

Message From the President

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Greetings everyone:

March Madness is over and warmer weather has arrived. I hope those of you who provide contract snow removal services made a lot of money this past winter. For those of us on the non-profit side of things, snow is just a hassle, but our crews did well on the overtime end of things. What's new with KTF? The Board of Directors met at the end of February to wrap up the previous conference review and set dates and fees for upcoming events. One interesting topic of discussion was concerning the format of the turfgrass conference. Some discussion was held regarding longer overall talks on each subject to provide more in-depth coverage, as well as changes to the banquet format, such as having the awards and recognition events during the general session and having a less formal banquet luncheon. The Board will discuss these details in future meetings. If you have any thoughts on this topic, please feel free to contact myself or any other board member and let us know what you think.

For you golfers out there, mark your calendar for May 24th, the Kansas Golf Course Superintendents Association is having their annual tournament at the Wichita Country Club with proceeds going to the KTF.

Don't forget to sign up for the Turfgrass Field Day August 5th in Manhattan at the Rocky Ford Research Center. Aside from the latest information on the staffs' research work, there's always a good group of vendors with equipment and products for you to test and try out.

And lastly, please remember, we value your continued membership to the KTF. Your membership dues and event participation are helping to support the research that, in turn, helps you do your job better. Keep involved and encourage peers to join us as well. And don't forget about the KTF Founders Society – our goal is to reach 100 members. Founders Society funds will remain untouched with, one day, the interest becoming a yearly source of funding for turfgrass research. You can join the Founders Society with a \$1,000 contribution (at once, or over time)

Have a great spring! I hope to see you at the upcoming events. *(Brian Anderson)*

Turf and Ornamentals Field Day

The Turf and Ornamentals Field Day will be held on Thursday, **August 5** at the Rocky Ford Research Center, Manhattan. Highlights will include updates spray nozzle selection, drought tolerance of Kentucky bluegrass cultivars and ornamental ground covers, shade tolerance of zoysiagrass, effectiveness of spring broadleaf weed control applications, and disease, insect, and weed control updates.

Exhibitors will be on hand displaying their latest products and experts from the K-State staff will be there to answer your questions. The 2010 Turf Research report will be distributed at the field day. Registration cost is \$30 and includes lunch. Look for more information in the July issue of *TurfNews*.

Synthetic Turf: The Good, the Bad, and the Misunderstood

Here at K-State, we enjoyed a visit last week from Dale Getz, Certified Sports Field Manager, and Sports Fields and Grounds Sales Manager for Toro. Dale is an adjunct faculty member in our department, and visits us once or twice a year to teach our students about the latest in sports turf management. One of his presentations was about synthetic turf, and since the fake stuff is surging in popularity, I thought it would be useful to pass along some highlights from Dale's talk.

First, a little history: Old-timers will remember AstroTurf, used in the Houston Astrodome beginning in 1967. It had a rubber backing "pad" and stiff, nylon fibers. Originally installed in the Astrodome because there wasn't adequate light for growing real grass, it wasn't long before many outdoor professional and college stadiums jumped on the bandwagon and replaced their natural grass with artificial surfaces too. K-State was right there along with everyone else. Who could blame them? No more watering, mowing, fertilizing, aerating, overseeing or pest control; no more limitations on how many games or practices could be held on a field. It was seemingly the perfect solution for sports turf..... except for all those pesky knee and ankle injuries that started to occur with greater frequency. And except for the fact that it was so abrasive that falling on it with any exposed skin meant that, well, you wouldn't have skin on those spots any longer.

So natural grass fields made a comeback. Players preferred them, hands-down. The advent of sand-based fields around 1980 meant that, with a good turf manager, natural grass fields could hold up better under intense use. There were even some really amazing innovations like giant "sewing machines" that sew fibers into sand-based fields to increase stability. On the downside, it was back to watering, mowing, fertilizing, aerating, etc., etc. And, while sand-based fields could handle more use, they couldn't handle unlimited use.

Enter the next generation of artificial turf: infilled synthetic turfgrass. You KU fans might think this new turf is only for baseball, but that would be "infield" turf (just jokin' ya'll). This new synthetic turf is made of polyethylene fibers that are "infilled" with crumb rubber or a combination of crumb rubber and sand. Compared to the old generation synthetic surfaces, it provides much more cushion, and is much less abrasive. So far, so good. However, there are some drawbacks and common misconceptions regarding infilled synthetic turf (hereafter referred to as "IST", for short). If your local school district or municipality is considering a switch to IST, they need to hear about these things. Here are five reasons to think twice:

1. **Contrary to popular belief, IST fields are NOT maintenance free.** The sports turf manager for the Cincinnati Bengals says that his IST field requires just as much maintenance time as his old natural grass field did. IST fields must be swept to pick up debris and broken fibers. They must be groomed to keep the rubber uniformly distributed. They can become compacted, which is a difficult problem to solve (apparently, you can "spike" to relieve compaction). Under

heavy use, the seams of the field often tear apart, necessitating difficult repairs. Static electricity can be a problem, so IST fields often require treatment with Downey, believe it or not.

2. **Clean up of IST fields is difficult.** Things like gum, sunflower seeds and tobacco can be a real headache on an IST field. A good portion of the maintenance requirement will actually be devoted to cleaning the field. It's odd—most people think of soil as "dirty", but soil actually has an incredible capacity to clean the environment. For example, the gum, seeds, and tobacco that are issues for the IST field manager, would filter into the canopy of a natural grass field and be naturally broken down over time.
3. **Health concerns.** With an IST field, what happens to all the sweat, blood, spit and occasional vomit (sorry about this) that are associated with sporting endeavors? Again, a natural grass field can break these things down rapidly, but synthetic surfaces cannot. Of course, sunlight and water will help break down the bodily substances over time, but it won't happen as quickly as when soil is present.
4. **IST fields get HOT in summer.** You would not want to hold a tiny-tot soccer camp on an IST field in June, July or August, because the temperature on the field can reach 140 to 150 F on a hot, sunny day. The fields can be irrigated to cool them down, but the temperature rapidly rises again once irrigation ceases, and then you have a hot, MUGGY field. Once again, the contrast with natural grass fields is striking. Natural grass, with its transpiring leaves, actually cools the environment rather than making it hotter.
5. **IST fields are expensive.** An IST field costs over \$500,000 to install, and the life expectancy is 7 to 10 years, depending on how heavily the field is used. So if the field lasted 10 years, it would cost over \$50,000 per year, even if it were maintenance-free (which it is not). Give a good turfgrass manager \$50,000 per year to maintain your natural grass field and he will be able to give you an awfully good product.

I could go on..... lines, injuries, player preferences.... there is a lot to discuss. There are pros and cons to IST fields. But the general public is not very aware of the cons, so I hope this article is helpful in your future discussions with decision-makers in your community. Those of us in the turfgrass industry are big fans of natural grass fields for a reason. *(Steve Keeley)*



Chickweed, Knotweed, Henbit—Oh My!

I must look pretty weird at my daughter's soccer practice, walking around with my head down to the ground, stopping every so often to take out my camera phone to take a picture of something on the ground. But my blood is green with the love of all things grass....I can't help it. Walking around the field I noticed quite a few weeds, but some notables were knotweed, chickweed, henbit.

Chickweed is a winter annual, just like henbit. It germinated from seed last fall and it will die this spring and have to come back from seed again in the fall. So, like henbit, we can prevent many chickweed-challenges with THICK-HEALTHY turf. And like henbit, we want to control chickweed when it is young small, (late fall-early winter or very early spring). Most commonly available broadleaf chemicals will control chickweed. But I can't stress it enough, thick turf will go a long ways to preventing chickweed and henbit. (Notice I found these weeds in flowerbeds and fence rows, not in the middle of a healthy yard.)

Chickweed have oppositely arranged leaves that are oval or elliptic in shape. The upper leaves are attached close to the stem (without petioles), where as the lower leaves have long petioles.

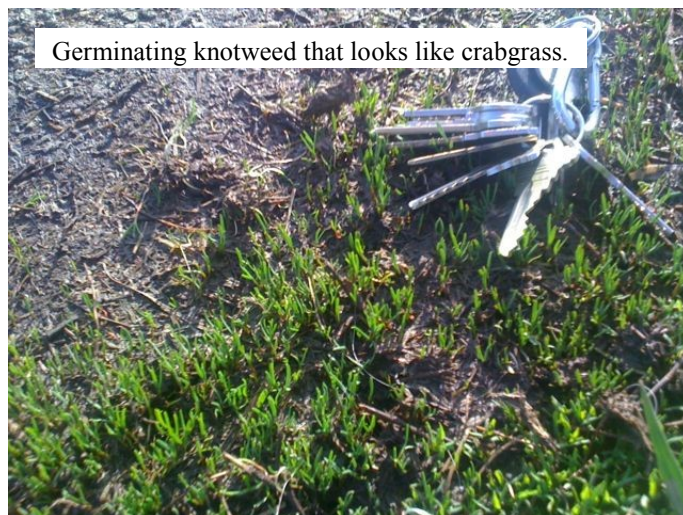


Chickweed growing along a fence.

Prostrate Knotweed. Now is the time we start to get calls about this weed. Many people will see the young germinating knotweed and think that it is crabgrass and worry that they missed their window of application for crabgrass pre-emergent herbicides. Knotweed is a broadleaf weed, but when knotweed germinates it looks like young grass seedlings.

Knotweed is a summer annual, which means it germinates in the spring and dies in the fall. Again, since it is an annual, THICK-HEALTHY turf will prevent 'knotweed nuisances.' Notice I found this knotweed along a sidewalk where there was no grass. Knotweed germinates a few weeks before crabgrass does. Knotweed is easily controlled with most broadleaf herbicides. Knotweed will continue to germinate for the next several weeks so re-application may be necessary; it is on the label for some pre-emergent herbicides. The downside with putting out those products early enough for prevention of knotweed, is that the pre-emergent herbicide will not be as effective at controlling other

weeds later in the season. Pre-emergent herbicides only last for a certain amount of time in the season, if you put them down too early, they will not last the entire spring/summer season.



Germinating knotweed that looks like crabgrass.

Henbit is a winter annual, which means it germinated from seed last fall and it will die this spring and have to come back from seed in the fall. Henbit has a square stem and purple trumpet-shaped flowers. Soon, it will put on many purple flowers and once those flowers start popping is when many people start calling wanting to know how to kill it. It can be killed, but I don't always advise it. There are other easier and more cost effective ways to control henbit than always trying to kill it now. For two reasons....big mature weeds are much more difficult to kill, and it is going to die soon anyway.

It's better to control henbit in the early winter/late fall with a broadleaf herbicide. (like 2,4-D, MCP, carfentrazone, trichlopyr, etc.) Or, if you've had henbit in the past and you expect to have it again, you can use a pre-emergent herbicide (like, prodiamine, pendamethilin, dithiopyr, etc.) applied in September.

Finally, since henbit is an annual, THICK, HEALTHY turf will prevent a majority of henbit headaches.

Like most things in life, once you see the problem (purple flowers) it's probably too late. A little planning next fall/winter will save you trouble in the spring. (*Rodney St. John*)



Henbit in a field.

Dothistroma Needle Blight on Pines



Now is a really good time to check for Dothistroma Needle Blight on Austrian, Ponderosa and Mugo pine trees. A pine sample from south central Kansas came into the K-State Plant Disease Diagnostic Lab with classic symptoms. This disease tends to show up in crowded, mature pine plantings. The key is crowded plantings that lead to poor air circulation. Wet weather and poor air circulation all lead to increased disease severity. The last few years have been ideal for this disease.

If you are trying to sort out winter damage from Dothistroma needle blight, the first thing to do is to look into the bottom of the tree. Dothistroma causes needle shedding and tends to be more severe in the bottom of the tree. Essentially when you look into the bottom of the tree, the interior needles are gone and all of the lower limbs tend to be bare.

Next take a look at the foliage. The needles will have scattered spotting and a half needle scorch. The outer needle tip will be brown and the inner portion of the needle will be green. Each needle will be affected in a different location. You can contrast this with winter burn which can also produce a half needle scorch but will always burn all of the needles back in exactly the same location. Plus the damage tends to be on the outermost foliage.

The last thing to look for is raised dark fruiting bodies (acervuli) on the affected needles. This is a diagnostic sign for the disease. You may need a magnifying glass or 10X hand lens to see them, although when they are fully mature they are visible with the naked eye. The fungal fruiting bodies don't start developing until late December or January, so now is a good time to look for them. If you don't initially see them you can put the suspect needles in a Ziploc bag with a wet paper towel. The high humidity will help the fruiting bodies pop out.

Dothistroma needle blight and winter damage can look very similar. If you are going to spend money to treat for the Dothistroma needle blight disease then it is a good idea to confirm that the disease is present. Samples can also be sent to the K-State Plant Disease Diagnostic Lab. For more information on managing this problem see the pine disease fact-sheet at the following web link.

<http://www.plantpath.ksu.edu/DesktopModules/ViewDocument.aspx?DocumentID=943>

(Judy O'Mara, Director of K-State Plant Disease Clinic)

Early Season Fairy Ring

A superintendent in the southern part of the state called a couple of weeks ago and said, "My greens are just starting to green up, but there are dark greens rings everywhere? What is this?" It sounded like some early-season fairy ring that I saw at our research facility last year.

Once the surrounding turf greened up, especially with the help of some spring fertility, the rings disappeared and were never heard from again. That is, they did not come back during the heat/stress period in mid-summer when we most typically see fairy ring.

Other than our occurrence on campus, and the one phone call this year, I don't have much experience with this late winter/early spring phenomenon so if any of the other bloggers, or any of you out there, have further comments please chime in. *(Megan Kennelly)*



Equipment Dealers that Support K-State Turf Research

Excel Sales

Out-front Rotary Mower

Kansas Golf & Turf

Cushman Truckster

Professional Turf Products

Toro Triplex Greensmower Out-front Rotary mower

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 Jack Fry at (785) 532-1430.

The Wait is Over... Two K-State Introductions Now Available

You have heard us talk about them over...and over...and over again. 'Emerald Prairie' Lacebark Elm (*Ulmus parvifolia* 'Emerald Prairie') and Prairie Sentinel™ Hackberry (*Celtis occidentalis* 'JFS-KSU1') are two trees that have been introduced by the John C. Pair Horticultural Center. Liner producers have been working hard to propagate commercial quantities of these selections and they are now available in limited quantities from J. Frank Schmidt & Son Nursery.

'Emerald Prairie' Lacebark Elm was selected by Dr. John Pair over 20 years ago. In that time, lacebark elm as a species, has undergone a cultivar explosion and is grown by nurseries across the country. So why does 'Emerald Prairie' deserve a spot in your nursery? The answer is simple...disease tolerance. Disease tolerance is what gives the tree its phenomenal dark green foliage, which is why Dr. Pair originally selected the tree. Anthracnose commonly infects leaves of many lacebark elm trees. The result is poor foliage color and early leaf drop. Thus far 'Emerald Prairie' Lacebark Elm has been completely resistant to anthracnose. Therefore the tree is full of lustrous green leaves throughout the summer months. In short...it's a green tree when you want a green tree.

Stem cuttings of 'Emerald Prairie' can be rooted easily under mist most of the growing season. Liners transplant easily and grow well in the field or in container production. While bark color is not as striking as in other cultivars, the tree's disease tolerance and cold hardiness are great assets for most growers.

Prairie Sentinel™ Hackberry was first recognized by members of the Kansas Forest Service. Its growth habit is strikingly columnar. The original plant is approximately 40 ft tall and only 8 ft wide. This selection will rival columnar English oak or Zelkova for a vertical accent in the landscape. The plant is otherwise typical of the species with excellent tolerance to urban conditions and a yellow fall color. Yes, the cultivar will get nipple gall, but it is not detrimental to the overall appearance of the tree.

This cultivar cannot be propagated by stem cuttings. This hackberry, like other cultivars of hackberry, is budded to seedling hackberry understock. Hackberry are notoriously difficult to clonally propagate, even by the best growers. Bare root liners can be planted and grow well under traditional nursery production practices.

Let these two outstanding cultivars add some diversity and interest to your inventory. (**Jason Griffin, Director, John C. Pair Horticultural Research Center**)



'Emerald Prairie' Lacebark Elm



Prairie Sentinel Hackberry

From the Department



Bring on Spring. We have earned it. The winter of 09-10 was brutal. Having been gone from the Midwest for many years, it is easy to forget just how cold -15°F really is. Hopefully, you were one of the ~40 K-State alumni and friends that attended the first K-State Alumni and Friends get-together at the 2010 Golf Industry Show on Feb. 10 in San Diego. There was much energy in the room as friendships were renewed. There are photos of our students, Jack Fry, Steve Keeley

and Rodney St. John at the 2010 GIS, along with a few photos of the Alumni and Friends get-together posted on our Facebook page at <http://www.facebook.com/home.php?#!/pages/K-State-Horticulture-Forestry-and-Recreation-Resources/62491034884?ref=ts>

If you missed it, please plan on attending at the 2011 GIS. Several alums mentioned they had not been back to Manhattan in some time and would welcome the opportunity to have an alumni get-together in Manhattan. Does that sound interesting to anyone else? One of the goals of our department is to establish better communications with our alumni. We would really welcome your thoughts and ideas. You can easily reach us by visiting our departmental home page and clicking on Alumni and Friends on the left hand side <http://www.hfr.k-state.edu/DesktopDefault.aspx> While you are there, check out what is happening in our department. Happy Spring. (Stu Warren)

Thatch

While thatch is usually associated with summer desiccation and summer root diseases, it can also be associated with winter desiccation and cold injury. The photo shows a sample of Kentucky bluegrass with more than an inch of thatch. This was a sample in April 2008. The turf looked fine in the fall of 2007, but with all the thatch, the crown was raised up above the ground leaving it more exposed to drying winter winds and temperature fluctuations. This winter (2009-2010) was fairly wet, and in many places the coldest temperatures occurred when there was insulating snow on the ground. However, keep an eye out for thatch-related winter injury. For more information about thatch, you can visit this site:

<http://www.ksre.ksu.edu/library/hort2/mf2131.pdf>

(Megan Kennelly)



Pride of Kansas 2010



Shrub of the Year—Southern Blackhaw Viburnum (Rusty Blackhaw), *Viburnum rufidulum*, is a large maturing shrub with glossy green leaves and creamy white flowers in the spring. A multi-season addition to the landscape and native to Kansas, Southern Blackhaw Viburnum is a great choice for native plantings, attracting wildlife. The edible fruit is blue-black and the fall foliage is burgundy. Useful for screening. Tolerates full sun to part shade and many soil types. 10-20' x 10-15'

Tree of the Year—Lacebark Elm, *Ulmus parvifolia*, is a very ornamental tree with colorful exfoliating bark. The dark green foliage turns red, purple and yellow in the fall and holds on well into the fall. Lacebark Elm is adaptable to a wide range of soils and conditions. Useful for both residential and commercial settings. Matures with a rounded canopy, 35-40+ by 30-35'. Zones 5-9.



Perennial of the Year—Sedum has many uses in the landscape. The taller varieties with attractive fall flowers, including Autumn Joy and Neon, are great additions to flower gardens and combine well with Rudbeckia, Echinacea, and Asters. Many of the sedums have colorful foliage in addition to showy flowers. The low growing varieties (Acre, Angelina, Kamschaticum, and Dragon's Blood) are great groundcovers for tough conditions in full sun with little moisture.

Water Issues in the Lawn and Landscape Course Available Summer and Fall for Professionals

"Water Issues in the Lawn and Landscape," an online course available through K-State will be taught in summer and fall 2010.

HORT 405, a 3 credit course, will examine critical water issues related to irrigation in urbanizing watersheds, with an emphasis on water quality and quantity. Factors impacting water scarcity and quality will be discussed. Successful completion of this course will help students understand the interrelatedness of correct irrigation practices and water quality/quantity, and will equip them to help protect water resources through application of science-based irrigation practices.

Upon completion of the auditing portion of the course students will be prepared for the Irrigation Association's Certified Landscape Irrigation Auditor (CLIA) or CGIA - Certified Golf Irrigation Auditor exam that is recognized internationally as an industry "standard." Education points are also offered through the Golf Course Superintendents Association of America for those who complete the course.

Register for the course using ISIS or through the Division of Continuing Education at <http://www.dce.k-state.edu/>
Questions? Contact Dr. Jack Fry at jfry@ksu.edu or 785-532-1430



Mark the Dates

May 24

**KGCSA Research Golf Tournament
Wichita Country Club**

June 14

**HAGCSA Research Golf
Tournament.
Mission Hills CC**

August 5

**Turfgrass Field Day
Rocky Ford Research Cntr.,
Manhattan**

December 7, 8 & 9

**Kansas Turfgrass Conference,
Topeka**

KTF Founders Society Members

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Heart of America Golf Course Supt. Assn.
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Professional Turf Products
Royal Seeds
Ryan Lawn & Tree
Gregg Snyder
Syngenta
Don Tannahill
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 becoming a member of the Kansas Turfgrass Founders Society, please contact Jack Fry, Horticulture Division, Throckmorton Hall, Kansas State University, Manhattan, KS 66506. (785) 532-1430. jfry@ksu.edu