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Kansas Turfgrass Field Day - August 3

Mark your calendar to attend the 2017 Kansas Turfgrass Field Day on Thursday, August 3 at the John C. Pair Horticulture Research Center, Wichita. Come see research in progress including studies on weed control, irrigation management, new turfgrass cultivars and ornamental care.

The Turfgrass Field Day rotates among our three Research Centers — Wichita this year. It is always the first Thursday in August.

The field day program is designed for all segments of the turf industry - lawn care, athletic fields, golf courses, and grounds maintenance. Included on the program are research presentations, problem diagnosis, commercial exhibitors, and equipment displays. There will be time to see current research, talk to the experts and get answers to your questions.

It is also a good chance to get a few pesticide recertification credits, as well as GCSAA education points.

Be sure to mark the date—Thursday, August 3! More information will be included in the next newsletter.



Message from the President



I hope everyone is doing well! It is hard to believe the spring football game is just around the corner. 2017 has been challenging. We have seen record high temperatures, drought, range fires and tornadoes. We are faced with a variety of challenges every year. The January KTF board meeting brought us many great questions concerning the conference. Who is attending? What is the true purpose? Why was the conference started? How can we increase attendance? Where are attendees traveling from? Location has been a topic of discussion for many years. The decision has been made to move the conference in 2019 to Manhattan. Recertification has become one of the main attractions. I would like to remind everyone why the KTF was created. I reflect back to our mission statement.

We wish to promote research and to disseminate information for the promotion of better turfgrass and landscapes for golf courses, parks, cemeteries, airports, public and private schools, college and universities, institutions, private businesses and individuals. The KTF cooperates with federal, state, and other interested agencies in working for the betterment of turf and landscapes for people everywhere.

We can never forget our purpose but need to realize change is the only thing that is constant. Our next board meeting will be focused on value and how to communicate moving forward. Any suggestions would be much appreciated. Thank you to all members for making this Foundation what it is today! I look forward to the future! (*Wes Kleffner*)

Mark the Dates!

June 19, 2017
**KGCSA Scholarship &
Research Golf Tournament**
Colbert Hills GC (Manhattan)

August 3, 2017
Turfgrass Field Day
Wichita

December 5, 6 & 7, 2017
Kansas Turfgrass Conference
Topeka

Controlling Grassy Sandbur

Grassy sandbur is the “sticker” plant that looks like a grass. It will often invade thin lawns, especially in dry years. Therefore, the best control for this weed is a thick, healthy lawn. However, if your lawn is thin this spring and grassy sandbur was a problem last year, use a preemergence herbicide before the sandbur comes up. However, not all preemergence herbicides are effective. The three products that can help minimize grassy sandbur are oryzalin, pendimethalin and prodiamine.



Oryzalin is sold under the trade names of Surflan and Weed Impede. It can be used on all warm-season grasses as well as tall fescue. It should not be used on cool-season grasses other than tall fescue such as Kentucky bluegrass. Apply oryzalin about April 15 when redbud trees approach full bloom.

Pendimethalin is sold commercially as Pendulum as well as several other names. On the homeowner side, it is sold as Scotts Halts. Pendimethalin is best applied as a split application with the first half applied about April 15 and the second about June 1. Alternatively, make the first application when redbud trees approach full bloom and the second six weeks later.

Prodiamine is sold under the commercial name of Barricade. It is also the active ingredient in a number of homeowner products. It can be used on all of our common lawn grasses. Apply as is done for oryzalin, about April 15 or when redbud trees approach full bloom. Only one application is needed per year.

None of the “weed preventers” will give complete control but each should help. Quinclorac (Drive) can provide some postemergence control especially if the sandbur is in the seedling stage. Quinclorac is also found in a number of combination products that control both broadleaf weeds and crabgrass such as one of the following:

- Ortho Weed-B-Gon Max + Crabgrass Control
- Bayer All-in-One Lawn Weed and Crabgrass Killer
- Monterey Crab-E-Rad Plus
- Fertilome Weed Out with Q
- Trimec Crabgrass Plus Lawn Weed Killer
- Bonide Weed Beater Plus Crabgrass & Broadleaf Weed Killer
- Spectracide Weed Stop for Lawns Plus Crabgrass Killer

Again, the best control for grassy sandbur is a healthy, thick lawn.

Oryzalin is also sold as a combination product with benefin as Green Light Amaze. As with oryzalin alone, it can be used on all warm-season grasses as well as tall fescue. It should not be used on cool-season grasses other than tall fescue such as Kentucky bluegrass. Apply Amaze about April 15 when redbud trees approach full bloom. (*Ward Upham*)

An Ounce of Prevention is Worth a Pound of Cure

“An ounce of prevention is worth a pound of cure” – Benjamin Franklin



When I start talking about preemergence herbicides, this quote from Benjamin Franklin always pops in my head. Although, Ben was giving fire-fighting advice to Philadelphians because fires were a dangerous threat at that time, it does apply to many things we are dealing with such as preemergence herbicides.

Preemergence (PRE) herbicides prevent summer annual weed

(crabgrass, goosegrass, annual sedges, and spurge) seeds from developing into mature plants. The reason we use PRE herbicides for summer annual weed control is because these summer annuals come back every year from seeds. So, if we can stop the seed from growing, then we don't have to deal with the weeds later in the season.

For all that don't know how a PRE herbicide works, here is a very short explanation. They do not keep the seed from germinating, but kill the young germinating plant. With few exceptions, they have no effect on existing plants, so they must be applied before germination.

But, like everything in life, there is an exception. Dithiopyr can kill crabgrass as long as it is young (two- to three-leaf stage, see photo below of three leaf crabgrass) and still have some residual for continued PRE activity. It doesn't last as long as some of the other PRE herbicides, but there is flexibility if you miss your window of opportunity to apply.



When do I put out the PRE application for summer annual weed control? Well, it depends on many things. What summer annuals do you have? Where are you located in Kansas? Many times turfgrass managers center their PRE applications around crabgrass germination. Crabgrass “typically” begins to germinate around May 1, or a little later in Kansas. April 15 is a good target date for applying a PRE because it gives active ingredients time to evenly disperse on the soil before crabgrass germination starts. The April 15 target works well for most of the state, but for southeast Kansas April 1 is more appropriate, and for northwest Kansas, May 1 is best. Additionally, weather varies from one spring to the next (As we can see this year where it is getting warmer earlier!), and with it, the timing of crabgrass germination. Some turfgrass managers base their PRE application around the bloom of the redbuds, but other ways can be used as well. Crabgrass germinates when the soil reaches 55° F at approximately 1 cm deep. So watch your soil temperatures to see when the soil consistently reaches 55° F. Here is a great website that will give you soil temperatures for your area.

<http://mesonet.k-state.edu/weather/historical/>

PRE herbicides do not last forever once applied to the soil. Microorganisms and natural processes begin to gradually break them down soon after they are applied. If some products are applied too early, they may have lost much of their strength by the time they are needed. Additionally, PRE herbicides have different half-lives, Koc, water solubility, and vapor pressure. This can determine how fast microbial, chemical and physical decay occurs along with infiltration, volatilization, leaching, and run-off.



Continued on page 4



<https://www.facebook.com/Kansas-Turfgrass-Foundation-138965519535526/?fref=ts>

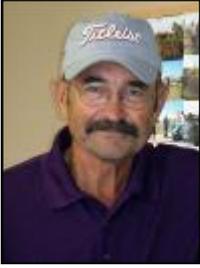
An Ounce of Prevention....(cont.)

Therefore, not all PRE herbicides are created equal. Here is a list of PRE herbicides, the weeds they target and some concerns that you might want to know before applying.

| <u>Active Ingredient</u> | <u>Weeds Controlled</u> | <u>Concerns or Comments</u> |
|--------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Benefin | Summer annual grasses, annual bluegrass, some small seeded broadleaves | Do not use on golf course greens |
| Prodiamine | Summer annual grasses, annual bluegrass, henbit, chickweed, spurge, some small-seeded broadleaves | Only apply to well established turf |
| Bensulide | Annual grasses, some broadleaves | Do not use on putting greens composed of > 50% <i>poa annua</i> . |
| Florasulam | Broadleaves, dandelion, prickly lettuce, clover | Packaged with Dimension 2EW, florasulam has great cool temperature activity, prevents flowering in some broadleaves (dandelions). |
| Dithiopyr | Summer annual grasses, annual bluegrass, yellow-woodsorrel, some small-seeded broadleaves | PRE and early postemergence activity on crabgrass. |
| Isoxaben | Broadleaves such as chickweed, henbit, spurge, plantain, others | Tank mix with a grass herbicide for broader spectrum. |
| Pronamide | Annual bluegrass, perennial ryegrass, other grassy & broadleaf weeds | Do not use on cool-season turf. Restricted use pesticide. |
| Pendimethalin | Summer annual grasses, annual bluegrass, yellow-woodsorrel, some small-seeded broadleaves | Not recommended for turf severely thinned due to winter stress. Split applications can be made for extended control. |
| Metolachlor | Annual bluegrass, Crabgrass, sedges | Do not use on cool-season turf. |

| <u>Active Ingredient</u> | <u>Weeds Controlled</u> | <u>Concerns or Comments</u> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Simazine | Summer annual grasses, annual bluegrass, henbit, chickweed, spurge, some small-seeded broadleaves | Do not use on cool-season turf. |
| Ethofumesate | Annual bluegrass, annual grasses, some annual broadleaves | See label for reducing annual bluegrass control on cool-season turf. |
| Oxadiazon | Summer annual grasses including goosegrass, annual bluegrass, some small-seeded broadleaves | Ronstar G and Oxadiazon 2G are only formulations labeled for use on cool-season turf. |
| Indaziflam | Annual grassy and broadleaf weeds in turf | Do not use on cool-season turf except tall fescue. |
| Oryzalin | Summer annual grasses, annual bluegrass, some small-seeded broadleaves | Do not use on cool-season turf. |
| Dimethenamid | Bittercress, crabgrass, goosegrass, purslane, sedges, spurge | On golf courses: Can be used on cool- and warm-season. Other areas: Warm-season only. |
| Siduron | Crabgrass, bermudagrass (suppression) | Does not control goosegrass or annual bluegrass. |
| <p>Information in this table was acquired from "Turfgrass Weed Control for Professionals" by A. Patton and D. Weisenberger, Purdue University (and 11 collaborating states including Kansas). For more information about purchasing this publication, see: https://blogs.k-state.edu/turf/new-weed-control-publication-for-turfgrass-professionals/ (Jared Hoyle)</p> | | |

Rocky Ford Update



Ahhhh...spring is here! The grass is greening up and the trees are in bloom. It must be time to aerfy, topdress, treat with preemergence, fix water leaks, and all that other fun stuff!

The water has been turned back on. We are having some issues with the river pumps, but hope to get the problem solved soon.

There are a lot of research projects soon to start and should be in full swing soon. We still have a lot of irrigation to install on the new area north of the shop. If anyone happens to have a ride on trencher, we could really use it for a week or so! We would pick it up and return it. I'm too old for a walker!

I'm looking forward to another summer here at Rocky Ford. As always, thanks to all for donations to our research centers!

I hope everyone have a great stress free summer doing the job we love! *(Cliff Dipman)*

Equipment Dealers that Support K-State Turf for Use at Rocky Ford

Excel Sales

Out-front Rotary Mower

Z-Spray Sprayer/Fertilizer Spreader

John Deere Landscapes & L.T. Rich Products, Inc.

Kansas Golf & Turf

Electric Greens Mower
Smithco Sprayer

Professional Turf Products

Toro Triplex Greensmower

RMI Golf Carts

Utility Cart

Van Wall Equipment Co./John Deere

John Deere Triplex Tee Mower

If your company is interested in supporting K-State turfgrass research by providing equipment, contact Cliff Dipman at (785) 539-9133.

Blast from the Past

Can you identify this long time KTF Member and vendor at Turf Conferences and Field Days (on the right)?

Answer on page 10



Undergraduate Research Projects

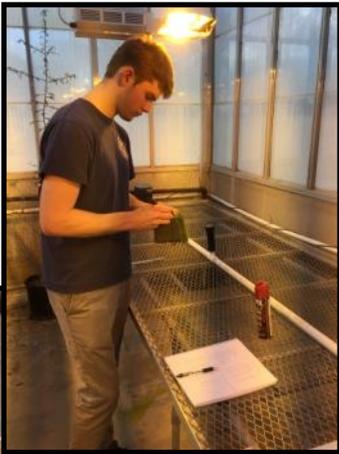
As the temperatures start getting warmer, friends and neighbors start getting out more. So when I run into them, the first question I get is, “What have you been up to?”. Many times people think winter is slow because the grass is not growing, but actually during the winter is when we try and get a lot of things done that we don’t have time to get to in the warmer parts of the year. One thing that we have been up to is undergraduate research projects.

In the fall of 2016, I had three students come to my office interested in conducting an undergraduate research project. I told them that the purposes of an undergraduate research projects are: 1. Answer a question for an issue that turfgrass managers face; 2. Learn the process to conduct research; and 3. Relate your research to more than just the turfgrass manager, and have a social impact. All three of them agreed and we started brainstorming and came up with three projects.

Undergraduate Research Project #1 —The Effect of Human Insect Repellents on Turfgrass Growth and Recovery (Student Peyton South)

Ever seen this before? <https://www.extension.iastate.edu/turfgrass/blog/dr-nick-christians/mosquito-spray-can-kill-grass>

That is what bug spray can do to your turf. Peyton wanted to look into it more to see if there are differences in not only the bug sprays but if there is recovery. He is currently taking data and we will get that information out there once the project is complete.



Undergraduate Research Project #2 —Will Turfgrass Colorants Blemish Clothing? (Student – Dani McFadden)

Dani’s research project was inspired by a question I got at an educational event this past year. There has been lots of research on turfgrass colorants and how long they last, but what will it do to the clothing of the athletes if they fall? Dani went out and applied a variety of different turfgrass colorants, pulled clothing across the colorants (after the recommended drying time), and then analyzed how much colorant blemished the clothing. Once her project is complete, then we will be able to determine which products to recommend to athletic field managers so they can be assured they won’t have any phone calls about stained clothing.



Undergraduate Research Project #3 —Prediction of Baseball On-Base Percentage Due to Infield Mowing Height (Student – Gage Knudson)

Sometimes there is only a split second at first base between a baseball batter and the throw at shortstop to determine if the runner is out or safe. One component of that split second is how fast the baseball moves through the infield. Holding all other factors constant, Gage manipulated mowing height of a simulated baseball infield to determine the speed of a ground ball hit to the shortstop. Then he can predict the out percentage at first base. Gage’s interest in this project not only helps field managers with maintenance of the field, but shows how important it is for the coach of a baseball team to communicate with the grounds manager. To simulate a constant speed, he used a pitching machine that was aimed at the infield. Believe it or not, that one split second can be influenced just by the mowing height of the infield. *(Jared Hoyle)*



Preemergence Weed Control in Bentgrass Putting Greens

In the previous article about preemergence herbicides, there is a table of many preemergence herbicides that are available for professional turfgrass managers (p. 4). But when we start talking about preemergence herbicides that we can use on bentgrass putting greens, the list gets really short. There are not many options out there for PREs on creeping bentgrass putting greens due to the injury they can cause to the putting surface.

Every golf course superintendent knows that one of the main priorities on the golf course is the putting greens. Therefore, weed control on the putting greens is a priority as well. Here are some of the PREs that are labeled for creeping bentgrass putting greens:



Bensulide (Bensumec 4FL, Pre-San 12.5G, Weedgrass Preventer) – With this product you are not able to reseed for 4 months and do not use on greens that have more than 50% annual bluegrass.

Bensulide +oxadiazon (goosegrass/crabgrass control) – To prevent injury, apply two half rate treatments 10-14 days apart.

Dithiopyr (Fertilizers w/ dithiopyr) – Older bentgrass varieties may result in undesirable injury.

Siduron (Tuperson) – May be applied at time of seeding or to established creeping bentgrass for crabgrass control and bermudagrass suppression.

You can see the list is a lot shorter than the list in the previous article, but that is why managing bentgrass is so difficult. Turfgrass managers must do whatever they can to have a healthy growing creeping bentgrass system to prevent weeds coming in because once they are there, there isn’t many options to get rid of them.

Information in the previous list was acquired from “Turfgrass Weed Control for Professionals” by A. Patton and D. Weisenberger, Purdue University (and 11 collaborating states including Kansas). For more information about purchasing this publication see

<https://blogs.k-state.edu/turf/new-weed-control-publication-for-turfgrass-professionals/>

Always remember to READ THE LABEL for the correct rate, turfgrass tolerance, and specific instructions before application!
(Jared Hoyle)

New Weed Control Publication for Turf Professionals

In 2016, Dr. Aaron Patton and Daniel Weisenberger reached out to surrounding universities to collaborate on producing a multi-state Turfgrass Weed Control for Professionals publication. There are 11 states, including Kansas, that worked together to help produce the 2017 edition.

This publication provides weed identification and control information that turfgrass professionals can use to develop effective weed control programs for golf courses, athletic fields, sod farms, lawns, and other turfgrass systems. Recommendations apply to most states, with input from experts in IL, IN, IA, Kansas, KY, MI, MN, MO, NE, NY, OH, and WI.

It contains images and information for identifying 105 different weed species.

Covers herbicide selection in:

- Non-selective herbicide/fumigants for renovation
- Non-selective herbicides for border maintenance
- Preemergence herbicides
- Postemergence broadleaf herbicides
- Postemergence grass herbicides
- Postemergence sedge herbicides
- PGRs for general turf
- PGRs for putting greens
- Herbicides labeled for putting greens (PRE and POST)

The publication also covers many other weed control aspects like:

- Which herbicide works best for each weed
- Includes notes and comments on each herbicide
- Control of touch weeds
- Provides handy comparisons of broadleaf herbicides ingredients
- Covers fundamentals of how herbicides work
- Frequently asked questions

GET YOURS TODAY!

For an electronic download copy (\$12.00) click here – https://mdc.itap.purdue.edu/item.asp?item_number=Turf-100-W#.WMFVKGVuD8s

For a hard copy delivered to your door (\$20.00) click here – https://mdc.itap.purdue.edu/item.asp?item_number=TURF-100#.WMFVDWVuD8u



K-State Earns 2016 Tree Campus USA Recognition

Who are the future leaders in the Kansas green industries? Our K-State grads! Why are they so amazing? These students have excellent opportunities to engage in hands-on, practical learning.

As one piece of that, K-State was recently named a Tree Campus USA for the third year in a row. Congratulations to Dr. Cathie Lavis for leading the efforts, and kudos to the whole team.

More details are available in this article from [K-State Communications](#):

<http://www.k-state.edu/today/announcement.php?id=33231>



Finding Your Passion

My wife and I are both educators, but we are both very different educators. She teaches 7th grade language arts, and I am an extension educator teaching continuing education to turfgrass professionals. As educators, we strive to help people find their passion but believe it or not, every once in awhile we find someone that helps us find our passion or rekindle our passion that may have been overwhelmed for many different reasons.

Most of my educational presentations are not to students, but every once in awhile I do get in the classroom and get to talk with undergraduate students. Most of my interaction with students is when I see them at their internship, summer job or out working at the Rocky Ford Turfgrass Research Farm.

One of those students is Slade Loewen. Slade is an undergraduate turfgrass student here at Kansas State University. Slade has worked out at Rocky Ford, as well as many other golf courses in Kansas. So it is safe to say Slade has a passion for turfgrass, like many of us. But what you don't know is that Slade has a passion for something else. He enjoys working on cars, trucks, tractors, equipment, etc. Problem solving a piece of equipment that hasn't run in a couple years and rebuilding an engine in his wife's car are things Slade has accomplished just in the past couple weeks.

When I moved here in April 2013, I noticed an old John Deere tractor out at the research farm. I always wondered why we haven't used it and apparently the story goes... It was rebuilt, the battery got hooked up backwards and fried the electrical system. So, it just sat there. A couple of weeks ago Slade got to working on the tractor and took it on as a project. Long story short, after some hard work, Slade was driving the tractor around Rocky Ford. Although it is an older tractor, it will be put to great use.



What I noticed that day when I pulled into Rocky Ford wasn't the running tractor that I have never seen move, but a young man "doing what he loves best." We walked around that thing and he went through the entire process of what he did to get it running. That day I saw someone not only finding their passion, but sharing it with someone else.

I try and share my passion for turfgrass through research and extension through many different outlets. Sometimes I get overwhelmed, busy, anxious and burned out. That day at Rocky Ford, Slade helped me rekindle my passion. When you find yourself overwhelmed, which is easy to do as a turfgrass manager, stop and remember your passion and look around at your employees, students, interns, etc. Look at the passion and motivation they have and use that as fuel to rekindle your own passion for the green industry.

As we enter spring and summer, keep up the great work and always remember why we do what we do! (*Jared Hoyle*)

Henbit and Chickweed in Lawns



The plant with the little purple flowers that have been showing up in home lawns is called henbit. If you are not sure this is what you have, check the stems. If they are square rather than round, you have henbit. A plant that also

is low growing but has round stems and tiny white flowers is chickweed.

Both these plants are winter annuals and start to grow in the fall. They spend the winter as small plants and so most people do not pay much attention to them until they start to flower in the spring. Trying to kill either one at this late stage with a herbicide usually is a waste of time and money. Though plants may be burned back, they will rarely be killed. So what should you do? Remember, these are winter annuals that will die as soon as the weather turns hot. Keep the lawn mowed until nature takes its course.

However, you can do something next fall that will help next spring. Henbit and chickweed usually germinate about mid-October. Spraying with 2,4-D, Weed-B-Gon, Weed Free Zone, Weed Out, or Trimec in late October to early November can go a long way toward eliminating these plants as they are small and relatively easy to control. Choose a day that is at least 50 degrees F so the young plants are actively growing and will take up the chemical.

Spot treating will probably be needed in the spring (March) to catch the few plants that germinate late. Use Weed Free Zone, Speed Zone, Weed Out, Weed-B-Gon, Trimec, or one of the special henbit herbicides early in the spring before they have put on much growth. (*Ward Upham*)

Methods of Predicting Crabgrass Emergence

With the fluctuating weather and temperatures I get the question, “What date do I need to put my preemergence herbicide out on?”

Well, this is a trick question because there is no correct answer for it. Here are some of my thoughts on preemergence timing.

Why do we recommend around April 15th for most of Kansas to put out a preemergence in our lawns?

April 15th is about the time that we have our “last” frost/freezing. (This also shifts to April 30th in western/northwestern KS and to April 1 in eastern/southeastern KS.). Even though it may be getting warm, we still might have a cold snap that would end up killing the crabgrass if it emerged. This is the same concept of why we don’t plant crops until after this date as well.

Should we use soil temperature at 1" to predict when to put out preemergence herbicide applications?

Soil temperatures are a great way of determining when to apply your preemergence herbicide. Scientists say when soils reach a daily average of 55 deg F for about 5 days at a 1" soil depth, then it is time to put out your preemergence. Let’s say you go out and measure your soil temperature at 1" you are not going to get a daily average, you are getting a single point in time. Does that really represent what is going on? What if you are maintaining many different properties? It is not practical to obtain that information. The good news is that KSU has a website (<http://mesonet.k-state.edu>) that you can click your closest weather station and get daily maximum and minimum soil temperatures where you can then calculate a daily average. The bad news is it only gives you a 2" or a 4" soil temperature. But using the 2" soil temperatures are going to give you a better idea of the daily averages than going and taking one measurement.

The forsythias are blooming but my redbuds aren’t. Do I still put my preemergence herbicide out?

This is called phenology – the study of cyclic and seasonal natural phenomena, especially in relationship to climate, plant and animal life. Many people believe that when the forsythias are blooming, then crabgrass is germinating. That is not 100% true. When forsythias are in full bloom, then we need to be getting “ready” to get our preemergence applied. Even though we see that this is a good indicator, Dr. Fry and others reported in a study that ornamental plant flowering is not always a good way to predict crabgrass germination and emergence. (Fry, J., S. Rodie, R. Gaussoin, S. Wiest, W. Upham, and A. Zuk. 2001. Using flowering ornamentals to guide application of preemergence herbicides in the Midwestern U.S. International Turfgrass Soc. Res. J. 9:1009-1012.) There are some things to consider when utilizing phenology for crabgrass germination and emergence. Not all forsythias will bloom at the same time. It determines where that plant is located in the landscape. There are micro climates in the landscape.

Think about plants located in roadway medians. They are typically warmer due to cars and the concrete and asphalt in close proximity. The same thing goes with crabgrass germination. Crabgrass will germinate sooner in areas that are warmer, for example (next to sidewalks, bare ground, etc.).

I have heard about growing degree days to predict crabgrass germination. What is that?

Growing degree days (GDD) uses air temperatures instead of soil temperatures within a formula to get a cumulative number of growing degree days. Using base 50 deg F, once you get to about 200 GDD then crabgrass will start to germinate. Don’t want to calculate GDDs? Don’t worry. There is a website that will do it for you. <http://www.gddtracker.net> Just enter your area code and click on crabgrass germination on the right side and it will give you the total GDD. It will also show you a prediction for the next couple of days too. GDDs do not go backwards; they only accumulate.



Crabgrass emerging in bare ground earlier than turf.

Now these rules, concepts, ideas are not bullet proof but it is something to think about when planning your lawn care program. There is no magic date for anything that you do to your lawn. You need to make sure you keep up with the temperatures, soil temperatures, precipitation, etc. The more you know what is going on with your turfgrass, the better you will be able to predict crabgrass preemergence applications. Use more than one method. This is going to give you the best idea of what to do! (*Jared Hoyle*)

Blast from the Past

And the answer is.....

Bryan Wood, Commercial Turf & Tractor

**Check out the K-State Turfgrass Blog
at:**

<https://blogs.k-state.edu/turf/>

Interested in Joining the KTF Founders Society?

The Kansas Turfgrass Foundation Founders Society was established in 1990 to provide support for research and education in turfgrass science. Faculty at K-State conduct research to help solve problems associated with turfgrass culture in Kansas. Joining the Founders Society is one more way your company can help support the goals of the KTF.

Any lawn care company, golf course, parks department, sports complex, association, or individual who benefits from turfgrass research should consider becoming a KTF Founder. Membership is accomplished by a one-time donation of \$1,000 (payable at once or in installments) to the KTF Founders' Investment Account. Golf courses and others who work from an annual operating budget may want to include KTF Founders membership in the upcoming year. Interest accrued will be used to compliment annual research contributions.

Complete the KTF Founders Society application at the end of this newsletter and join the turfgrass research team working to improve turfgrass quality in Kansas!

KTF Founders Society Members

*Bayer Environmental Science
Flint Hills National Golf Club
Gard'N Wise
Merrin Godfrey
Heart of America Golf Course Supt. Assn.
Jim Heinze
Kanscapes, Inc.
Kansas City CC
Kansas Golf Assn.
Kansas Golf Course Supt. Assn.
McPherson College*

*Midwest Turf
Prairie Dunes CC
Professional Grounds Management
Ryan Lawn & Tree
Gregg Snyder
Syngenta
Don Tannahill
Turf Professional Equipment
Williams Lawn Seed*

A \$1,000 contribution (at once, or over time) is all that is required to become a KTF Founder. Our goal is to recruit a total of 100 Founders over the next several years. These funds are untouched with hope that one day accumulated interest will help to support turfgrass research.

For more information on how to become a KTF Founders Society member, contact Jack Fry, Horticulture Division, Throckmorton Hall, Kansas State University, Manhattan, KS (785) 532-1430 jfry@ksu.edu