4th Quarter 2024

## **TEXAS TURFGRASS ASSOCIATION**



#### Full Conference Program - Pages 23 - 26

Texas Turfgrass Association 2024 Gun Raffle Wednesday December 18 *A maximum of 1,200 tickets Need not be present to win * Donation: \$25 each or 5 for \$100		
Seretta A300 Synthetic Shotgun 12 or 20 gauge Seretta A300 Synthetic Shotgun 12 or 20 gauge BUENA VISTA (grass) Remington 700 BDL 270 Winchester Bolt Rifle Sig Sauer P320 9mm Auto Pistol Horizon		
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## **TEXAS TURFGRASS ASSOCIATION**

## President's Message

of 2024 and is currently enjoying their winter in Texas.

Thank you to everyone who has registered to be a part of our Winter Show in Corpus Christi, TX. We are always excited when we can venture to different regions and keep engaging with Members and Exhibitors to promote our Turf Industry. We could not do these events without your support.

Our Association is continuing to progress and keep education new and relevant to all the members. If there is something our association is missing, please let us know and we will work to improve or address it if we can. Our 2<sup>nd</sup> Annual Gun Raffle will not only provide a fun environment to the association, but the proceeds will help our association promote education.

Next, we will turn our attention to the Summer Conference at the Hyatt Lost Pines in Bastrop, TX, July 20<sup>th</sup>- 22<sup>nd</sup> so be sure to mark your calendars. For next winter, we will venture back to Denton, TX December 9<sup>th</sup>- 10<sup>th</sup>. Our goal remains to hit the State of Texas and keep the turf industry engaged.

Please do not forget to support our vendors and sponsors when repairs, equipment, and sod are needed. Thanks to all our sponsors, without you our industry would not survive. Special thanks to our Annual Sponsors of TTA and our Board of Directors for their continued dedication to our Association.

Have a Blessed winter, Christmas season, and Great New Year!



# Special Thanks To Our 2024 Sponsors!

## PLATINUM SPONSORS



**Executive Director Message** 

This past year, 2024, has been all about allowing our conference to grow in Education and Networking through the Summer Show and this Winter Conference! What I love is that a Board of Directors can come together in a room and talk passionately about what we can do to grow, change, and encompasses differently the industry. Are we going to hit the mark? Not always. But we do make small jumps in the right direction and always for the benefit for the members and to advance the industry and our education.

Huge Congratulations to our 2024 Awards Winners which I will be highlighting in the upcoming 2025 Quarters. I love

the dedication to each submission, the passion on how to improve a field or landscape, and the details to show the progress.

## 2024 Annual Award Winners

2024 Soccer Field of the Year- Dyess Soccer Complex Green Thump of the Year- McMahan Turf and Agronomics, LLC Lawn under 10,000 Square feet- Memorial Park and Conservancy Lawn over 10,000 Square feet- Memorial Park and Conversancy Football Field of the Year- Texas A&M – Kyle Field Baseball Field of the year- Town of Prosper

## <u>Job Well Done!</u>

I was so pleased to see how well his past winter show and education turned out. My hope this that we continue to ignite the need for these two days of education, networking, and invaluable learning each December. I realize that you may be able to go to lots of other shows / conferences to earn your CEU's. TTA has a



**Texas Turfgrass Association** 

#### has implemented a Texting System and we urge you all to opt in.

#### Membership Texting - Join

#### Please Text: TTA2023 To: 972-243-9239

This service will only be used for TTA events and notifications.

This is a great tool! Emails get buried and you can stay informed!

goal to keep you coming back for the time, experience, and top-notch education.

If you know anyone that is wanting to become a member or feel they would benefit, please get them to join our association. Remember we are actively trying to keep Sod, Sports, Golf, Lawn and Landscape, and Affiliates working together!

Thank you to all Members, Exhibitors, Sponsors, and my amazing Board of Directors for working, speaking, and emailing me all year long. I look forward to a great year in 2025.

God Bless! Warmest Regard C Your Executive Director, Katie Flowers

Laso Hower



Summer Conference - Bastrop

July 20 - 22

2025 Conference Sites



Save the Dates!

Winter Conference - Denton

December 9 - 10

Join us at these great sites in

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# Assessing application error on sports fields across varying levels of sprayer technology and operator experience

Weston Floyd, CSFM, Megan Muesse, Hailey Tucker, Opeyemi Alabi, Jacob Winger, and Chase Straw, Ph.D.

#### Department of Soil and Crop Sciences, exas A&M University College Station Texas US/

Texas A&M University, College Station, Texas, USA

The demand for precise input application and operational efficiency in turfgrass has driven the development of Global Navigation Satellite System (GNSS)-equipped sprayers, which offer several advantages over conventional systems. Features like individual nozzle control and automated operation within preset boundaries reduce the need for manual boom control, while enhancements such as sub-centimeter precision correction and autosteer further minimize human error.

Despite these benefits, GNSS sprayers have seen limited adoption in the broader turfgrass industry, with increased interest primarily in the golf course sector. Early adopters report benefits such as reduced treated area, shorter application times, less reliance on operator expertise, and improved accuracy. However, testimonials remain scarce in sports field management, where skepticism about the technology's value persists.



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As the sports field industry increasingly embraces sustainable practices and faces rising labor costs, the demand for technological solutions is expected to grow. Overcoming hesitancy toward new technologies will require extensive demonstrations to promote adoption. Currently, there is limited unbiased data on the benefits of GNSS-equipped sprayers for sports field managers.

This research aims to fill that gap by quantifying application errors on sports fields using different sprayer technologies and operator experience levels. The hypothesis is that as technology advances, discrepancies in misses, overlaps, and overspray will decrease, reducing the total sprayed area and minimizing differences between experienced and inexperienced operators.

#### Study design, equipment, and application process

Research was conducted from winter 2022 to summer 2023 in College Station, TX, at Veterans Park and Athletic Complex and Southwood Athletic Park. Identical studies were performed on softball/baseball and soccer fields at both locations. Using a crossover design, six treatments— manual, GNSS, and GNSS + autosteer sprayer technologies, each operated by both experienced and inexperienced operators—were applied to three fields of each type at both locations. Each field received all six treatments to evaluate technology performance across operator skill levels.

At Veterans Park, a Toro Workman 200 Spray System (18 ft. boom) with Ninja GPS Spray Control, a Smart7 GNSS receiver, and Polaris autosteer was used (Figure 1). At Southwood Park, a John Deere ProGator with an Above Par Tech sprayer (20 ft. boom), a GPS 7500 GNSS receiver, and SteadySteer autosteer was employed (Figure 2).

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Winter Conference - Denton, Texas

December 9 - 10

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Both sprayers featured correctional services, individual nozzle control, automatic rate control, on -screen guidance, and adjustable spray parameters.

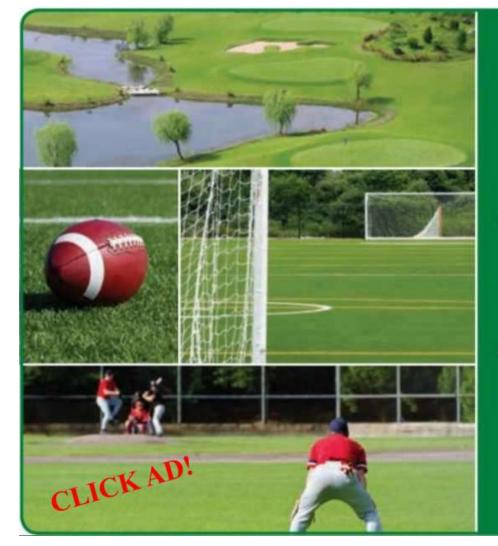


Figure 1. The experienced operator making an application using the GNSS sprayer



Figure 2. An inexperienced operator making an application using the GNSS sprayer

#### Continued on page 14



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32601 F.M. 529 • Brookshire, TX 77423 Phone 281.375.7505 • AllSeasonsTurf.com One experienced operator with nearly 20 years of sports field spraying experience, including three years with GNSS and autosteer, was assigned to each location. Four inexperienced college students, new to both spraying and the technology, were assigned to specific locations and field types, ensuring their inexperience remained consistent. Each student received a 30-minute training session on sprayer controls before their first application.

Field boundaries were georeferenced once using the sprayers' GNSS receivers to establish consistent target areas for all fields, aiding in GNSS and GNSS + autosteer treatments. The average target areas were 74,899 ft<sup>2</sup> for Veterans Park's softball fields and 37,631 ft<sup>2</sup> for Southwood Park's baseball fields, with soccer fields averaging 88,244 ft<sup>2</sup> and 33,644 ft<sup>2</sup> at Veterans and Southwood, respectively. Water was used for treatments at 65 gallons per acre, and designated level areas were marked for filling and draining the sprayers. Sprayers were filled to 150 gallons for Veterans Park and 80 gallons for Southwood, based on field size.

At Veterans Park, the dual-nozzle sprayer used FastCap 422FC11004 and 422FC11006 nozzles, while Southwood Park used a single-nozzle sprayer with COMBO-JET SR110-08 nozzles. The accuracy of the water volume in the tank was confirmed by measuring in fivegallon increments and validating the flow meters against the computer outputs before the initial treatments.

Treatment applications occurred from December 2022 to May 2023 at Veterans Park and from June to July 2023 at Southwood Park, depending on field availability and weather. To prevent tire tracks from being used as a guide, sufficient time was allowed between applications for the tracks to disappear. Sprayers operated at 2.5 mph, controlled by a speed regulator.

For manual treatments, monitors were covered, and foam markers guided operators, who manually controlled the booms. GNSS treatments used foam markers and on-screen maps, while GNSS + autosteer treatments added autosteer. Both GNSS treatments featured individual nozzle control, with a 100% overlap setting. After each treatment, remaining water was drained via valve and hand pump. Spray data were stored in the sprayers' computers and later exported for analysis.

#### Data processing and analysis

The study measured target area misses, overlaps, and overspray. Data downloaded from the sprayer computers included field boundaries, sprayer paths, and coverage. The percentage of target area missed and overlapped was calculated by comparing the spray coverage to the field boundaries, excluding non-target areas. Missed areas were identified where no spray was applied, and overlaps where sections were sprayed more than once. These percentages were then calculated as a proportion of the total target area. Overspray was calculated by subtracting the amount of water left in the tank after spraying from the initial volume. The percentage of overspray was determined by dividing the actual volume applied by the intended volume for the target area, then multiplying by 100. Any values over 100% indicated overspray.

The percent total volume saved between treatments was determined by subtracting the lower percentage from the higher one, dividing the absolute value of this difference by the higher percentage, and then multiplying by 100 to convert it into a percentage.



For example, if treatment A used 105% of the intended volume (i.e., 5% overspray) and treatment B used 110% of the intended volume (i.e., 10% overspray), then the total volume savings by using treatment A is 4.6%, calculated as ((|105-110|)/110)\*100 = 4.6%.

Only the 422FC11004 nozzles were used at Veterans Park in manual mode because individual nozzle control could not be turned off when dual nozzles were active, resulting in a lower spray volume since the sprayer isn't designed for single-nozzle operation. Therefore, the percent target area overspray was analyzed separately by location, as the manual total volume applied data from Veterans Park was unreliable. However, this issue did not affect the percent of the target area missed and overlapped, as spatial spray data were recorded for all treatments.

#### Misses, overlaps, and overspray on softball/baseball fields

The results for percent target area missed were similar across locations, so data were combined for treatments and locations. Inexperienced operators using manual sprayers had the highest percentage of missed areas (3.7%), while experienced operators showed no major differences across sprayer technologies. There was also no difference in missed areas between GNSS and GNSS + autosteer, regardless of operator experience. Southwood Park had more missed areas (2.4%) compared to Veterans Park (1.4%).

For percent target area overlapped, results differed by location, so data are presented separately for each. At Veterans Park, the manual sprayer used by inexperienced operators caused the highest overlap (8.3%). In other cases, both experienced and inexperienced operators performed similarly across sprayer technologies. As technology advanced, overlap decreased, with GNSS + autosteer reducing overlap to less than 2% (Figure 3).

At Veterans Park, overspray was similar between operators within each technology level, but advanced technology reduced overspray. GNSS + autosteer led to 2.1% overspray compared to 6.3% with GNSS, saving 4% of the total water volume. For inexperienced operators, autosteer reduced overspray by 3.3%.

At Southwood Park, there were no significant differences in overspray between operators within each technology level, but experienced operators generally had higher overspray. While there wasn't a clear advantage between manual and GNSS or GNSS and GNSS + autosteer, switching from manual to GNSS + autosteer significantly reduced overspray. For experienced operators, overspray dropped from 11.5% with manual to 6.5%, and for inexperienced operators, it dropped from 9.7% to 5.7%, resulting in a 3.7% reduction in total water used.

#### Experienced Operator

Inexperienced Operator

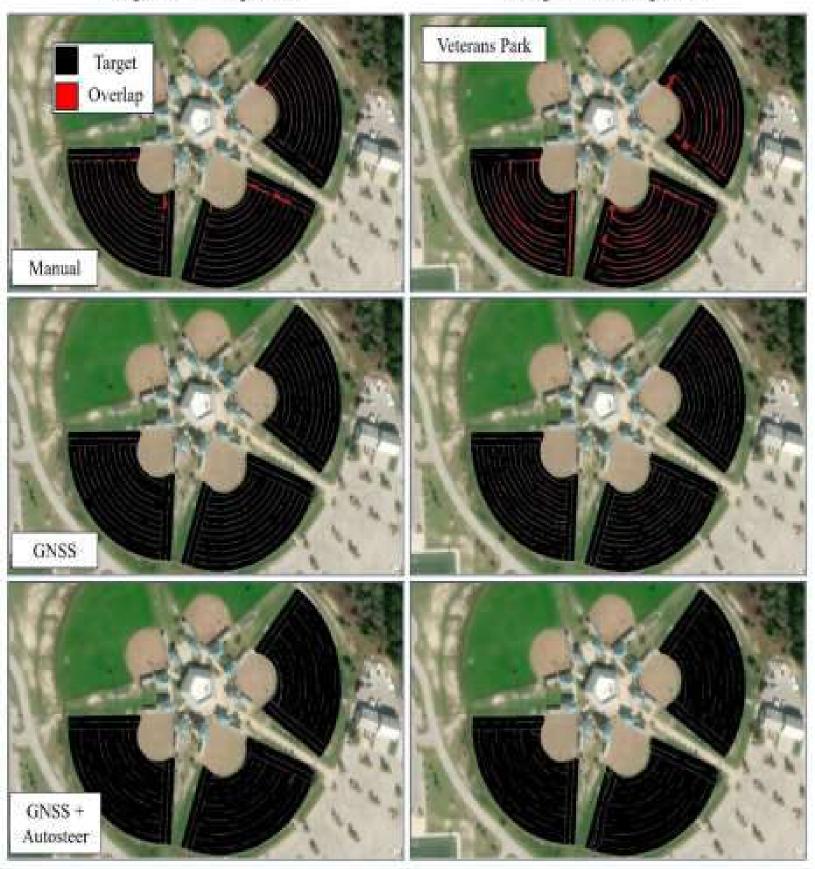


Figure 3. Maps of target area overlapped on softball fields at Veterans Park across manual, GNSS, and GNSS + autosteer sprayer technologies (rows) and operator experience (columns)

#### Misses, overlaps, and overspray on soccer fields

The results for percent target area missed on soccer fields were consistent across locations, so data were combined for treatment analysis. The manual inexperienced operator had the highest percentage of missed target area (2.8%), which was higher than all other treatments. There were no differences in missed areas among experienced operators across any level of sprayer technology. Additionally, there was no difference in missed areas between GNSS and GNSS + autosteer, regardless of operator experiencee.

Similarly, the results for percent target area overlapped were consistent across locations, so data were pooled for analysis. The manual inexperienced operator had the highest overlap (6.4%), significantly more than the manual experienced operator (4.3%). The manual experienced operator's overlap was similar to that of the GNSS inexperienced operator (3.6%), and both operator types showed similar results within the GNSS and GNSS + autosteer technologies. Overlap decreased as sprayer technology advanced, with both operator types achieving less than 1% overlap using GNSS + autosteer (Figure 4).

The results for percent target area oversprayed differed slightly between locations, so data are presented separately. At Veterans Park, operator experience did not affect overspray with the GNSS sprayer, with both experienced and inexperienced operators having similar overspray rates (6.2% and 6.5%, respectively). However, the addition of autosteer reduced overspray to 2.3% for experienced operators and 3.8% for inexperienced operators, resulting in total water savings of 3.7% and 2.5%, respectively.

At Southwood Park, overspray results were similar between operators within each sprayer technology level, though the inexperienced operator consistently had slightly higher overspray. For experienced operators, overspray decreased from 11.1% with manual to 8.3% with GNSS, but there was no further reduction with GNSS + autosteer (6.2%). For inexperienced operators, overspray dropped from 12.1% with manual to 10.2% with GNSS and further to 7.0% with GNSS + autosteer.

Overall, both operator types saw a reduction in overspray as sprayer technology advanced. Moving from manual to GNSS technology reduced overspray by 2.8% for experienced operators and 1.9% for inexperienced operators. Upgrading from GNSS to GNSS + autosteer reduced overspray by 2.1% for experienced operators and 3.2% for inexperienced operators. Switching from manual to GNSS + autosteer technology resulted in total water savings of 4.4% for experienced operators and 4.6% for inexperienced operators.

#### **Experienced** Operator

#### Inexperienced Operator

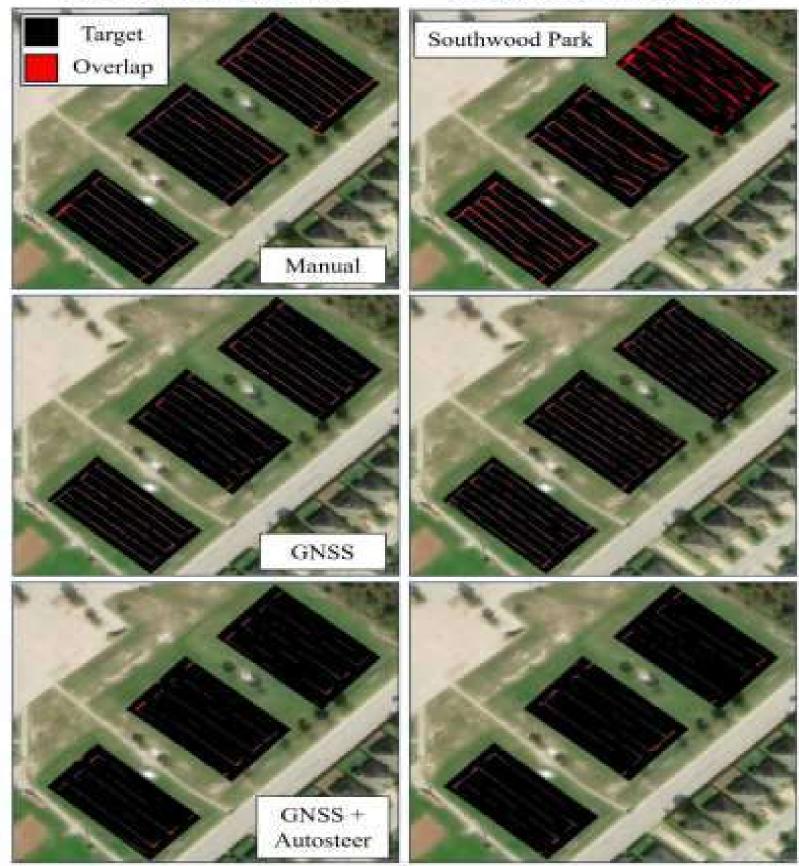


Figure 4. Maps of target area overlapped on soccer fields at Southwood Park across manual, GNSS, and GNSS + autosteer

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#### **Recommendation for sports field managers**

Inexperienced operators using manual spray mode had the highest rates of misses and overlaps, except for overlaps on Southwood Park's baseball fields. GNSS and autosteer technologies significantly reduced these errors across all locations and field types (Figure 5). Standard deviations of misses and overlaps decreased with advanced technologies, especially when comparing inexperienced manual mode to GNSS + autosteer, indicating more consistent applications. Additionally, advanced technology reduced overspray and the total volume applied. Investing in GNSSequipped sprayers with autosteer minimizes reliance on experienced operators, reduces errors, and enhances consistency. This study used factory settings, so further improvements might be possible by adjusting overlap parameters

Figure 5. An inexperienced applicator making a pass using manual mode (left) and GNSS + autosteer (right) on soccer fields at Veterans Park.



#### Acknowledgements

The authors wish to extend their gratitude to the Texas Turfgrass, Research, Education, and Extension Endowment for providing funding for this study. They also want to express their thanks to GLK Turf Solutions and Traqnology for providing the Above Par Tech sprayer and real-time kinematic correction service, respectively, for use in the study. Additionally, appreciation goes to Stephan Richardson, the Parks Operations Manager of the City of College Station, Curtis Richmond, the Southwood Park Supervisor, Keith Fails, the Veterans Park Supervisor, and Ken Rost and Cam Schafer from Frost, Inc. for their support of this project.

# Winter Conference & Trade Show December 17th & 18th, 2024

## Texas Turfgrass Association Keeping Texas Green Since 1947



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## Monday, December 16

Exhibitor Set up in Exhibit Hall A/ CPTM Lecture

CPTM Lecture, Room C101 Monday December 16 & Tuesday December 17 with test to follow! \*Advanced registration required\* Certified Professional Turf Manager

Monday December 16, 2024 Join us for lecture 12 pm - 4pm

Tuesday, December 17, 8 am- 12 pm

Testing to follow at 2 pm December 17.

\$ 50.00 for Members \$ 125.00 for Non-Members

**OVERVIEW-** The Certified Professional Turf Manager (CPTM) designation recognizes a level of achievement in professional turfgrass management in Texas beyond a Bachelor of Science degree or a long tenure in the industry. The CPTM designation is a mark of distinction. Professinals who acquire the CPTM designation benefit the turfgrass industry and themselves through increased self-esteem and respect, increased value and service to their employer and increased competitiveness in the job market.

#### OBJECTIVES



To raise and maintain the professional standards of those employed in the turfgrass industry in Texas.



To provide effective continuing education programs for professional turfgrass managers.



To award special recognition to professional turfgrass managers who demonstrate a high level of accomplishment and skill.



To encourage professional turf managers to become active participants in the Texas Turfgrass Association.



## **Tuesday, December 17**

**New Conference Opportunity Spanish Session** 

Single Day Spanish Education, Room C103, December 17, 2024 \*Advanced registration required\* - \$260.00 per employee Includes access to Trade Show

#### Spanish Speaking Agenda

8 am - Prácticas Culturales del Césped (Turfgrass Cultural Practices)

9 am - Fertilización y Matemáticas (Fertilization and Mathematics)

10 am - Manejo del Agua en Césped (Turfgrass Water Management)

> 2 pm - Control de Malezas (Weed Control)

3 pm - Interpretación de Etiquetas de Pesticidas (Interpreting Pesticide Labels)

Spanish Session TDA CEU's: 3 General, 1 IPM and 1 Laws and Regulations



Tuesday, December 17 Opening Day and Registration

7 am conference registration in the Grand Lobby Check in at registration with Katie Flowers

### **TDA Session for Non Licensed Attendees**

TDA Lectures, room C102: Dr. Mark Matocha Texas A&M AgriLife Extension mmatocha@ag.tamu.edu



#### TEXAS DEPARTMENT OF AGRICULTURE EXAM PREP: 8 am - 5 am

When you register for this session, you must pre-register and pay fees for the conference and this session. Texas A&M AgriLife Extension is now charging for this session. When you register for this session, it also includes the fees for the manuals you will need.

The license exam are not given at the TTA Conference. The Texas Department of Agriculture conducts all testing through a third party testing company, PSI Exams. If you would like to schedule the exams you must first register with TDA. You can register at https://licensing.texasagriculture.gov You will pay the exam fee directly to them when you test.

If you are a new applicator you will need to take the General test and at least one category test to get a license, usually the Landscape Maintenance.



Tuesday, December 17 Full Day Exhibitors Trade Show Schedule

## Exhibit Hall A, 11 am - 1 pm Grand Opening of Exhibits Enjoy Lunch While You Visit with Our Vendors

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After Education, Join us at 4:45pm - 6:30pm for Happy Hour with the Exhibitors! \*Cash Bar\* \*Hor d'oeuvres\*

\*And a Corn Hole Tournament! Form a 2 Man team and Sign-up at Rregistration Networking, Prizes and FUN!

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## Tuesday, December 17 Morning Concurrent Sessions

#### GOLF SESSIONS ROOM C107

8 am: Nematode Management on Golf Turf in Texas.

Dr. William Crow
 Ag General: I Structural L&O

9 am: The Direct Relationship Between Cutting Units & Turf Health

- Danny McConnell

10 am: Why Applications Fail

- Jim Garrett, PBI Gordon 1 Ag General: I Structural Pest

#### SPORTS SESSIONS ROOM C105

8 am: Sports Field Updates

 Nick McKenna, Texas A&M Athletics

 Brad Finn, University of Houston

9 am: Nematode Management on Sports Turf in Texas.

> - Dr. Wlliam Crow 1 Ag General; 1 Structural L&O

10 am: From Lab to Grass: An Inside Look at the Pesticide Development Process

Dr. Eric Reasor, PBI Godon
 1 Ag General; 1 Structural General

#### COMMERCIAL SPEAKERS ROOM C106

8 am: Managing High Quality Turf Using Low- Quality Water

> Dr. Ben Wherley, Texas A&M University
>  1 Ag General; 1 Structural L&O

9 am: Selecting the Right Turfgrass with emphasis in New Cultivars

> - P. Agustin Boeri, Ph.D 1 Ag General

10 am: Cutting Through the Marketing of Commercial Herbicides

> - Dr. Joey Young I Structural- Weed



## Tuesday, December 17 Annual Awards and Education

#### General Session, Location: Henry Garrett B 1 pm: Annual Meeting and Awards!

1:45 pm: The Talent Whisperer

- Dan Ralphs

2:45 pm: Fraise Mowing - Benefits of Mechanical cultural Practices

- Riley Maxey, GLK Turf Solutions

- Mark Langer, Professional Turf Services

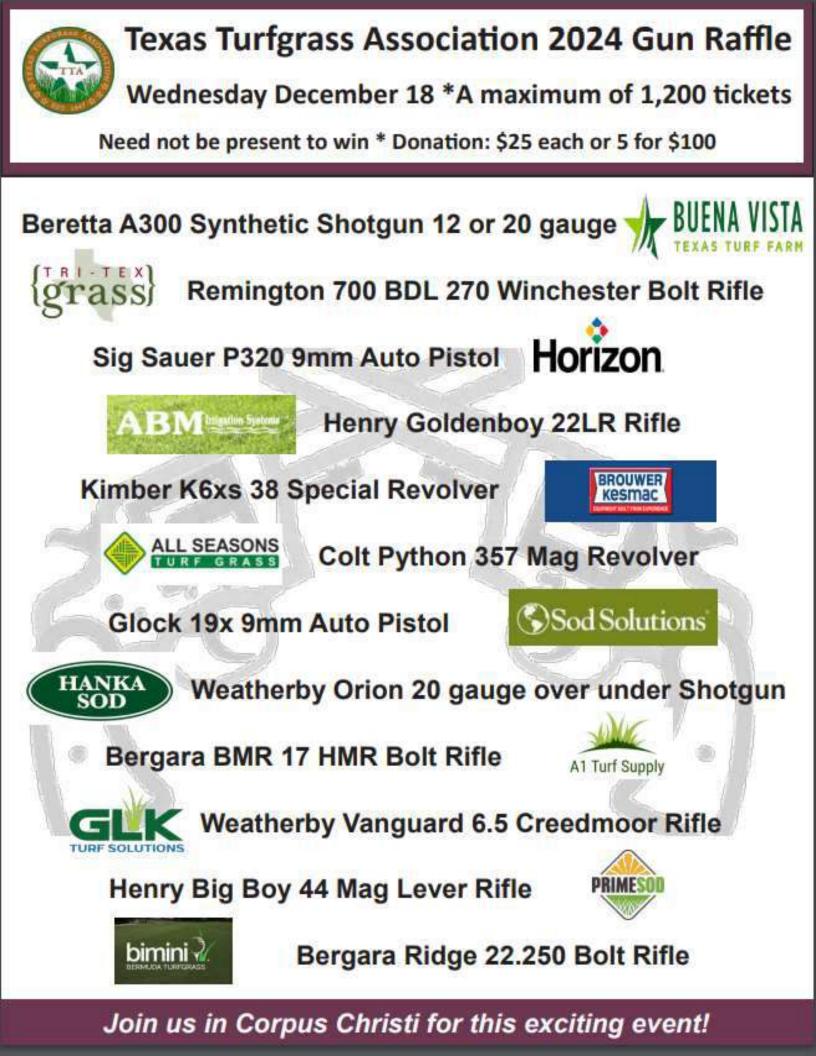
3:45 pm: There are weeds- than there are Texas Weeds

- Dr. Eric Reasor, PBI Gordon, 1 Ag IPM; 1 Structural Weed



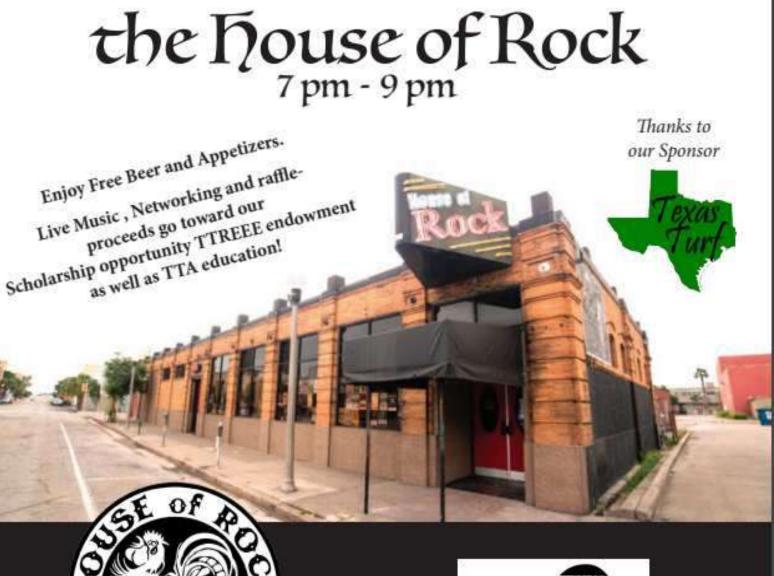
TDA Credits offered: AG:3 General; 1 IPM and 1 Laws and Regulations Structural Structural: 3 General ; 1 L&O ; 1 Weed; 1 Pest

GCSAA Credits Pending





Tuesday, December 17 Off Site Concert Event





511 Starr St. Corpus Christi, TX 78401





## Wednesday, December 18 Morning and Afternoon Sessions

#### BRUNCH WITH THE EXHIBITORS Exhibit Hall A, 9 am - 11:30 am Gun raffle Drawing- Don't miss it- 11am!

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TXSFMA - luncheon for member 12 pm- 1pm Location: Henry Garrett D

Annual Meeting for Texas Chapter Agenda will be communicated to membership



Lone Star GCSA luncheon for member 12 pm- 1pm Location: Henry Garrett C

## TCEQ - Irrigators Course

Room C102, 8 am - 5 pm Water Efficient Irrigation & BMP's Norman W. Werback TX LI 13721; TX BP 10340; TX CI 12350; TX TCEQ IAC IRRIGATION AUDITOR (TAMU) ~Wet Dog Irrigation

At a time in Texas when our water supplies are being depleated faster than they can be replenished, it is the responsibility of the stakeholder to be more efficient with this valuable resource. This trianing program focuses on the state of water in Texas and the affects irrigation have on the supply, best management practices for irrigators, understanding plant water needs, the importance of irrigation checks and audits, and alternate water supplies for irrigation and the most efficient delivery system within irrigation systems.



## Wednesday, December 18 Afternoon Concurrent Sessions

#### GOLF SESSIONS ROOM C107

- 1:15 pm: Pond Dredging a key to reducing pond and lake maintenance costs and what YOU can do about it!
  - Trent Lewis 1 Ag IPM

2:15 pm: Poa Annua Management

- Raymond Miller I Ag IPM;

#### SPORTS SESSIONS ROOM C105

1:15 pm: Developing Control Strategies for Problem Weeds in Turfgrass

> Dr. Patrick McCullough 1 Ag IPM; I Structural Weed

2:15 pm: Turf Transformation: Comprehensive Strategies for Fraise Mowing.

> Jacob Winger and Dr. Jada Powlen

#### COMMERCIAL SPEAKERS ROOM C106

- 1:15 pm: Winter Overseeding: Species Selection and Site Preparation
  - Dr. Jada Powlen 1 Ag General; 1 Structural Other

2:15 pm: How to CEO: 6 Key to having a wildly Profitable business

- Dan Ralph

3:15 pm: The Joint Talk is: Laws and Regulations - Protect Yourself

- Laura Miller I Ag Laws and Regs; I Structural General-Laws

#### Texas Turfgrass Association Keeping Texas Green Since 1947



## **Special Thank You to Our Speakers and University Advisors!**



Dr. William Crow Professor of Nematology; University of Flordia



Dr. Jada Powlen Purdue University; Lead Research Scholar; Dept. of Horticulture and Landscape Architect



Dr. Manuel Chavarria Assistant Professor & Extension in Turfgrass Physiology; Texas A&M University



P. Agustin Boeri, Ph.D Assistant Professor; Extension Turfgrass Specialist; Texas A&M ÁgriLife Researh



Dr. Ben Wherley Texas A&M University; Professor Turfgrass Science and Ecology



Mark Langer Professional Turfgrass Services



Brad Finn University of Houston



Trent Lewis, FPC Senior Consultant Engineer Surface Water Solutions



Dan Ralph Head Coach/Founder: The Lawn Care CEO





## Special Thank You to Our Speakers and University Advisors!



Nick McKenna Texas A&M Athletics



Dr. Eric Reasor PBI Gordon; Southeast Research Scientist



Jacob Winger Texas A&M Athletics



Riley Maxey GLK



Jim Garrett, CGCS Regional Sales representative: PBI Gordon



Laura Miller Texas A&M AgriLife Extension Tarrant County



Raymond Miller Corteva AgriScience



Patrick McCullough, Ph.D. McCullough Research & Development

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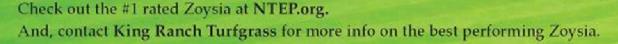
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#### Super-Sod Expands to Texas by Uniting with Tri-Tex Grass

Super-Sod, a leader in premium sod and turfgrass products, proudly announces they have joined forces with Tri-Tex Grass, a prominent turfgrass grower headquartered in Granbury, Texas. This strategic partnership aligns with Super-Sod's commitment to delivering high-quality turf solutions and expanding its footprint across the Southern United States.

Founded in 2004, Tri-Tex Grass has established a reputation for excellence in turfgrass production, serving North and Central Texas. With over 1,500 acres of sod across multiple farms, Tri-Tex offers a range of grass varieties that align with Super-Sod's offerings, including Zeon® Zoysia, Certified Tifway 419 Bermuda, and the drought-tolerant TifTuf® Bermuda.

Their dedication to innovation and customer service has made them a preferred choice among landscapers, golf courses, sports venues, and residential clients.

Super-Sod and Tri-Tex Grass combine two industry leaders with a shared vision of providing superior turfgrass products and services. This partnership expands Super-Sod's distribution capabilities to serve customers in Texas and neighboring regions.

"We are thrilled to be expanding into Texas and collaborating with the outstanding team that Tri-Tex has built," said Ben Copeland, Jr., CEO of Super-Sod.

Mike Pender and Mark Graf, who lead the Tri-Tex team, will spearhead the transition to SuperSod. "We're excited to join the Super-Sod team in Texas," Pender said. "The relationship with Ben and his talented team has limitless potential. This new collaboration allows us to utilize the synergies between the two companies, which will most benefit our customers."

Existing Tri-Tex Grass stores and farms will continue under the Super-Sod brand. Customers can expect a seamless transition with continued access to the high-quality products and services they have come to trust. The acquisition of Tri-Tex Grass on November 14, 2024, marks a significant step in Super-Sod's growth strategy, opening new opportunities for customers and the combined teams.

Super-Sod is a vertically integrated turfgrass and compost company with farms and retail locations throughout Georgia, Alabama, North Carolina, South Carolina, Tennessee, and now Texas. They sell lawn care products and specialize in sod that's available by the individual roll, full pallet, or bulk truckload. Order at SuperSod.com or by calling 1-888-360-1125 for sod delivery or pick-up, fresh from their farms. Super-Sod is open to everyone, offering online instructions for DIY homeowners and wholesale accounts for landscapers.

One of their most popular products is Soil3 humus compost. It's OMRI Listed for organic gardening and sold in cubic yard BigYellowBags and cubic foot Mini Cubes at all Super-Sod stores. Visit Soil3.com to order and learn about their composting method and the benefits of using compost in lawn care (topdressing), ornamental bed preparation, and vegetable gardening.

Super-Sod continuously develops new landscaping products and seeks to improve farming practices, technology, environmental stewardship, and employee knowledge. With their farmfresh sod and game-changing lawn care products, Super-Sod is out to rid the world of ugly lawns . . . and here to help you do it.