. It is generally not recommended that products containing 2,4-D be applied to buffalograss in temperatures exceeding 75°F.	
Atrazine	Annual Grassy Weeds and Select Broadleaf Weeds	NR	NR	T	T	T	Often found in products catered to St. Augustinegrass and/or Centipedegrass Lawns. (Weed B Gon, Image, Weed Stop for St. Augustinegrass)	Injury is very likely on bermudagrass lawns. Refer to label. Do not overapply.	
Dicamba	Broadleaf Weeds	T	C	L	C	T	Often used in combination with other active ingredients like 2,4-D or MCPP. (Weed B Gon; Weed-n-Feed, Roundup for Lawns)	Can be absorbed by roots. Do not apply near shallow-rooted trees. Use caution when applying to St. Augustinegrass, Centipedegrass, or Buffalograss. Refer to label. Do not overapply.	
Imazaquin	Sedges, Some annual grasses	T	C	T	C	T	Image kills Nutsedge.	Do not use for winter weed control in St. Augustinegrass. Refer to label.	
MCPA	Broadleaf Weeds	T	L	L	C	T	Often used in combination with other active ingredients like 2,4-D. (Weed B Gon, Weed-n-Feed, Roundup for Lawns)		
Mecoprop-p (MCPP)	Broadleaf Weeds	T	L	L	C	T	Often used in combination with other active ingredients like 2,4-D. (Weed B Gon, Weed-n-Feed, Roundup for Lawns)		
Sulfentrazone	Sedges, broadleaf weeds	T	T	T	C	C	Ortho Nutsedge Killer, Select Roundup for Lawns products	This product may temporarily discolor St. Augustinegrass or zoysiagrass leaves, particularly when grass is stressed. Mowing will remove discoloration.	
Penoxsulam	Select broadleaf Weeds	T	L	C	C	T	Fertiome Dollarweed Killer, Select Roundup for Lawns products	Can take 2-3 weeks to be effective. May not control larger weeds when applied alone.	
Quinclorac	Select grassy and broadleaf weeds including clovers	T	T	NR	NR	T	Often used in products with added "Crabgrass Killer." (Weed Stop + Crabgrass Killer, Roundup for Lawns 1-3)	Offers relatively good grassy weed and clover control. Do not apply to St. Augustinegrass.	
*BE - Bermudagrass; BU - Buffalograss; CE - Centipedegrass; SA - St. Augustinegrass; Z - Zoysiagrass									
C - CAUTION: Select products containing these active ingredients may be labeled as "safe" to use on these species. However, proceed with caution, as there may be a higher than normal risk of injury. Read and follow label instructions to reduce the risk of injury at application.									
L - Label: See label recommendations. There may be limited data available for tolerance of this species to this active ingredient. AND/OR turfgrass tolerance may be primarily determined by product composition.									
NR - Not Recommended: Indicates that this active ingredient is generally not recommended for that particular species of turfgrass due to the high risk of injury or death. Read and follow label instructions. Do not use a product if your turfgrass species is not included on the label as a tolerant species.									
T - Tolerant: Indicates that these species are generally tolerant of the select active ingredient. Remember that many products will contain more than one active ingredient and that not all active ingredients may be safe to use on your desired turfgrass species. Read and follow label instructions to minimize the risk of injury at application.									

I won't use this space to repeat everything in the article, but here are a few key take-aways:

- **Not all lawn products are safe to use on all lawns.** What might be safe in your bermudagrass lawn could *significantly injure or even kill* your St. Augustinegrass lawn.
- **Different active ingredients will target different types of weeds.** If you are purchasing a 2,4-D or dicamba product to control your crabgrass, you are out of luck. Proper weed identification and thorough label reading will usually help

you choose the right product.

- **Incorporate preemergence herbicides into your program.** Not enough homeowners take advantage of these products, but they can make a HUGE difference in weed pressure in your lawn, particularly if you are dealing with annual bluegrass, crabgrass, goosegrass, or other annual weeds.
- **Be mindful of your other landscape plants.** Probably at least 3 or 4 times a year, I hear from a homeowner that accidentally kills their favorite tree or shrub with common lawn herbicides. Sometimes, even if we apply product to all the right places, wind, rain, and irrigation water will move it where we never meant for it to go. Taking time to read all of the cautionary statements on the label can be really important in protecting our other landscape plants.
- **Timing is everything.** Many of us may not even notice weeds in our lawn until they are 6-ft tall and blowing seeds in our face. Unfortunately, this is not the time to apply herbicide products, as these mature weeds are typically much harder to control. Learning how to properly time your herbicide applications will help you get the most out of them.



Check out the publication here....

A Homeowner's Guide to Herbicide Selection on Warm-Season Turfgrass Lawns.

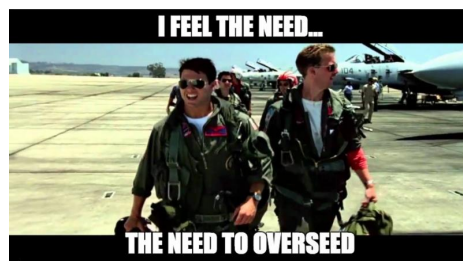
For other AggieTurf publications, click *here*.

The Need to Overseed

Written by Dr. Chrissie Segars

Assistant Professor & Extension Turfgrass Specialist
Texas A&M AgriLife Extension
Dept. of Soil and Crop Sciences
Dallas, TX
972.952.9212 | chrissie.segars@ag.tamu.edu
Twitter: @hairyligule21

Do you ever feel the need...the need to overseed? Likely, it is not a need but a necessity. This factsheet was written to serve those who must overseed at their facility for continued play during the fall and winter months. Overseeding is a delicate process that most of you seasoned turf managers are pretty good at by now, but it doesn't hurt to review the basics of what could be a detrimental practice should it be done incorrectly.



Some of the most common mistakes are incorrect seeding timing, improper seedbed preparation, and use of a pre-emergent which may lead to improper timing. If you have lived in Texas very long you know that the seasons are extremely different from year to year, so you have to be flexible each year when you are choosing our seeding date. Some of you will hit that perfect window of soil temperatures that lines up with a two

week break in play so you can create the perfect transitional surface and be highly praised by your bosses and those involved. Have you woken up from your dream yet? How often does this really happen, especially if you are a parks and recreation manager? How about never! So, with that being said, you have to be creative with your timings (seed and herbicide applications) and be sure that you are giving that cool-season grass the best chance to make it in your situation. In the turf business, you have to take advantage of your opportunities to perform cultural practices and perform them to the best of your ability. Overseeding can be a wonderful thing when care is taken to perform it correctly. The most important piece of advice that I can give you is not to read a textbook, but to talk to your colleagues and friends about their experiences with overseeding. There is nothing like a good network of turf managers with a wealth of knowledge and experience in the industry.

Check out the publication here....

The Need to Overseed

For other AggieTurf publications, click *here*.



AggieTurf Research First Look

You know that we like to keep you in the loop on some of the ongoing research here in the Texas A&M turfgrass program. Will Bowling is currently a Master's student under Dr. Ben Wherley and is conducting research looking at the dynamics of sand-capped fairways. Don't have your own personal golf course? These same principles of sand-based root zones can be applied to any number of turfgrass systems from sports fields to home lawns and even the *National Mall in Washington D.C.*

Sand-Capping: An Overview



Written by Will Bowling

Graduate Research Assistant (M.S.)
Turfgrass Science
Dept. of Soil and Crop Sciences
Texas A&M University
wjb24@tamu.edu

Major Professor: Dr. Ben Wherley

To put it simply, sand-capping involves placing a layer of sand atop an existing subsoil. This concept originated in the 1990's in the Northwestern U.S. and Asia as a way to combat high annual rainfalls that compromised turfgrass quality and performance. Sand-capping offers many benefits including increased infiltration rates, improved drainage, deeper root development, improved playing conditions, improved traffic tolerance, less compaction, and the ability to flush salts from the root zone. In many areas throughout Texas (including College Station), water quality is poor -

containing high levels of sodium, bicarbonates, and other salts. High levels of sodium in the soil can cause the soil to disperse and lose its structure. Ultimately, a hardpan layer can form leading to poor aeration, slow drainage, compaction issues, poor root development, and unplayable conditions. While there are specifications for USGA root zone physical properties, sand-capping may utilize a variety of sands, often not meeting USGA specifications. For this reason, it is always a good idea to work with a reputable soil physical testing lab when selecting the appropriate sand and placement depth for placing over a given soil. The objectives of this study are to determine the best long-term management requirements of sand-capped turf surfaces and to develop a standard specification for turf managers to follow when managing sand-capped surfaces on their golf courses, sports fields, lawns, or other areas.

A 3-year USGA-funded Texas A&M study is currently evaluating turfgrass performance and soil properties at multiple capping depths to determine which depth offers the most benefits to turfgrass systems. This is important, as too little sand will limit the benefits of the sand cap, but too much may cause other issues with drought and hydrophobicity. Sandier soils are particularly susceptible to hydrophobicity, a situation in which water is repelled and unable to move freely to the roots. Sand-capping depths of 2, 4, and 8 inches, as well as a 2 inch cap developed over time through aggressive topdressing are being evaluated.

Side-by-side: 2-inch versus 8-inch sand-capped areas.



2-inch sand-cap on a Tifway 419 hybrid bermudagrass stand in College Station, TX.



8-inch sand-cap on a Tifway 419 hybrid bermudagrass stand in College Station, TX.

Various application regimes of gypsum in combination with wetting agents are being evaluated for combatting the rapidly increasing SAR (sodium adsorption ratio) of subsoils and surface hydrophobicity that is being observed. Gypsum (CaSO_4) is a soil amendment used for ameliorating sodium-laden soils, displacing CEC bound Na with Ca, and allowing it to be flushed from the root zone. Wetting agents are products used commonly in turfgrass to overcome hydrophobicity. Results to date suggest that a *single high rate* application of gypsum early in the season may be more effective than monthly lower-rate applications when combating sodium issues throughout the season. Also, wetting agents are showing the greatest benefit on deeper (8") compared to shallower (2 and 4") capping depths, due to the lack of observed hydrophobicity in shallower sand caps.

In addition to managing subsoil sodicity and hydrophobicity, thatch and organic matter can be long-term concerns in these systems. Management regimes are being evaluated through the use of various cultural practices in combination with Worm Power (an Aqua Aid soil amendment). Cultural practices being evaluated include core aeration, verticutting, and a combination of the two. Results to date indicate the more aggressive cultural practices, while temporarily reducing playing quality, result in greater turf quality

during the latter half of the season. Treatment effects due to Worm Power treatments have been slower to develop during the first year of the study.

This research project will continue through the summer of 2020.

— Will Jackson Bowling; Benjamin Wherley, Ph.D.; Kevin J. McInnes, Ph.D.; Tony L. Provin, Ph.D., and Chrissie Segars, Ph.D., Texas A&M University, College Station, Texas

Project is funded by the United States Golf Association with support from Aqua-Aid Solutions.

Thanks for Reading!

We appreciate you taking the time to read our newsletter. Keep an eye out for updates on our upcoming AggieTurf events in October!

October 9 - Texas A&M Turfgrass Field Day in College Station

October 16 - The Tale of Two Playing Surfaces in Dallas

TEXAS A&M
AGRI LIFE
EXTENSION



SOIL & CROP SCIENCES
TEXAS A&M UNIVERSITY