The PALLET

Winter 2018

Newsletter of Turfgrass Producers of Texas

ECOSYSTEM SERVICES IN URBAN AND SUBBURBAN LANDSCAPES

Edited for "Rooted in Research" by Casey Reynolds, PhD

If someone were to ask what it costs to build an athletic field, park, landscape, or other greenspace it would be relatively easy to determine, or at least accurately estimate, those costs. However, determining the cost of an item often is quite different than determining its value. If someone were to ask, what is the value of a landscape, athletic field, or other urban greenspace, an accurate answer to that question is often much trickier to determine. Real estate agents may tell you that a nice landscape or greenspace can add 10 to 12 percent to a home's resale value, but is that really the only value that greenspaces bring to urban and suburban communities? Researchers in the world of Ecosystem Services would tell you no, there is much more value to urban greenspaces than simply increased real estate prices.

A relatively new area of research called Ecosystem Services (ES) is bringing to light the value of natural capital in urban and suburban environments. Ecosystem Services is defined as the many and varied benefits that humans freely gain from the natural environment and properly functioning ecosystems. The

(See ROOTED, Page 3)

IN THIS ISSUE

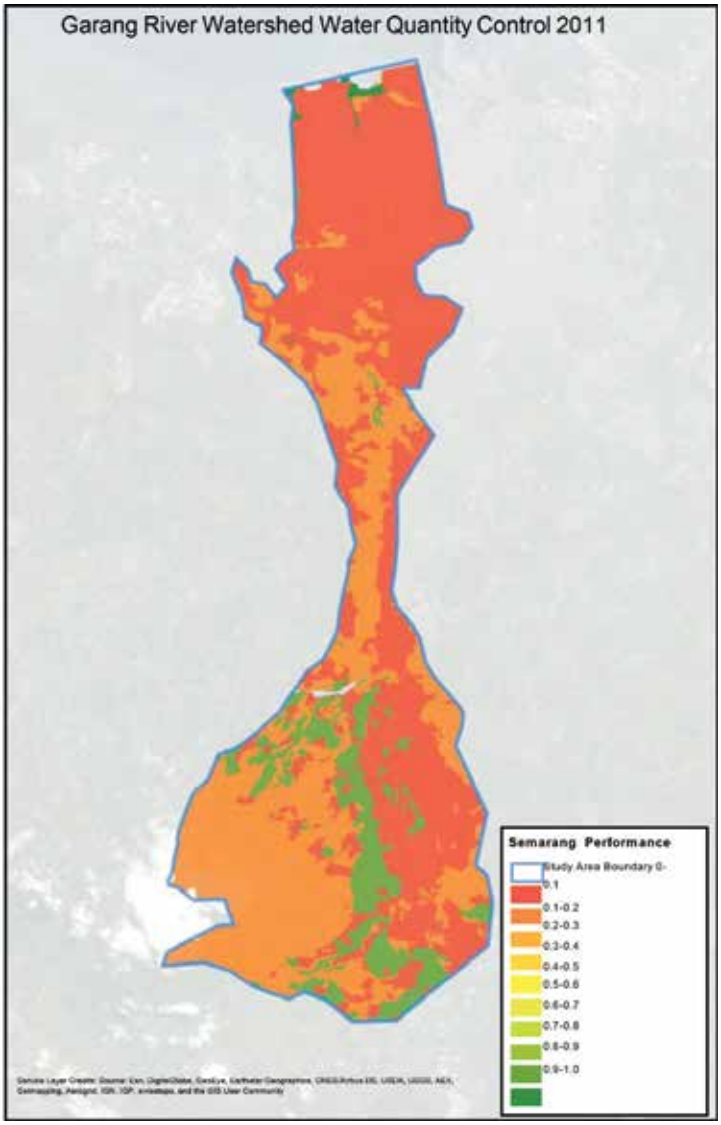
(Continued from Page 1)

Millennium Ecosystem Assessment group (MEA), which formed in 2001, grouped ecosystem services into four broad categories: supporting services, provisioning services, regulating services, and cultural services. Supporting services include processes such as nutrient recycling and soil formation that make it possible for other ES services to function. Provisioning Services support the production of food and raw materials, while Regulating Services include carbon sequestration, climate regulation, and water and air purification. Cultural Services include recreational experiences, cultural, spiritual, or historical experiences, and therapeutic uses, as well as education and science. One example that illustrates the concept of Ecosystem Services can be found in Figure 1 which uses a heat map to show areas of high and low performance of an area in regard to Water Quantity Control.

Additionally, Figure 2 illustrates an Aesthetic Service Pathway indicating visual screening benefits from a manufacturing facility's surrounding landscape. Most of the ecosystems previously measured for these services have been categorized into agricultural, forest, grassland, and aquatic ecosystems with urban and suburban areas largely being ignored for the role they play. However, an emerging trend in research on the importance of urban ecosystems and natural capital is beginning to shed light on the importance of these areas as well. For example, a recent report in Toronto, Canada, places the value of its urban forest at $14.2 billion.

That study states that the region's urban forests store 2.7 million tons of carbon worth $70 million, remove $36.5 million worth of air pollution annually, and provide $20 million worth of energy savings.

This type of research is not limited to just forests, and Dr. Carly Ziter in the Department of Zoology at the University of Wisconsin-Madison has recently published research on the importance of other urban green spaces such as grasslands, open spaces, and



Courtesy of Michelle Kenna Halsey, the EcoMetrix Solutions Group

developed residential lots. Dr. Ziter and her team quantified three ecosystem services which included carbon storage, water quality regulation, and runoff regulation in five land-cover classes: Deciduous forests, Grassland, Open Space, Low-density developed residential sites, and Medium-density developed

(See ECOSYSTEM, Page 10)

THE PALLET

Produced by
TURFGRASS
PRODUCERS OF TEXAS

BRENT BATCHELOR
Executive Director

P. O. Box 3010
Glen Rose, Texas 76043

Phone: 979 533-9750
Email: tpt@txsod.com

•

WE'RE ON THE WEB!

www.texasgrass.com

facebook.com/Turfgrass-Producers-of-Texas

twitter.com/turfgrassgreen

TAMU Tackles Bluegrass Epidemic

Faculty from Texas A&M University work with team of 16 scientists to embark on a $5.7 million award from USDA to address annual bluegrass epidemic in turfgrass

The invasive biology and acquired herbicide resistance of Poa annua (annual bluegrass, "Poa") threatens all segments of the turfgrass industry and increases environmental impact of management programs across the country. A team of 16 university scientists embark on a $5.7 million project to limit the impact of annual bluegrass, the most troublesome weed of athletic, golf, lawn, and sod turf. The team's multifaceted approach, funded by USDA-NIFA, involves characterizing the nationwide distribution of herbicide-resistant populations, seeking weaknesses in the weed's seed biology and growth characteristics, and developing alternatives to herbicides to supplement current control measures.

Dr. Becky Grubbs and Dr. Muthu Bagavathiannan are seeking sites including golf course fairways, athletic fields, professionally managed lawns, and sod farms to collect annual bluegrass samples throughout the state of Texas. To propose a site for sample collection, please contact Dr. Grubbs at bgrubbs@tamu.edu to complete a short questionnaire.

More details of the project and the team can be found in the following link: http://soilcrop.tamu.edu/poa-team-5million-research-grant/

NEW IN THE FIELD!

Fully Self-Contained AUTOMATIC SLAB HARVESTER

Trebro - TSS

The new Trebro TSS is a self-propelled, automatic stacking, slab harvester that showcases Trebro's longstanding reliability. This innovative new turf harvester is powered by a 140 HP John Deere® engine. With all-wheel hydrostatic drive, large floatation tires and a tight turning radius, the TSS maneuvers extremely well in all field sizes and conditions.

The deluxe cab with anti-vibration mounts rotates 90 degrees in the harvesting position to provide the driver excellent visibility of the cutting head, conveyor and stacking functions. Its rear-mounted automatic pallet injector has a capacity of up to 20 empty pallets. This machine also has a cross-conveyor scrap dump, which quickly moves scraps out of the way.

The TSS Slab one-man turf harvester has the newest and latest technology with features requested by today's turf producers – making it the key to labor reduction, improved harvesting efficiency and higher profits.

TSS FEATURES

- Floating cutting head with adjustable dual down pressure
- Available in 16 inch, 21 inch, and 24 inch cutting widths
- 16 inch dual chop off feature - for 16" x 24" slabs

RESPONSIVE AFTER-THE-SALE SERVICE

TURF EQUIPMENT
Trebro
The Future of Turf Harvesting

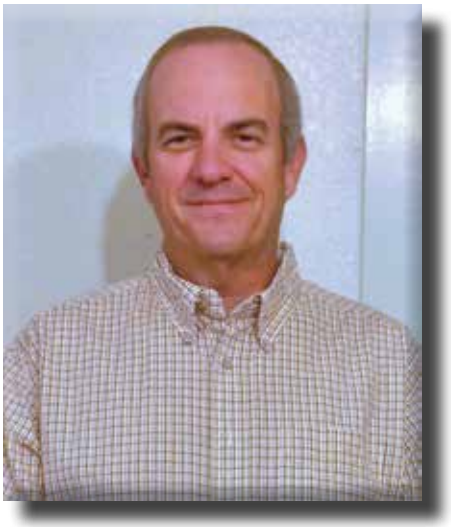
Cross-conveyor scrap dump - puts scrap out of the way

Outstanding maneuverability, tight turning radius

Trebro Manufacturing, Inc. • PO Box 80390 • Billings, MT 59108 • 406-652-5867 • 888-395-5867 • www.trebro.com

Executive Director's Message

By BRENT BATCHELOR



As we turn the page from August tIt is hard to believe that the holidays are here and its time to close out 2018 and start 2019! I know we are all hopeful that 2019 will bring strong markets and more predictable "Normal" weather. However, before we launch into 2019 let's reflect on the current year. From my point of reference turf demand was steady to good throughout the year, weather plaid havoc with delivery schedules and certainly mad things difficult for farms and their customers. There is no indication that over all demand for turf will change soon, but who knows what 2019 and beyond will bring. Some incite on the Texas economy comes from Comptroller Glen Hegar at recent conference I attended. The Comptroller stated that the Texas economy is and has been strong for a while, however he also cautioned the audience that this was one of the longest periods without a recession in a long time. SO, I guess his advice would be enjoy the good times but prepare for the opposite!

Speaking of politics and its influence on the turf industry. Most of you know natural turf continues to be a target when it comes to water and water use. I continually see recommendations that encourage limited use of turf in landscapes and other venues. Although we continue to demand drought tolerance in our new varieties, we must resist the urge to have this feature be our only target. The recent issues with the St. Augustine variety TamStar proved varieties need to be well rounded and acceptable in grower fields and the end market. We also saw a direct questioning of Turf as a crop in the case of an underground water district requesting the Attorney Generals opinion on the matter. The ramifications of a negative outcome on this pending decision are wide spread and could affect the industry far outside this situation. We are waiting on the outcome of that decision and will keep you informed.

Speaking of varieties, I am amazed at how many new ones that have hit the market in the past few years. By my count there are four new Bermuda's plus several Zosia's and a St. Augustine also. I know as a grower you invest much time and effort in evaluating and investing in new varieties with the hope of gaining more market share, or at least not loosing what you have. I also know each farm has its own business plan and set of customers. Some of you require the latest varieties while others are satisfied with older varieties that have expired patents and cheaper production costs from the standpoint of royalty payments.

January 29-29 will bring us to the TPT Annual meeting. We will host the event at the same location as last year the Hilton Garden Inn I College Station. We will keep the same format as the last two years with a meet and great Monday evening followed by the Annual Meeting and dinner. Tuesday will be the educational /CEU session which will also be held at the hotel. See more details in this issue and watch your mail box for registration information.

We have embarked on the task of updating the TPT Website! This endeavor was made possible with the help of a grant we received from the Texas Department of Agriculture who distributes the USDA Specialty Crop promotion dollars. The new site will focus on educating consumers about the benefits of natural grass and guide them and our tradition clientele to where to purchase grass by variety and farm. We are also embedding a grower friendly component that will allow you to pay for memberships and events online. We tried this last year with a third party vendor which many of you took advantage of but I found it a little cumbersome and not as user friendly as I would have liked.

I will close this writing with the following two paragraphs from TPI President Jimmy Fox's article in the Turf News publication.

What is our influence outside of our industry? Our preliminary research from Fleishman Hillard tells us that 71 percent of our (TPI) Facebook followers are male, but only 48 percent of gardening decisions are made by men. The early research shows that the turf industry is looking for TPI to be a voice, and members are looking for us to help promote natural turfgrass for them. We are a million-dollar organization in a 60-billion-dollar industry, with a $100,000 marketing budget—yet we are being asked to be the voice of hope for natural turfgrass. Daunting!

What legacy will we leave behind for the turfgrass industry? Will we help rejuvenate the demand for natural turfgrass, or will we watch silently as our industry is slowly replaced by a true environmental hazard made of plastic and rubber tires? We need your involvement, your engagement, and your financial support to be a strong, united voice for natural turfgrass. We need to act as a team, embrace our diversity, overcome our differences, and work together for success.

I would say the same holds true for the Turfgrass Producers of Texas in our continued effort to make Natural Turf a viable business for those who choose to be in it.

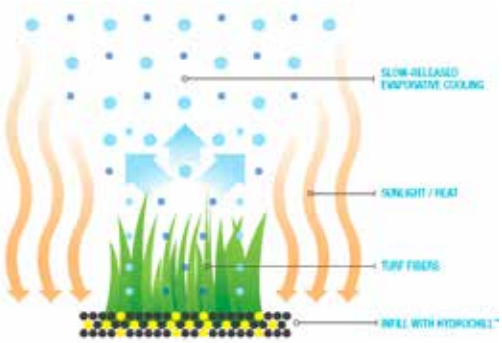
Until next time Good Luck and let me know if you need anything!

Another Football Heat Issue Reported

According to Facebook posts and Tweets from TPI During coverage of the University of Arizona at Houston game on September 8, when a player was down on the field toward the end of the game, the announcers speculated that it might be due to heat exhaustion. They reported that when they went to check out the field the day before the game, as they always do, it was hot when they were in the first row of the seats in the stands, but when they went down on the synthetic turf field it felt at least 30 degrees hotter. One of them added, "And I was in shorts and a lightweight shirt; these guys are in full football gear."

TV Station Reports Students Hospitalized Due to Hot Turf

Raleigh, North Carolina's WRAL TV reported on September 6th that 37 students were hospitalized after hot turf made them sick. On camera a school official is seen reporting that the band students had been practicing how to get on and off the new synthetic turf (plastic surface) and learning where they would be seated in the stadium. He said that as the students came off the field, several complained of being dizzy and nauseated and some vomited. As a precautionary measure to make sure no one got sick, EMTs were called. Upon preliminary examination, a total of 37 students were taken by squad to the hospital—three local hospitals were used.



The remaining students were checked out by a school nurse or by one of the EMTs. The newscaster reported that the band had practiced on the field for over 30 years prior to a football game – but always before on a natural grass field. The newscaster also reported the incident was due to the combination of the heat and the brand-new synthetic turf field which gets much hotter than the grass. Another school spokesperson reported that the surface of the synthetic turf would be 20 to 25 degrees hotter than a grass field.

The full newscast can be seen at https://www.wral.c / news/education/video/17824766/

TURF INDUSTRY NEWS

Syngenta Introduces New Herbicide

Syngenta has launched Manuscript® herbicide specially designed to provide post-emergence control of tough grassy weeds like tropical signalgrass, bull/thin paspalum, crabgrass and dallisgrass in certain warm-season turf species on sod farms, golf courses and sports turf.

Manuscript is powered by pinoxaden, a new active ingredient for the turf industry. It has an advanced form of ACCase mode of action, which helps control grassy weeds in bermudagrass and zoysiagrass turf. This herbicide can be used anytime the weeds are actively growing, including in the heat of the summer when desired turfgrass is actively growing and fills in more rapidly. Sod producers may also use Manuscript on St. Augustinegrass. Manuscript features a built-in safener that speeds the metabolism of pinoxaden in desirable turf to help improve turf safety, without sacrificing control of mature, difficult-to- control weeds. This allows for effective spot treatments, further improving selectivity against tough weeds.

For more information, visit: ***GreenCastOnline.com/Manuscript***

Progressive Turf Equipment Brings Roller Mower to North America

Building upon the success of Progressive Turf Equipment's TDR-22 and TDR-30 roller mowers, Progressive is pleased to offer in North America, a roller mower with a wide productive 26' foot cutting swath per pass! The TDR-26 has been *"Field Proven"* since the summer of 2017 as it has been operating in Europe in turf production applications.

The basic design and layout of TDR-26 is similar to the TDR-22. With wider wing decks and heavier suspension axels that accommodate the extra-wide low ground pressure tires, the TDR-26 is uniquely positioned to offer increased productivity in a value conscious wide-area roller mower.

The TDR-26 also has many components that are common to both the TDR-22 and/or the TDR-30 roller mowers. Using these common field proven parts means less downtime and more production. The TDR-26 is proudly built in North America and is equipped with painted bolt-on deck shells.

(Continued on Page 18)

Another Progressive ADVANTAGE

26 FEET OF PRODUCTION!

TDR-26: A Productive 26' Cut!

Simple Lift-N-Turn Mechanical System

Front Vents Improve Clipping Discharge

HEX Roller End Shafts with Sealed Bearings

Roller mower cutting widths: 12', 15.5', 22', 26', 29.5'
Tri Deck mower cutting widths: 12', 15.5', 22', 36'

Learn More About Us and Our Dealers at:

TF: (800) 668-8873
Tel: (519) 527-1080
Fax: (519) 527-2275

www.progressiveturfequip.com
info@progressiveturfequip.com

PROGRESSIVE TURF EQUIPMENT INC.

The Better Built Choice.™

Ecosystem Services Developed

(Continued from Page 3)

residential sites. These land-cover classes represent a continuum from semi-natural to more developed land cover and span approximately 125 years in their time since development.

Another unique and interesting component of this study was that Dr. Ziter and her team also investigated land-use history, an integral but sometimes overlooked component of this type of research. This is of particular importance in suburban areas because as cities expand, agricultural land is often lost to housing. The impacts of many years of prior agricultural practices on these sites, particularly regarding soil-based ecosystem services such as carbon storage, water quality regulation, and runoff regulation, are vital to accurately accessing ecosystem services in these areas.

Questions that Dr. Ziter and her team investigated included:

1) How do indicators of soil-based ecosystem services vary with land cover and time since development?

2) Do indicators of soil-based ecosystem services vary primarily among or within land-cover classes, or within sites?

3) What is the relative contribution of urban land-cover classes to soil-based ecosystem services at the citywide scale?

This study was conducted during the summer of 2015 in Madison, Wisconsin, USA. Madison is a city of 245,000 people with another 162,000 in surrounding suburbs. Madison is similar to many growing, urban areas in that it is situated in an agricultural watershed, developed on former farmland, and surrounded by agricultural farmland still in production. It is dominated primarily by low and medium-density developed land and open space, but also includes forests, high-density developed land, and grassland.

(see URBAN, Page 14)

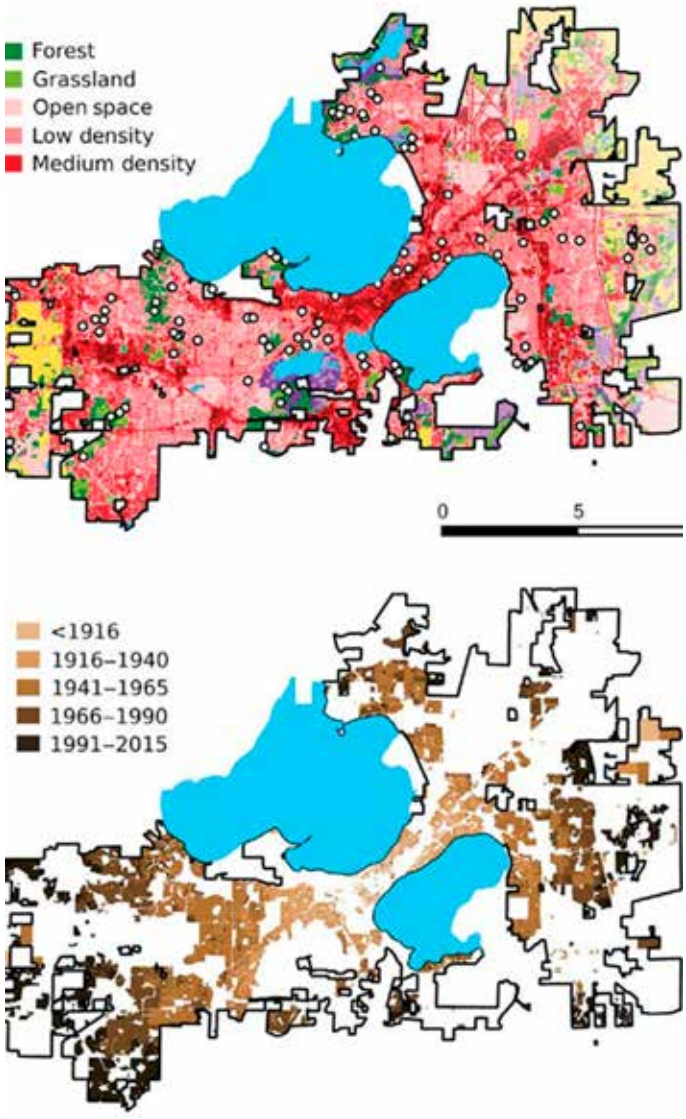


Figure 3: Map of study area. (A) Land cover in the City of Madison, Wisconsin, USA. Legend indicates land cover classes included in the present study. White circles indicate site locations. (B) Year of development for residential lots within the City of Madison, Wisconsin. Blue areas in panels A and B are lakes. Courtesy of Carly Ziter, PhD


BROUWER
kesmac
EQUIPMENT BUILT FROM EXPERIENCE
BROUWER
BV-85 VAC
BROUWER
AERATOR
BROUWER
SINCE
1972
TURF INDUSTRY LEADERS
905-476-6222 1-888-341-5113
info@kesmac.com www.brouwerkesmac.com

Golf, Fishing &

FIRST PLACE TEAM, Triangle Turf, *with Clint Huitt, Erik Franksom, John Romine and Keith Meyer.*

SECOND PLACETEAM, Texas Sod: *with Doyle Anderton, and Bubba Simons.*

THIRD PLACE TEAM, Rod Farms *with Bob Little, Stan Rod and Glen Rod.*

It is not unusual for the TPT Golf or Fishing Tournaments to be held on a rainy day. However, this year both events experienced rain and in the case of the fishing tournament cold temperatures.

We moved the TPT Golf Classic from early August to September with the hope of avoiding the late summer monsoons that have plagued the event for two or three years in a row.

Well as most of you know September was one of the rainiest on record and the TPT tournament was no exception. We had eight teams entered with six staying the course and braving the intermittent rain storms that streamed off the Gulf most of the morning. The persistent play and strategic use of mulligans added up to a winning score of 55. However, the interesting twist was two teams had this score.

The team winning the tie breaker was Triangle Turf, John Romine, Erik Frankson, Keith Meyer, & Clint Huitt. Second place went to the Texas Sod team Bubba Simons, Doyle Anderton, Johnny Simmons, & Brandon Simmons. Rod Farms rounded out the top three with a score of 59 team members where Glen Rod, Stan Rod, Bob Little, & Bart Worthing. Individual winners included Closest to the line Johnny Simmons, Longest Drive Johnny Simmons, Longest Putt John Romine. The Rio Colorado Course may not have a lot of tough obstacles but few courses can boast of the moving hazard of an Alligator that strolled across the fairway as one team played through!

A strong cool front blew in mid-morning the day of the TPT Fishing tournament making for "a very blustery day". Ten Teams braved the weather to weigh in fish by the official time at 2:00 p.m. The top team for the day was Texas Sod, Bubba Simmons, Chad Briggs, Wes Morris, Joe Johnson & Capt. Lee Warmke. Second place was Red's

Rainy Weather

FIRST PLACE TEAM, Texas Sod, *Capt. Lee Warmke, Chad Briggs, Wes Morris, Bubba Simmons and Joe Johnson.*

THIRD PLACE TEAM, ABM Irrigation – *Pictured is Brent Pirkle.*

SECOND PLACE TEAM, Red's Grass Farms. *Not pictured.*

Red Fish Most Spots - *Cliff May*

First Trout – *Gregg Bogle.*

2nd Trout *Bubba Simmons*

Blackjack Trout - *Adam Rodbers, left, and Bubba Summons.*

Grass Farm Steven Zapalac, Rett Holloway, Brent Cherney, Blake Barger, Cole Rickaway. Third Place Team was ABM Irrigation with one-member Brent Piekle! Heaviest Trout Gregg Bogle, 2nd Bubba Simmons, 3rd Ret Holloway, Heaviest Red Ron Holub, 2nd Mike Christians, 3rd Joey Hague, Heaviest Flounder Mike Christians, Most Spots on a Red Cliff May, & Black Jack Trout (closest to 21 inches without going over) Adam Rodbers.

First Red – *Ron Holub*

2nd Red Fish - *Mike Christians*

3rd red- *Joey Hague*

Special Thanks to our Golf and Fishing Sponsors.

ABM Irrigation • Brouwer Kesmac • Capital Farm Credit • Progressive Turf Equipment

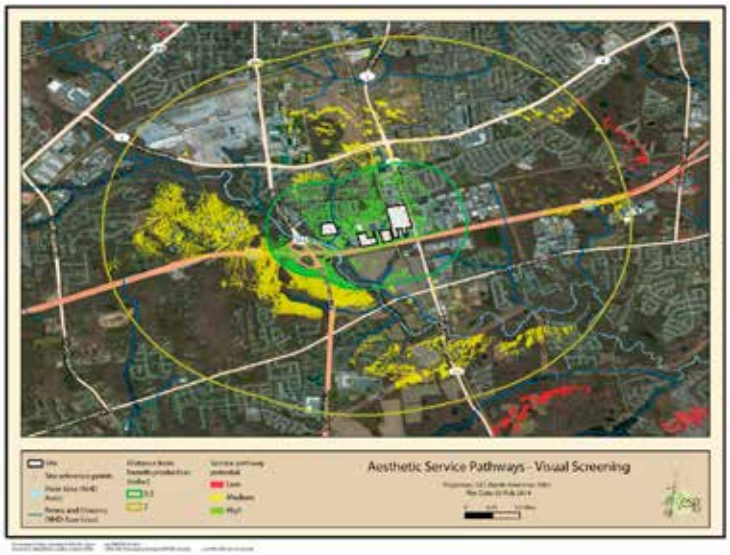
Sanders Pinnacle Brand Agriculture • Triangle Turf Inc • Texas Sod • Miner Material Handling

Del's Grass Farm • Rod Grass • Red's Grass • Trinity Turf Nursery • Tri-Tex Grass

Urban Areas On Ag Watershed

(Continued from Page 10)

For the purposes of this study, low-density developed land includes residential lots with 20-49 percent impervious surfaces, medium-density developed land includes residential lots with 50-79 percent impervious surfaces, open space includes



impervious surfaces of less than 20 percent and mostly lawn grasses, grassland includes grassy or other herbaceous vegetation of greater than 80 percent (meadows/prairies), and forest were defined as areas where trees were greater than 20 percent of total vegetation cover. Each site consisted of a 30 m x 30 m (98.43 ft. x 98.43 ft.) area within which four 5 m x 5 m (16.40 ft. x 16.40 ft.) subplots were established where vegetation was measured, and soil samples were collected. Three biophysical indicators were measured in each site and included soil carbon, available phosphorous, and saturated hydraulic conductivity, These indicators were then evaluated using linear mixed models to test for significant differences based on the effects of land cover and time since development.

All three ecosystem services indicators differed among land-cover classes. Carbon density was highest in more developed land covers, including open space and residential areas with low and medium-density developed residential lots. Higher soil carbon in open spaces and residential lots than in forests and grasslands is consistent with previous research in urban and suburban landscapes. Open spaces in this study consisted primarily of lawn grasses and included city parks, golf courses, and cemeteries. These areas along with residential lots were able to capture the most carbon of any of the land-cover classes in this research. The high soil carbon in these areas indicates the high

The large amount of leaf area in managed turfgrasses coupled with their dense, fibrous root systems make them ideal for capturing carbon in urban and suburban areas. Photo by Steve Trusty

productivity of managed turfgrass systems and their ability to capture carbon.

A common question often asked though is whether these carbon gains are larger or smaller than carbon emissions from mowing, fertilizer production, etc. Other research in this area has shown that managed turfgrass systems capture more carbon than is produced, even when taking into account carbon emissions from turfgrass management practices. The large amount of leaf area in managed turfgrasses coupled with their dense, fibrous root systems make them ideal for capturing carbon in urban and suburban areas. This also means that perennial turfgrasses are great for remediating disturbed soils and restoring the carbon:mineral balance that is often destroyed during construction practices associated with urban sprawl. Increases in urbanization and the subsequent capture of carbon in managed turfgrass systems have the potential to increase ecosystem carbon stocks at regional scales, and perhaps even larger. When determining the relative contribution of each land-cover class to citywide ecosystem services, open space (turfgrasses in city

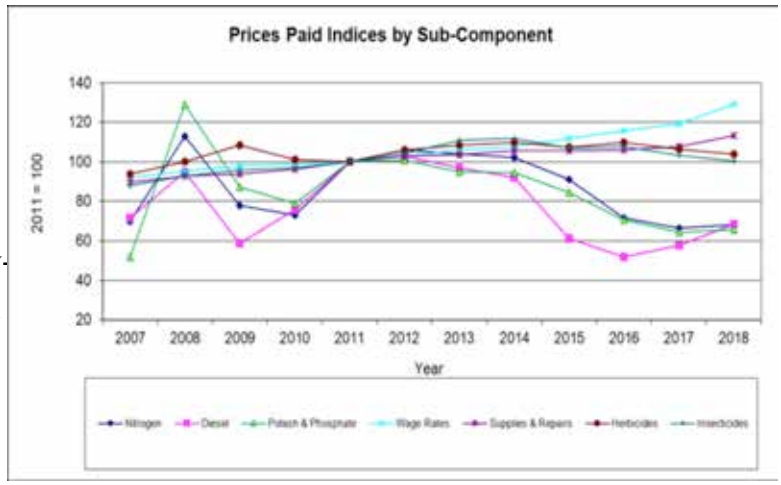
Ecosystem services delivered by urban green spaces can provide substantial benefits to the environmental, economic, and social health of urban and suburban areas. Photo by Steve Trusty

(See ECOSYSTEM, Page 22)

USDA Announces September Prices

Input Price Trends

by **DR. MARK WALLER**
Extension Economist
Texas A&M AgriLife Extension



The prices paid by farmers indices by sub-component shown in the graph below represent nationwide average annual prices of inputs purchased by farmers and ranchers to produce agricultural commodities. As can be seen, on an average annual basis, price indices for nitrogen, diesel, potash & phosphate, wages, supplies & repairs, moved mostly higher, while herbicides and insecticides have moved mostly lower.

On a monthly basis, mid-October (the most recently available data) monthly input prices were steady to higher relative to the previous month (September). Nitrogen, diesel, potash & phosphate, wage rates, and supplies & repairs, prices increased +4.6%, +3.2%, +2.5%, +1.3%, and +0.1% respectively from the previous month, while herbicides, and insecticides prices were unchanged from September to October 2018. Relative to last year (October 2017), Nitrogen, diesel, potash & phosphate, wage rates, supplies & repairs, herbicides, and insecticides prices increased +13.3%, +15.5%, +10.8%, +7.8%, +4.4%, +1.0%, and +0.7% respectively.

A continued tighter labor market, tariffs on a number of imported goods, and an anticipation of possible inflation may be influencing some increasing prices. Low farm profits in general will likely help restrain rising input prices, barring any supply-side changes. Trade/tariff concerns could continue to impact these markets over the coming months.

The average price when multiplied by quantity purchased should equal total producer expenditures for the item. The prices paid data are obtained from establishments that sell goods and services to farmers and ranchers. Annually, about 8,500 firms are randomly selected from lists by type of item sold with an average response rate in the range of 75-80 percent. Firms are asked to report the price for the specified item "most commonly bought by farmers" or that was the "volume seller."

Source: National Agricultural Statistics Service, Agricultural Statistics Board, U.S. Department of Agriculture. Agricultural Prices. Accessed December 4, 2018. Web available at http://quickstats.nass.usda.gov .



TEXAS A&M AGRILIFE EXTENSION

2019 TURFGRASS ECOLOGY & MANAGEMENT SHORT COURSE

February 25 - March 1, 2019 | College Station, TX

CORE CURRICULUM

Monday, February 25 - Thursday, February 28 ($595)

The Texas A&M Turfgrass Ecology & Management Short Course is a four-day course designed for turf professionals and enthusiasts looking to expand their knowledge of turfgrass systems and best management practices. This course moves linearly from site preparation and appropriate species selection to establishment, cultural practices, and pest management. Attendees will have the opportunity to learn from a wide range of experts with unique problem-solving perspectives. The objective of this course is to empower turfgrass managers to make confident, well-informed decisions through a combination of applied and theoretical knowledge. Participants will spend time both in the classroom and engaged in group and hands-on activities.

Topics Covered

- Introductory Turfgrass Physiology
- Principles of Soil Science
- Soil and Water Testing (Hands-on)
- Turfgrass Identification and Selection
- Site Preparation
- Turfgrass Establishment
- General Turfgrass Management
- Turfgrass Nutrient Management
- Environmental Management
- Selecting Fertilizer Products
- Water Quality
- Calculations and Calibrations (Hands-on)
- Weed Management
- Herbicide Selection and Timing
- Turfgrass Disease Management
- Laws and Regulations
- Turfgrass Insects (Pests and Beneficials)
- Ornamental Disease Management
- Landscape Ornamentals (Tour)*
- Athletic Field Management (Tour)*
- Golf Course Management (Tour)*

*Tours are weather-permitting

SOIL & CROP SCIENCES
TEXAS A&M UNIVERSITY

TEXAS A&M AGRILIFE EXTENSION

Lecturers and Featured Speakers

Dr. Jacqueline Aitkenhead-Peterson
Texas A&M University
Gary Brooks
Bayer CropScience
Katie Flowers
Texas Turfgrass Association
Dr. Becky Grubbs
Texas A&M AgriLife Extension
Dr. Mengmeng Gu
Texas A&M AgriLife Extension
Raymond Miller
Corteva AgroScience
Dr. Scott Nolte
Texas A&M AgriLife Extension
Dr. Kevin Ong
Texas A&M AgriLife Extension
Craig Potts & Nick McKenna
Texas A&M Athletics Department
Dr. Tony Provin
Texas A&M AgriLife Extension
Dr. Don Renchie
Texas A&M AgriLife Extension
Brent Batchelor
Turfgrass Producers of Texas
Dr. Benjamin Wherley
Texas A&M University

Continuing Education

The curriculum for this program has been submitted for approval by the Texas Department of Agriculture. Total CEUs to be determined. All participants will receive a certificate upon completing the first 4 days of this course.

OPTIONAL 5TH-DAY PROGRAM:

IRRIGATION WATER MANAGEMENT OF COMMERCIAL LANDSCAPES

Friday, March 1 (+$165)

Lecturers:
Dr. Guy Fipps and Charles Swanson
Texas A&M School of Irrigation

Approved by the TCEQ for 8 CEUs for Licensed Irrigators, Irrigation Technicians, and Irrigation Inspectors.

This course is designed for landscape professionals including contractors, licensed irrigators and managers of turf areas, but is useful for anyone interested in landscape water conservation or learning more about irrigation water management.

Topics Covered

Water Issues and Trends in Texas
Introduction to Irrigation Auditing
Determining Precipitation Rates
Understanding Irrigation System Efficiency
The Relationship Between Plants, Soil and Water Requirements
Science-based Irrigation Scheduling
Use of the Texas Landscape Irrigation Scheduling Software
Use of the TexasET Network and Website for Real-time Irrigation Water Management.

ADDITIONAL INFORMATION

A light breakfast, snacks, and lunch will be provided throughout the week.

Participants will be afforded the opportunity to complete the Certified Professional Turfgrass Managers (CPTM) exam through the Texas Turfgrass Association on Thursday, February 28.

For more information, visit www.aggieturf.tamu.edu
or contact Dr. Becky Grubbs at bgrubbs@tamu.edu

PRICING

EARLY REGISTRATION (BEFORE FEB 1)	PRICE	LATE REGISTRATION (AFTER FEB 1)	PRICE
Core Curriculum (Mon – Thurs)	$595	Core Curriculum (Mon – Thurs)	$645
Core Curriculum + 8-hour Commercial Irrigation Course (Mon – Fri)	$760	Core Curriculum + 8-hour Commercial Irrigation Course (Mon – Fri)	$810

TURF INDUSTRY NEWS

(Continued from Page 8)

New Television Program Spreads the Word about Pet-Friendly Green Spaces

The Outdoor Power Equipment Institute's (OPEI) environmental education and stewardship program, **TurfMutt**, will sponsor a new television program, *Ready, Set, Pet.*

Hosted by Phil Torres and co-produced by Hearst Originals, *Ready, Set, Pet* will educate and inform teens and their families about pet adoption, responsible pet ownership, and the importance of a green space for pets. In each episode, Phil will guide a family through the pet adoption process after a careful look at their unique situation to help them make an informed decision in finding the right pet for their lifestyle. While the family visits local shelters and rescues, experts revitalize their outdoor space to make a safe and eco-friendly home for their new pet. In the end, viewers will see family members overcome their disagreements and make the tough decision on which pet will join the family.

Ready, Set, Pet will teach viewers that thoughtful preparation is key when learning to care for an animal's needs. *Ready, Set, Pet* will air on Saturday mornings starting this October on the CW Network. Included in each episode will be Turf Mutt tips on the importance of our yards and managed landscapes to families, pets and the environment. Kris Kiser, President of OPEI, will appear on select episodes working with professional landscapers to implement the Turf Mutt tips.

STMA to Host 30th Annual Conference & Exhibition

Sports Turf Managers Association (STMA)—the non-profit, professional association for the 2,700 devoted men and women who manage outdoor sports fields worldwide to provide the safest possible playing surfaces—will host its 30th annualConference & Exhibition January 22-25, 2019, in Phoenix, AZ. The coalition of more than 1,600 leaders in the sports turf industry will flock to the Phoenix Convention Center for four days of industry education, networking events and exhibitor demonstrations. The summit is highlighted by daily events including a volunteer field rebuild at Lindo Park in partnership with Project EverGreen, Sports Turf Talk Show, Women's Forum & Lunch and the STMA Awards Reception & Banquet. Participants will enjoy the "Seminar On-Wheels" tour. Facility visits include University of Phoenix Stadium (home of the Arizona Cardinals), Camelback Ranch (Los Angeles Dodgers, Chicago White Sox training facility), Sun Devil Stadium at Arizona State University, Sloan Park & Riverview Park (Chicago Cubs Spring Training complex), and Salt River Fields at Talking Stick (MLB Spring Training home of Colorado Rockies and Arizona Diamondbacks). For more information: **www.STMA.org or 800-323-3875.**

DOL Conducting Initiative to Strengthen H-2B

Compliance The U.S. Department of Labor's (DOL) Wage and Hour Division (WHD) is conducting a nationwide initiative to strengthen compliance with the labor provisions of the H-2B temporary visa program in the landscaping industry, in order to ensure compliance with federal wage laws. The initiative will provide compliance assistance tools and information to employers and stakeholders and include conducting investigations of employers using this program, according to the U.S. DOL.

"The H-2B visa program includes specific requirements employers must follow to participate. This initiative demonstrates our commitment to educate employers about those rules and enforce them to safeguard American jobs, protect guest workers and level the playing field for law-abiding employers." The landscaping industry employs more H-2B workers than any other industry, according to the U.S. DOL.

NALP Meets with DOL, Agrees to Collaborate

NALP met with senior officials in the Department of Labor's Wage and Hour Division in September. The Wage and Hour division is responsible for enforcing components of the H-2B program, and the previous month had issued a press release indicating an intent to increase enforcement and compliance efforts on H-2B users in the landscape industry (see News topic above). In response, NALP contacted DOL to proactively engage the Department and determine how to best assist members to ensure they remain compliant.
The discussion between NALP and DOL was very productive and an agreement was reached to collaborate and cooperate by developing H-2B compliance resources for the landscape industry, provide educational opportunities at meetings, provide contacts and compliance assistance in the field and lastly implement a plan to hold a webinar later this fall/winter with the Department to further educate members on H-2B compliance issues. Check the NALP website, **https://www. landscapeprofessionals.org/** for details and updates.

NLRB Proposes Rule to Redefine "Joint Employer" Standard

The National Labor Relations Board (NLRB) has published a proposed rule to roll back the controversial definition of the "joint employer" standard set forth in the 2015 Browning-Ferris Industries court decision. The Browning-Ferris Industries decision held the employer liable

(See TURF NEWS, Page 23)

Turfgrass Producers of Texas Annual Meeting & Trade Show

January 28th &29th 2019

The TPT Annual meeting and trade show will be packed with great information and allow you to visit with growers and sponsors alike

Monday January 28

Meet and Greet & Annual Meeting Dinner

Tuesday January 29

Educational Session and CEU Conference

Where: Hilton Garden Inn

3081 University Drive East

Bryan, TX 77802

Registration will be mailed

Registration Form
2019 TPT Annual Conference and Trade Show
Monday January 28 & Tuesday, January 29, 2019

Company: _____

Mailing Address: _____

City: _____State: _____Zip: _____

Phone Number: ( ) _____Fax Number: ( ) _____

E-mail: _____

All attendees must have name badges to attend meetings and meals.
Please furnish names as you wish them to appear on name badge.

Monday includes Welcome Reception, Silent Auction 3-6:00 p.m. Annual Banquet 7:00 p.m.
Hilton Garden Inn 3081 University Drive East, Bryan, Texas, 77802, TEL: +1-979-703-7919 FAX: +1-979-703-7917

Tuesday includes CEU Conference, Lunch, other speakers.
Hilton Garden Inn 3081 University Drive East, Bryan, Texas, 77802, TEL: +1-979-703-7919 FAX: +1-979-703-7917

Tour of the Texas A&M Turf facility following the meeting weather permitting.

REGISTRATION FEES

Advance Registration deadline: *January 15, 2019*

	Monday Jan. 28	Tuesday Jan. 29
Additional Banquet meal tickets for spouses or guest $25.00	**Member $50.00 Non Member $75.00**	**Member $50.00 Non Member $75.00**
Name on Badge:		
Name on Badge:		
Name on Badge:		
Name on Badge:		
Name on Badge:		

(Duplicate Registration Form for additional names)

Total Due $_____

Make check payable to *Turfgrass Producers of Texas*. Please mail registration form to:
Brent Batchelor, Executive Director (Phone: 979-533-9750)
Turfgrass Producers of Texas P.O. Box 3010 Glen Rose, Texas 76043

Turfgrass Producers of Texas
P.O. Box 3010
Glen Rose, Texas 76043

Brent Batchelor, Executive Director
Cell: (979) 533-9750
b_batchelor86@att.net

2019 ANNUAL CONFERENCE & TRADE SHOW

Monday, January 28 & Tuesday, January 29, 2019

EXHIBITOR REGISTRATION FORM

Company Name: _____

All exhibitors must have name badges to attend meetings and meals.
Please furnish names as you wish them to appear on name badge.

Representative's Name: _____
_____

Please furnish company information as you wish it to appear in Exhibitors Directory.

Address: _____
_____
Phone: _____Fax:_____
Email: _____ Website: _____
Mobile Phone: _____

Registration Fees

(Fee includes 2 Lunch Tickets & 2 Dinner Tickets. Additional tickets may be purchased below)
Please indicate # for Monday Banquet/Dinner _____ # for Tuesday Lunch_____

- Trade Show Fee Member @ $300.00 $ _____
- Trade Show Fee Non-Member @ $400.00 $ _____
- Additional Banquet/Dinner Tickets _____@ 50.00/ each $ _____
- Additional Lunch Tickets _____@ 15.00 / each $ _____

TOTAL $ _____

I wish to donate the following for the Silent Auction: _____

_____

Please mail your registration form and fees by January 2, 2019
TPT P.O. Box 3010 Glen Rose, Texas 76043

Ecosystem Services

(Continued from Page 14)

parks, golf courses, and cemeteries) were the highest contributors to soil carbon stocks.

Phosphorous was lowest in open space and grasslands, and intermediate in forests, while saturated hydraulic conductivity was highest in forests followed by grasslands, residential areas, and then open space. Phosphorous was banned within Madison city limits in 2005, yet soil phosphorous still remained highest in residential areas. This could be due to legacy effects of phosphorous use in prior years, but also as a result of pet waste. A research study in Minnesota found that pet waste contributed up to 76 percent of total phosphorous in residential watersheds in Minnesota. Regardless, proper nutrient management plans are important in any urban or suburban area due to the large amounts of impervious surfaces that can lead to phosphorous being present in stormwater runoff. The relatively high saturated hydraulic conductivity in forests and grasslands relative to developed land-cover is no surprise given the impacts of construction and impervious surfaces on reduced infiltration.

So, what does all this mean for the city of Madison, WI, and the ecosystem services provided by the relative contribution of the various land-cover classes of forests, grassland, open space, and developed residential lots?

It means that low and medium-developed residential lots accounted for over 50 percent of the carbon stocks in urban green spaces and over 60 percent of available soil phosphorous. While one may argue that increased soil phosphorous in residential lots is a bad thing, the ultimate fate of that soil phosphorous is really what is important. The ability of managed turfgrasses to prevent soil erosion means that soil phosphorous from prior land-use legacy effects will likely remain in place, and not end up in local watersheds. Only if that land is disturbed, and proper construction practices are not followed, will that soil phosphorous leave a managed turfgrass system due to its dense, fibruous leaf, stem, and root structure and ability to hold it in place. Less developed green spaces such as urban forests comprised less than 9 percent of the total land cover but provided 19 percent of the city's infilltration capacity.

Ecosystem services delivered by urban green spaces can provide substantial benefits to the environmental, economic, and social health of urban and suburban areas. Forests, open spaces including golf courses, cemeteries, parks, etc., and even residential lots all play a pivotal role in maintaining the balance between urban growth and nature. The many positive benefits

A relatively new area of research called Ecosystem Services (ES) is bringing to light the value of natural capital in urban and suburban environments. Photo by Steve Trusty

of maintaining healthy plants in urban environments has long been recognized, but through current and future research in the area of Ecosystem Services such as presented here, it will become increasingly simple to quantify these benefits. and make their full value known.

The full article on Dr. Ziter's research, "Current and historical land use influence soil-based ecosystem services in an urban landscape," can be found in the Journal of Ecological Applications, Volume 28(3), pp. 643-654. Carly Ziter, PhD, Department of Zoology, University of Wisconsin-Madison, developed this research with the assistance of her postgraduate doctoral student, Monica G. Turner.

(Continued from Page 18)

with independent contractors if they had the authority to exercise indirect control over the independent contractor's employees. This definition deviated from long standing notions of agency law and exposed companies to additional liability when contracting work. The new standard published by the NLRB in September would require that the potential joint employer must "possess and exercise substantial, direct, and immediate control" over those workers. This standard more accurately reflects agency law precedent and better protects employers from liability when they do not actually possess control of workers' actions.

The proposed rule is open for public comment until November 13, 2018, before it goes final, likely in 2019.

Public Comment Sought on Soil Health Standards & Lab Procedures

The U.S. Department of Agriculture (USDA) released a set of standard indicators and associated laboratory procedures to assess soil health in September. These measures—recommended through a multi-organizational collaboration among soil health experts in the federal, university, public and private sectors— are being developed to improve conservation planning and implementation across the United States.

The USDA's Natural Resources Conservation Service (NRCS) has posted a draft Technical Note detailing these soil health indicators and associated laboratory methods in the Federal Register for public review and comment. NRCS is accepting comments on this Technical Note through December 13, 2018. USDA will work closely with other stakeholders to ensure that the indicators and corresponding laboratory methods are appropriately understood and applied across diverse agricultural environments.

Review and comment on the draft Technical Note in the Federal Register by December 13, 2018. Learn more about the basic principles of soil health on the NRCS website, https://www.nrcs. usda.gov/wps/portal/nrcs/main/national/soils/health/.

Gen Z Is Set to Outnumber Millennials Within a Year

Gen Z will comprise 32 percent of the global population of 7.7 billion in 2019, nudging ahead of millennials, who will account for a 31.5 percent share, based on Bloomberg analysis of United Nations data and using 2000/2001 as the generational split. People born in 2001 will turn 18 next year, meaning many will enter university, be eligible to vote and, depending on their citizenship, smoke or drink alcohol without breaking the law. Gen Zers have never known a non-digital world and have grown up amid events such as the "war on terror" and Global Recession. "Each generation comes with a unique set of behaviors and presents a unique set of challenges for those looking to reach them," according to a report by research firm Nielsen Holdings Plc. "Gen Z are bombarded with messages and are a generation that can quickly detect whether or not something is relevant to them."

INTERNATIONAL EDUCATION CONFERENCE | THE WESTIN CHARLOTTE
CHARLOTTE, NORTH CAROLINA
FEBRUARY 18-20, 2019

TURFGRASS PRODUCERS OF TEXAS

BRENT BATCHELOR, *Executive Director*

P.O. BOX 3010
GLEN ROSE, TEXAS 76043
Phone: 979.533-9750
•
email: tpt@txsod.com

WE'RE ON THE WEB!

www.texasgrass.com

Please notify Brent Batchelor at 979-533-9750 if you wish to be removed from the Turgrass Producers of Texas Mailing List.