

Wednesday, December 1

7:30 am	Registration & Exhibitor Set-up			
8:15 - 8:30 am	Welcome, Orientation and Announcements - <i>Jack Fry</i> (Ballroom II)			
8:30 - 9:20 am	Turf and Landscapes in Kansas: Highs and Lows of 2021 - <i>Jack Fry and Megan Kennelly</i> (Ballroom II) (3A/3B - 1 hr)			
9:20 - 9:40 am	BREAK			
	Basic Turf McDowell/Tuttle room	Nursery & Landscape Alcove room <i>Cheryl Boyer, Moderator</i>	Diseases, Insects & Weeds Ballroom II <i>Ron Reese, Moderator</i>	Advanced Turf Konza Prairie BC room <i>Sam Eberly, Moderator</i>
9:40 - 10:05 am	Soils - <i>Ward Upham</i>	Environmental Stress in Trees - <i>Jason Griffin</i> (3A - 1 hr)	Core Hour: Laws, Safety & Environmental Concerns - <i>KDA</i>	Turfgrass Cultivation Practices - <i>Chrissie Segars</i> (3B - 1 hr)
10:10 - 10:35 am	Turfgrasses for KS - <i>Ward Upham</i>			
10:40 - 11:05 am	Turfgrass Weeds - <i>Dani McFadden</i> (3B - .5 hr)	Drought Tolerant Ornamentals - <i>Holly Dickman</i> (3A - 1 hr)	How Insects Pests Overwinter - <i>Raymond Cloyd</i> (3A/3B - 1 hr)	Drought Resistance in Cool-Season Grasses - <i>Mu Hong</i>
11:10 - 11:35 am	Irrigation - <i>Dale Bremer</i>			Managing Thatch - <i>Jack Fry</i>
11:35 - 1:00 pm	LUNCH (On Your Own)			
	Basic Turf McDowell/Tuttle room	Nursery & Landscape Alcove room <i>Cheryl Boyer, Moderator</i>	Diseases, Insects & Weeds Ballroom II <i>Ron Reese, Moderator</i>	Advanced Turf Konza Prairie BC room <i>Sam Eberly, Moderator</i>
1:00 - 1:25 pm	Turfgrass Diseases - <i>Megan Kennelly</i> (3B - .5 hr)	Deer Management in Urban Landscapes - <i>Drew Ricketts</i> (3A - 1 hr)	Landscape & Turf Disease Update - <i>Judy O'Mara</i> (3A/3B - 1 hr)	Advances in Fungicide Programming - <i>Joe Roberts</i> (3B - 1 hr)
1:30 - 1:55 pm	Turfgrass Insects - <i>Mu Hong</i> (3B - .5 hr)			
2:00 - 2:25 pm	Mowing Basics - <i>Jack Fry</i>	Industrial Hemp Update - <i>Jason Griffin</i>	What Happened in 2021 in Regards to Insect and Mite Pests - <i>Raymond Cloyd</i> (3A/3B - 1 hr)	Best Management Practices for Promoting Athletic Field Safety - <i>Chrissie Segars</i> (3B - 1 hr)
2:30 - 3:00 pm	Cultivation - <i>Manoj Chhetri</i>			
3:05 - 3:30 pm	Fertilization - <i>Steve Keeley</i>	Managing Nostoc and Liverwort in Nurseries - <i>Cheryl Boyer</i> (3A - 0.5 hr)	Factors Causing Preemergence Herbicide Failure - <i>Dani McFadden</i> (3A/3B - .5 hr)	Update on New Zoysiagrass Cultivar Progress - <i>Jack Fry and Chrissie Segars</i>
3:30 - 5:30 pm	TRADE SHOW - Meet with vendors, network, and chat with speakers in an informal setting			

Thursday, December 2

7:30 am	Registration
General Session - Ballroom II (<i>Jack Fry, Moderator</i>)	
8:00 - 8:20 am	Welcome, Announcements, Awards - <i>Steve Wilson, KTF President</i> Each participant will be given a raffle ticket at the beginning of the General Session. Two lucky winners will each receive 2 tickets for the K-State vs. Wichita State men's basketball game at Intrust Bank Arena in Wichita on Sunday, Dec. 5.
8:20 - 9:10 am	Understanding Biological Control of Turf and Landscape Pests - <i>Joe Roberts (3A/3B - 1 hr)</i>
9:10 - 10:00 am	Landscape and Turf Research Update: A National Perspective - <i>Cheryl Boyer (3A/3B - 1 hr)</i>
10:00 - 10:10 am	BREAK

	Advanced Turf Konza Prairie BC room <i>Ryan Varns, Moderator</i>	Nursery & Landscape McDowell/Tuttle room <i>Cheryl Boyer, Moderator</i>	Sustainability, Technology & Water Management Alcove room <i>Dale Bremer, Moderator</i>
10:10 - 11:00 am	Site-Specific Turfgrass Selection to Reduce Stress & Enhance Performance - <i>Chrissie Segars (3B - 1 hr)</i>	Update on Nursery & Landscape Problems - <i>Judy O'Mara (3A - 1 hr)</i>	Not Using Soil Moisture Sensors is Like Driving without a Fuel Gauge - <i>Dale Bremer</i>
11:00 - 11:50 am	The Turfgrass Microbiome - <i>Joe Roberts (3B - 1 hr)</i>	Native Plants to Support Native Bees - <i>Jason Graves (3A - 1 hr)</i>	Using Drones from an Industry Perspective - <i>Dana Sullivan</i>
11:50 - 1:30 pm	Trade Show (Lunch served at 11:50 am in Big Basin/Kaw Nation Room)		
1:30 - 2:20 pm	Suppressing <i>Poa annua</i> - <i>Jack Fry & Industry Panel: Ethan Shamet, Jeff White, Steve Wilson (3B - 1 hr)</i>	Diversifying Your Business with Specialty Crops - <i>Cary Rivard</i>	Keeping Ponds Clean - <i>Joe Gerken (3A/3B - 1 hr)</i>
2:20 - 2:50 pm	New Strategies for Suppressing Zoysia Seedheads with a Plant Growth Regulator - <i>Manoj Chhetri (3B - .5 hr)</i>	How <i>From the Land of Kansas</i> Can Help Your Business - <i>Sammy Gleason</i>	Establishment of Turfgrass with Drip Irrigation & Protective Covers - <i>Alex Bach</i>
2:50 - 3:35 pm	Industry Conversations Panel: <i>Mike Maas, Doug Melchior, Ryan Varns, Steve White</i>	Industry Conversations: Nursery/Landscape Roundtable	Innovative Irrigation Insights Panel: <i>Jamie Chambers, Matt Gourlay, Dana Sullivan</i>
3:35 pm	Conference Adjourned		
3:35 pm	Commercial Pesticide Exam - Konza A room		

SPEAKERS

Alex Bach, The Greensman, Kansas City, MO
Cheryl Boyer, Horticulture, K-State
Dale Bremer, Horticulture, K-State
Jamie Chambers, Turfwerks, Gardner, KS
Manoj Chhetri, Horticulture, K-State
Raymond Cloyd, Entomology, K-State
Holly Dickman, City of Hays, KS
Jack Fry, Horticulture, K-State
Joe Gerken, Wildlife & Outdoor Mgmt., K-State
Sammy Gleason, KDA, Manhattan, KS
Matt Gourlay, CGCS, Colbert Hills GC, Manhattan, KS

Jason Graves, Central KS Ext. Dist., Salina, KS
Jason Griffin, Horticulture, K-State
Mu Hong, Horticulture, K-State
Steve Keeley, Horticulture, K-State
Megan Kennelly, Plant Pathology, K-State
Mike Maas, Reinders, Olathe, KS
Dani McFadden, Horticulture, K-State
Doug Melchior, Overland Park GC, KS
Judy O'Mara, Plant Pathology, K-State
Drew Ricketts, Wildlife & Outdoor Mgmt., K-State
Cary Rivard, Horticulture, K-State
Joseph Roberts, Plant Pathology, Clemson Univ., SC

Chrissie Segars, Texas A&M, Dallas, TX
Ethan Shamet, Heritage Park GC, Olathe, KS
Dana Sullivan, Turf Scout, Greensboro, NC
Ward Upham, Horticulture, K-State
Ryan Varns, Aspen Lawn, Olathe, KS
Jeff White, CGCS, Indian Hills CC, Mission Hills, KS
Steve White, City of Derby, KS
Steve Wilson, CGCS, Milburn CC, Overland Park, KS

PRESENTATION DESCRIPTIONS

Wednesday, December 1

General Session - Ballroom II

Welcome, Orientation and Announcements - *Steve Wilson*

Turf & Landscape in Kansas: Highs and Lows of 2021 - *Jack Fry & Megan Kennelly*

A review of great things seen across the landscape and turf industry, and some of the issues that caused problems. (3A/3B - 1 hr)

Basic Turf - McDowell/Tuttle room

A series of presentations that cover the basic knowledge needed to manage turf in the Midwest. A great starting point for new employees.

Nursery & Landscape - Alcove room

Environmental Stress in Trees - *Jason Griffin*

If Kansas can throw environmental stress at trees, it will do so: wind, drought, flooding, sub-zero temperatures, sky-high temperatures, soil compaction...the list goes on. This session will cover diagnosing environmental stress in trees and managing/mitigating plant response and pest issues resulting from host plant stress. (3A - 1 hr)

Drought Tolerant Ornamentals - *Holly Dickman*

Growing landscape plants in the ever-changing Kansas environment can be a challenge, but add drought to the equation and the challenge becomes even greater! Learn about drought tolerant ornamentals that have shown to "hold their own" during times of drought. Happy plants = fewer pests and diseases! (3A - 1 hr)

Deer Management in Urban Landscapes - *Drew Ricketts*

Deer can cause considerable damage to ornamental plants, and can be a challenge to manage in urban settings. This talk will cover deer biology and appropriate methods for managing deer damage to urban landscapes. (3A - 1 hr)

Industrial Hemp Update - *Jason Griffin*

In April 2018, Kansas Gov. Jeff Colyer signed a bill enacting the Alternative Crop Research Act, leading to the legal production of industrial hemp in the state on a research basis. Since then, K-State Research and Extension faculty at the John C. Pair Horticultural Center have studied industrial hemp production to determine best practices for Kansas producers. In this fast-paced industry, a lot has changed--learn about challenges, opportunities, and facts we still need to research.

Managing Nostoc and Liverwort in Nurseries - *Cheryl Boyer*

Nostoc is the slimy, unsightly, algae-like green stuff that is often present in nursery production areas. When dry, it shrivels up and is not much of a problem; when wet by irrigation, Nostoc becomes a slip hazard for employees. Similarly, Liverwort can be an unsightly weed on the surface of container-grown plants, reducing water uptake by plants. This session will report on the latest research to control these nursery pests. (3A - .5 hr)

Diseases, Insects & Weeds - Ballroom II

Core Hour: Laws, Safety & Environmental Concerns - *KDA*
Regulatory information required for certified applicators.

How Insect Pests Overwinter - *Raymond Cloyd*
Learn about the biology and ecology associated with how insect and mite pests overwinter, including the life stages that insect and mite pests overwinter as, and how overwintering may influence the management of insect and mite populations. (3A/3B - 1 hr)

Landscape & Turf Disease Update - *Judy O'Mara*
This session will cover common Kansas landscape and turf plants and their current pest challenges. (3A/3B - 1 hr)

What Happened in 2021 in Regard to Insect and Mite Pests? - *Raymond Cloyd*
Learn about the various insect and mite pests encountered in 2021 associated with ornamentals and turfgrass, including the fall armyworm, Japanese beetle, green June beetle, and bagworm. Find out why certain insect pest populations were a problem in 2021. (3A & 3B - 1 hr)

Factors Causing Preemergence Herbicide Failure - *Dani McFadden*
There are several factors that determine herbicide persistence in soil. Hear about the three main factors (soil, herbicide properties, and climatic conditions) and how they interact with one another to affect herbicide persistence. (3A/3B - 0.5 hr)

Advanced Turf - Konza Prairie BC room

Turfgrass Cultivation Practices - *Chrissie Segars*
This discussion will focus on cultivation practices commonly used in turfgrass management. Cultivation is one of the four basic cultural practices that can lead to a healthy, dense area of turfgrass that can stand up to pests like weeds, diseases, and insects. Updates will also be given on new cultivation practices and equipment. (3B - 1 hr)

Drought Resistance in Cool-Season Lawns - *Mu Hong*
Learn about drought research that has been conducted in Kansas and other states, and the differences in drought resistance among cool-season turfgrass species and cultivars.

Managing Thatch - *Jack Fry*
Excessive thatch can cause problems with turf performance. Hear about options to prevent it and manage it after it accumulates.

Advances in Fungicide Programming - *Joe Roberts*
Numerous fungicides have been introduced over the years with broad applicability to a variety of turfgrass diseases. With the advancement of new active ingredients and many new prepackaged mixtures, it is important to stay up-to-date on the newest products. Learn about these new fungicide-programming strategies. (3B - 1 hr)

Best Management Practices for Promoting Athletic Field Safety - *Chrissie Segars* (3B - 1 hr)
Proper turfgrass selection is vital for stress management and site success. This presentation will cover options for Kansas lawns, sports fields, and golf courses. Attendees will learn about new cultivars of turfgrass that can be used for specific situations such as shade, cold, and drought. Selecting a cultivar for site-specific management will increase tolerance to abiotic and biotic stresses which will reduce the use of pesticides and lead to a healthier turfgrass. (3B - 1 hr)

Update on New Zoysiagrass Cultivar Progress - *Jack Fry and Chrissie Segars*
K-State and Texas A&M AgriLife Research-Dallas have been cooperating to develop zoysia cultivars since the early 2000's. Hear about newly released cultivars and those coming soon!

Thursday - December 2

General Session - Ballroom II

Understanding Biological Control of Turf and Landscape Pests - *Joe Roberts*
Concerns of synthetic pesticide use on turfgrasses has increased in recent years, yet we still have a poor understanding of alternative controls available. Come hear new information as to what non-synthetic turfgrass pest control measures are available, and new information on what happens to living biologicals once applied and how cultural practices can help. (3A/3B - 1 hr)

Landscape & Turf Research Update: A National Perspective - *Cheryl Boyer*
Every day new research is published in peer-reviewed journals related to various landscape and turf issues (pests, plant management, labor, marketing, etc.). It's challenging to keep up! This session will cover research highlights to enhance your effectiveness and competitiveness in the Kansas landscape and turfgrass industries. (3A & 3B - 1 hr)

Advanced Turf - Konza Prairie BC room

Site-Specific Turfgrass Selection to Reduce Stress and Enhance Performance - *Chrissie Segars*
Proper turfgrass selection is vital for stress management and site success. This presentation will cover options for Kansas lawns, sports fields, and golf courses. Attendees will learn about new cultivars of turfgrass that can be used for specific situations such as shade, cold, and drought. Selecting a cultivar for site-specific management will increase tolerance to abiotic and biotic stresses which will reduce the use of pesticides and lead to a healthier turfgrass. (3B - 1 hr)

The Turfgrass Microbiome - *Joe Roberts*
Microbiomes have developed into a popular topic in the world of science. Much of previous research on turf microbes has been centered on pathogens, but these account for a small percentage of the overall microbiome. This presentation will introduce the topic of microbiomes and how we are advancing our knowledge to improve turfgrass health and survival. (3B - 1 hr)

Suppressing *Poa annua* - *Jack Fry & Industry Panel: Ethan Shamet, Jeff White, Steve Wilson*
Get an overview of success with the use of plant growth regulators and herbicides in suppressing and controlling *Poa*. The industry panel will discuss the experiences they've had on the golf course. (3 B - 1 hr)

New Strategies for Suppressing *Zoysia* Seedheads with a Plant Growth Regulator - *Manoj Chhetri*
Zoysiagrass produces seedheads in spring, which affect the aesthetics and playability on golf courses. This talk will provide insights on how to manage seedheads on *zoysiagrass* using ethephon. (3B - 0.5 hr)

Industry Conversations - *Panel: Mike Maas, Doug Melchior, Ryan Varns, Steve White*
Hear short summaries of highlights that stood out in 2021 for professionals in the golf, lawn care, sports turf, and sales industries.

Nursery & Landscape - McDowell/Tuttle room

Update on Nursery & Landscape Problems - *Judy O'Mara*
Each year we have new or emerging/reemerging pest issues in ornamentals. Current pests of concern for Kansas include Boxwood Blight, Southern Blight, plant viruses, etc.). Learn how to identify these pests in nursery and landscape settings and what to do to address them. (3A - 1 hr)

Native Plants to Support Native Bees - *Jason Graves*
There are at least 4,000 species of native and solitary bees in the United States. These pollinators directly connect to human health and well-being and deserve to be understood, appreciated, and preserved in our landscapes. Jason will explore native bee biology and how native plants can be used to create a welcoming habitat for these essential pollinators. (3A - 1 hr)

Diversifying your Business with Specialty Crops - *Cary Rivard*
Participants will learn how nursery and landscape operations can incorporate production and sales of specialty crops such as fruits and vegetables. Crops can be grown in the open field or in greenhouses or hoopouses for retail or wholesale markets. Learn about agritourism and other opportunities for diversifying into specialty crops.

How From the Land of Kansas Can Help Your Business - *Sammy Gleason*

From the Land of Kansas is the state's trademark program designed to promote agricultural experiences and products grown, raised or produced in Kansas. Learn how they can help you promote your business thru being a member.

Industry Conversations: Nursery/Landscape Roundtable
Join your colleagues in an open discussion of current issues in the Kansas nursery and landscape industry. Topics may include labor, plant shortages, managing employees and other business decisions. Bring your thoughts, experiences, and questions!

Sustainability, Technology & Water Management - Alcove room

Not Using Soil Moisture Sensors is Like Driving without a Fuel Gauge - *Dale Bremer*
Learn how integrating information from soil moisture sensors to existing irrigation techniques could substantially advance irrigation management by improving the timing and amount of each irrigation event.

Using Drones from an Industry Perspective - *Dana Sullivan*
Drones offer an affordable and valuable birds-eye perspective for detection, management and risk avoidance strategies. As the turfgrass industry continues to embrace this technology, it is increasingly important to understand the role in which drone image acquisitions may provide solutions for turfgrass management.

Keeping Ponds Clean - *Joe Gerken*
Landscapes and turfgrass areas often include ponds and other aquatic features. Learn management techniques to control, prevent, and suppress aquatic weeds and techniques that can be used to limit nutrient and pesticide runoff into these aquatic systems. (3A/3 B - 1 hr)

Establishment of Turfgrass with Drip Irrigation and Protective Covers - *Alex Bach*
Subsurface drip irrigation (SDI) is gaining attention as a water conserving irrigation strategy in turfgrass. But once SDI is installed, how well does it work when it's time to establish turfgrass from seed? Also, do protective covers help with establishing seeded turf with SDI and if so, are some covers better than others? Learn about this and more from recent research conducted at Kansas State University.

Innovative Irrigation Insights - *Panel: Matt Gourlay, Dana Sullivan*
Hear thoughts from those in the irrigation industry on how the past year has gone, and advancements in technology.

Conference Location

The Kansas Turf & Landscape Conference will be held at the Hilton Garden Inn, 410 S. 3rd St., Manhattan, KS

Hotel

Hilton Garden Inn (410 S. 3rd St., Manhattan.). Room rate: \$103 Reservations can be made online by November 3 at <https://hiltongardeninn.hilton.com/en/gi/groups/personalized/M/MANGIGI-KSTF-20211130/index.jhtml>

OR, call the hotel directly at (785) 532-9116 (please mention you are part of KS Turfgrass Assn. Group code KSTF)

Registration

To register online and pay by credit card go to <https://2021turfconference.eventbrite.com>

OR fill out the registration form and send in by November 22.



Special Assistance

A conference participant who needs accommodations due to a disability or special dietary requirement, should indicate services needed on the registration form. Early notification is requested to ensure that accommodations can be provided in a timely manner.

Cancellation/Refund Policy

If cancellation is necessary, substitutions with another person from the same company is allowed. A written request for a refund must be received before Nov. 22, 2021. The amount refunded will be less a \$25.00 processing fee. No refunds will be made after this date. Mail your request to: KTF, 1712 Claflin, 2021 Throckmorton, Manhattan, KS 66506.

If inclement weather should prevent your attendance, no refunds are provided. Significant expenses are occurred on behalf of the KTF in its commitment to hold this conference.

Pesticide Recertification Credit Hours



The Kansas Turf & Landscape Conference has been approved for state pesticide applicator recertification credit:

1 Core Hour 3A - 7 hrs 3B - 7 hrs

Presentations qualifying for 3A or 3B credit are noted *after* the title. Pick up a form at the registration table to record pesticide recertification credits. A monitor must sign each form before you leave the session. At the end of the conference, give your form to the moderator in the last session you are attending.

If your license expires this year, go to <https://agriculture.ks.gov/divisions-programs/pesticide-fertilizer/renewals> to pay the fees and renew before December 31st.



GCSAA Education Points

December 1 - 0.45 ed points
December 2 - 0.50 ed points



Int'l. Society of Arboriculture

CEUs available for Certified Arborists

Covid protocols will match what is current at the time for Riley County.

Kansas Turf & Landscape Conference
December 1 & 2, 2021 Pre-Registration Form

Register online at: <https://2021turfconference.eventbrite.com>

FULL Registration (2 days) (\$275.00 at conference) \$250.00 x _____
*Includes 2-day conference, lunch on Thursday,
complementary KTF membership dues, and trade show.*

Additional persons from same firm (\$140.00 at conference) \$115.00 x _____
No dues included.

WEDNESDAY only-Dec. 1 (\$150 at conf.) *Includes trade show; no dues.* \$125.00 x _____

THURSDAY only-Dec. 2 (\$150.00 at conference) \$125.00 x _____
Includes lunch, trade show; no dues.

2022 Kansas Turfgrass Foundation Membership Dues \$ 75.00 x _____
A 2022 Kansas Turfgrass Foundation Directory will be sent to each member
Name of individual(s) joining association: _____

2022 KNLA Membership Dues can be paid at <http://ksnla.org/join-ksnla/>

Yes, I need to take Pesticide Exam on Dec. 2 at 3:30 p.m.

TOTAL: \$ _____

Dietary or special assistance needed: _____

Company/business name _____

Individual _____

Mailing address _____

City _____ State _____ Zip _____ Phone () _____

Email: _____

Payment:	
<input type="checkbox"/> Check payable to Kansas Turfgrass Foundation enclosed	<input type="checkbox"/> Please invoice (<i>payable upon receipt</i>)
<input type="checkbox"/> Credit card Type: _____ No. _____ Exp. _____ 3-4 digit CID _____	
Name on card (printed) _____	Signature _____

Please return registration form by November 22 to:
Turf Conference Registration, 1712 Claflin, 2021Throckmorton Plant Science Cntr., Manhattan, KS 66506-5507
Fax: (785) 532-6949 cdipman@ksu.edu

K-STATE

Research and Extension

Horticulture and Natural Resources
1712 Claflin, 2021 Throckmorton Plant Science Cntr.
Manhattan, KS 66506-5507

Kansas Turf & Landscape Conference

December 1 & 2, 2021

Manhattan, KS

Featured Speakers



Dr. Joseph Roberts is an Assistant Professor and Specialist of Turfgrass Pathology and Nematology at Clemson University. His research is centered on innovative strategies to limit turfgrass and crop loss from plant pathogens including fungi, bacteria, and nematodes. His microbiome research is designed to understand both plant-microbe and microbe-microbe interactions. Improved understanding will enhance disease etiology, management recommendations, and possibly identify new beneficial microbes for enhancing turfgrass health.



Dr. Chrissie Segars is an Assistant Professor and Turfgrass Specialist at Texas A&M AgriLife Extension. Her outreach efforts focus on coaching managers on a system of approaches where primary goals are user safety and healthy turfgrass. Her research aims to find solutions that support better turfgrass areas across the socioeconomic spectrum using best management practices for turfgrass health & safety.