2024
Winter Prairie Project Newsletter

Merry Christmas and Happy New Year!

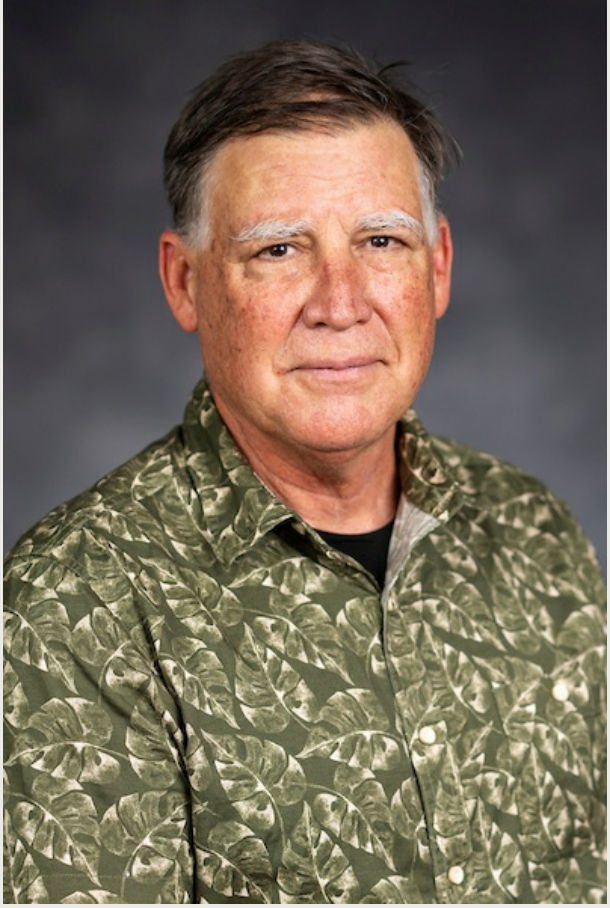
It's the most wonderful time of the year! We hope you had a very Merry Christmas and enjoy the warmth and magic of of the holiday season.

From our team to you, may your holidays be filled with lots of love and laughter!

Faculty Spotlight: Dr. Brad Wilcox, Texas A&M University!

His research has been widely recognized for its scientific rigor and real-world applicability, influencing land management strategies across the globe.

Dr. Wilcox's scholarly achievements include over 150 peer-reviewed publications,



Dr. Brad Wilcox, Regents Professor and renowned researcher at Texas A&M University, is a leading expert in rangeland ecology and management.

With a career spanning over three decades, Dr. Wilcox has made groundbreaking contributions to the understanding of landscape dynamics, hydrology, and the impacts of land management practices on ecosystems.

many of which have set new directions in rangeland science. His interdisciplinary approach, integrating ecology, geography, and hydrology, has earned him accolades from professional organizations, including the Society for Range Management.

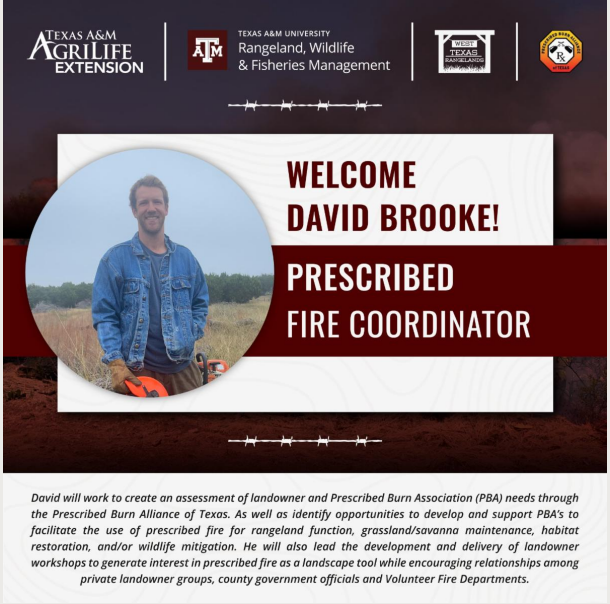
Beyond his research, Dr. Wilcox is deeply committed to mentoring students and fostering future leaders in natural resource management, reflecting his passion for advancing knowledge and societal impact.

As a dedicated educator, Dr. Wilcox teaches courses that challenge students to think critically about global challenges in rangeland systems. His work exemplifies the mission of Texas A&M University to create knowledge, solve complex problems, and prepare the next generation for success.

Welcome David Brooke!

David Brooke is the new Prescribed Fire Coordinator in Texas!

David will work to create an assessment of landowner and Prescribed Burn Association (PBA) needs through the Prescribed Burn Alliance of Texas, as well as identify opportunities to develop and



support PBA's to facilitate the use of prescribed fire for rangeland function, grassland/savanna maintenance, habitat restoration, and/or wildfire mitigation.

AP Environmental Science Free-Response Questions and AP Annual Conference!

Due to interest from several cohort participants who taught AP Environmental Science (APES), Dr. Sakina T. S. Dixon and Bryan Yockers co-led a free-response question (FRQ) working group to create Prairie Project-themed prompts for use as practice for the annual APES exam.

This resulted in four FRQs with accompanying scoring guides on the following topics: fire and bird diversity, grassland bird population decline, fire and forage quality, and rangeland ecosystem services.

The FRQs were showcased at the national AP Annual Conference in July 2024 along with Prairie Project lessons created by APES teachers Bryan Yockers, Dr. Rhonda Burrough, Shannon Chatwon, and Gaby Del Bosque-Hernandez. The presentation received praise from the College Board's Director of APES, Dr. Karin Gastreich, who stated the talk was her vision for how all the APES presentations should be at the conference.

Dr. Dixon also presented the FRQs at the Resources for Ecology Education - Fair and Share at the Ecological Society of American Annual Meeting in August 2024 and the Texas Section Society for Range Management Annual Meeting in October 2024.

Additional members of the FRQ working group included Tess

Sykes, Sheridan Swotek, and Danielle Williams.

Ecological Society of America (ESA) Annual Meeting

The Dr. Ben Wu and Dr. Dixon co-organized a symposium at ESA titled, "Cultivating Educators as Agents of Change to Promote Rangeland Literacy and Advance Ecology Education".

Data from the pre-post surveys completed by the students of the Educator Cohort participants were presented along with evaluation data from all three cohorts.

Additionally, four participants shared their Prairie Project lessons and action research findings:

Amy Leising, Teresa Walters, Dr. Jason Martina, and Dr. Letitia Reichart.

Prairie Project and St. Edward's University (SEU) Science Curriculum Writing Workshop

On Saturday, November 16, 2024, Dr. Dixon and Dr. Wu partnered with Cohort 2 participant, Dr. Amy Concilio, and her colleague, Dr. Steve Fletcher, to host a one-day workshop for 6th through 12th grade science teachers and community college instructors at SEU in Austin ,Texas.

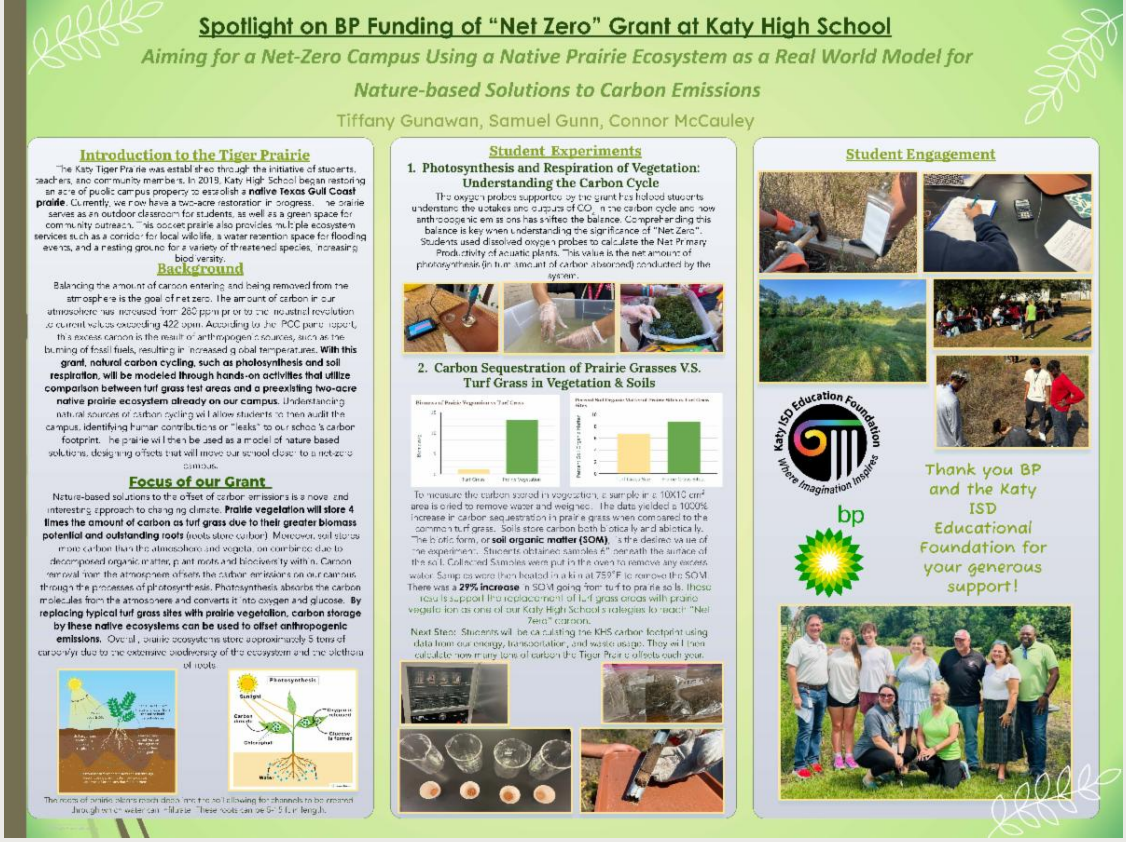
Drs. Concilio and Fletcher are faculty in SEU's Department of Political Science, Global Studies, Environmental Science and Policy. Attendees heard brief overviews of Prairie Project lessons from cohort participants Dr. Rhonda Burrough, Dr. Amy Concilio, Gaby DelBosque-Hernandez, Dr. Julie Flegal-Smallwood, Dr. Mark Hutchinson, and Dr. Letitia Reichart. For the remainder of the day, the cohort members served as mentors to the attendees and assisted them in creating their own Prairie Project-themed lessons.

Educator Cohort Participant Kudos!

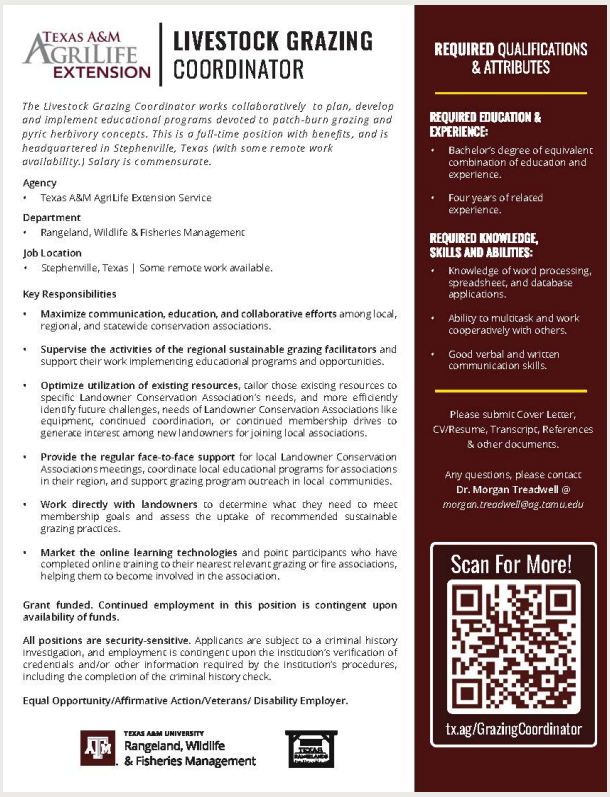
Each year, EPA recognizes national winners for the **Presidential Innovation Award for Environmental Educators**. Among this year's winners were two Prairie Project cohort participants!

Region 6 winner, Shannon Chatwin, from Cohort 1, and Region 7 winner, Lee Stover from Cohort 3. The winners were honored during region specific live Q&As hosted by EPA this fall. Congratulations Shannon and Lee!

Region Dr. Rhonda Burrough won a grant from BP to study how native prairie vegetation could be used to offset carbon emissions as an alternative to turf grass. With conceptual assistance from fellow cohort members, Dr. Kelly Lyons and Lee Stover, Dr. Burrough's students conducted experiments to determine the net amount of photosynthesis in the system and measure carbon sequestration. Her student presented their results to BP using the poster below. Well done, Dr. Burrough!



Texas A&M AgriLife Extension is hiring!



We are looking for a talented Livestock Grazing Coordinator with experience and expertise in patch burn grazing and pyric herbivory concepts to join our team!

- This position is grant funded
- Located in Stephenville, Texas

Check out the link below for more information!

View Application

Agents of Change!

This project is building on our Prairie Project and is a

We are recruiting a cohort of twelve (12) educators and natural resource professionals as “agents of change” for a USDA-NIFA funded Climate Hub Partnership project.

collaboration among TAMU, OSU, UNL, and the USDA-ARS Southern and Northern Plains Climate Hubs. We are looking for highly motivated individuals with a strong interest in increasing climate awareness and promoting climate-smart land management practices such as pyric-herbivory and multi-species grazing.

If you think any of your colleagues who may be interested in this opportunity, would you please share the attached flyer with them and encourage them to apply? We will start reviewing applications in early December and will be accepting applications until February 7, 2025.

For more information be sure to contact Dr. Melissa Shehane.

melissa.shehane@ag.tamu.edu

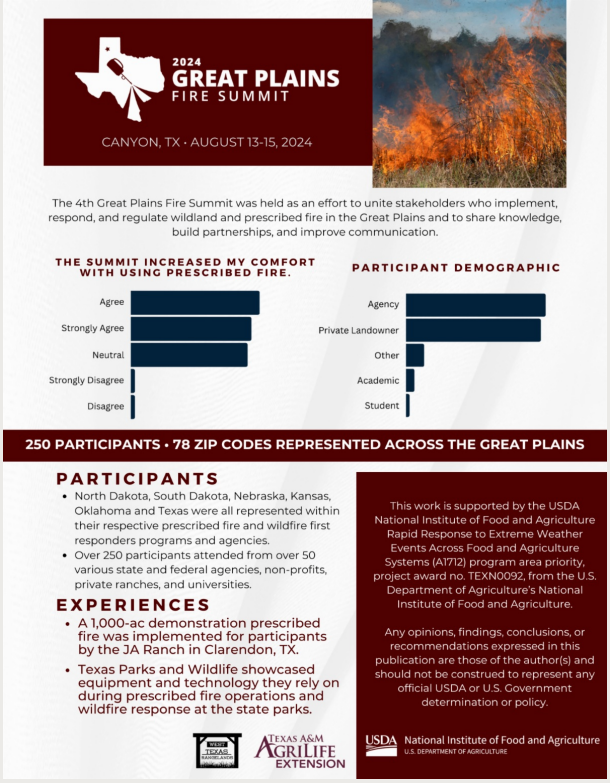
Great Plains Fire Summit Recap!

Our Great Plains Fire Summit in August was a huge success!

We had participants from:

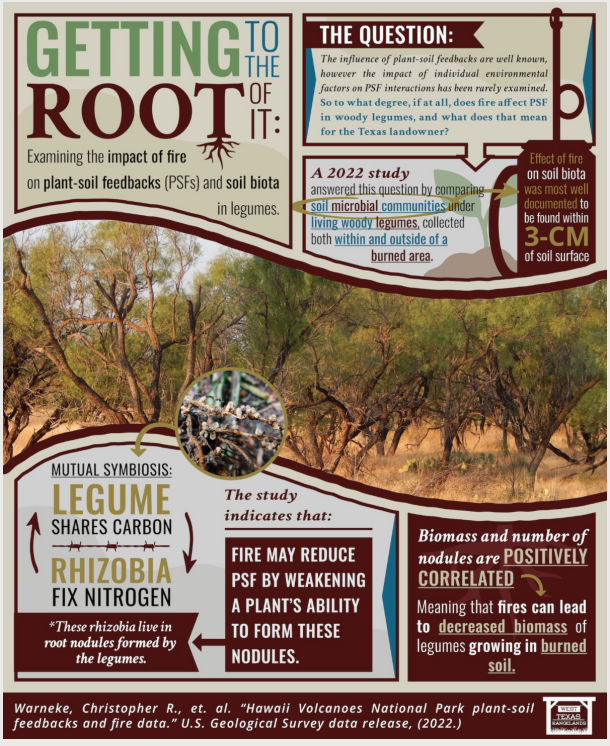
- North Dakota
- South Dakota
- Nebraska
- Kansas
- Oklahoma
- Texas

Over 250 participants attended from over 50 various state and federal agencies, non-profits, private ranches and universities!



Missed this event? Be on the lookout for it in 2026!

Getting to the Root of it!



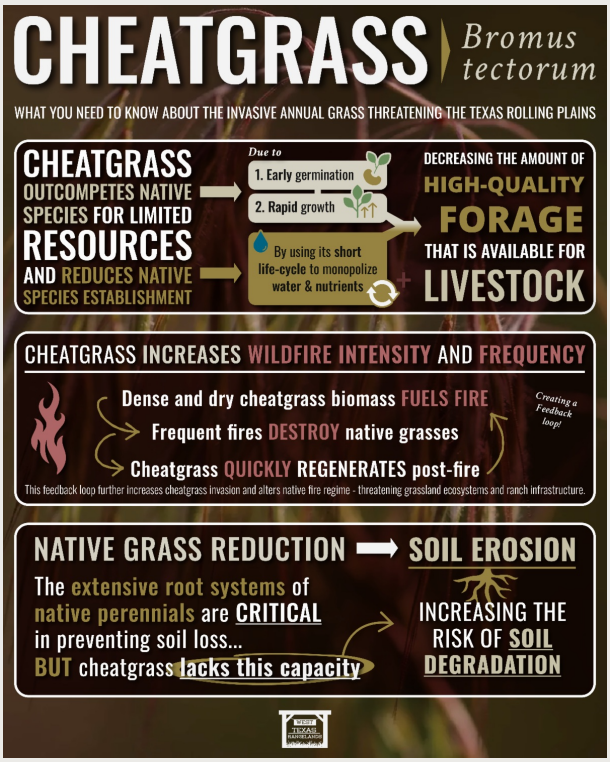
Interactions between plants and soils, plant-soil feedbacks (PSFs) are widely known to influence patterns of plant diversity at local and landscape scales.

However, these interactions are rarely examined in the context of environmental factors.

Prescribed fire is an environmental factor that alters microbial communities (Pourreza et al. 2014, Hedo et al. 2015, Prendergast-Miller et al, 2017). Prior to the study below, the influence of fire on PSFs was unexamined. Does fire affect PSF in woody legumes and what does it mean for Great Plains Area landowners? This study helped to answer this question by comparing soil microbial communities under living woody legumes, collected both within and outside of a burned area.

For more information and the full study, be sure to read it here - **Soil Feedback**

Cheatgrass in the Lower Texas Rolling Plains!



What is Cheatgrass? Cheatgrass (Bromus tectorum), is an invasive annual species. This species poses a significant ecological threat to the Southern Great Plains of Texas, particularly in the Rolling Plains Region. Cheatgrass will displace native grasses such as sideoats grama (Bouteloua curtipendula), blue grama (Bouteloua gracilis) and little bluestem (Schizachyrium scoparium). These dominant, perennial, native grasses are key to maintaining soil stability, biodiversity, and forage quality (D'Antonio & Vitousek, 1992; Chambers et al., 2014).

How does cheatgrass outcompete native grasses? Cheatgrass has an early germination and a rapid growth. Due to these two aspects, it outcompetes the native species for the limited resources available. Cheatgrass also completes its life cycle before native grasses begin to thrive and opportunistically monopolizes the water and nutrients in the soil (Bradford & Lauenroth, 2006). This process reduces overall biodiversity and quantity of high-quality forage available for livestock to graze.

Cheatgrass also dramatically alters the fire regime by increasing the frequency and intensity of wildfires. This is due to its dense and dry biomass that becomes rapidly available as fuel for fires. Cheatgrass is fire-adapted and can quickly regenerate after a fire.

For more information, be sure to check out Cheatgrass Invasions and data co-authored with USDA-NRCS Rangeland Management Specialist – Matthew Coffman.

Blue Grama (Bouteloua gracilis)!

It takes more than just quantity, but quality too! And blue grama, hairy grama, and buffalo grass are some of the most nutritious of all native grasses in mixed prairie holding crude protein

levels well into dormancy. Their leaves are notable for their remarkable starch sheaths and the peak protein content ranks high along with dominant warm season tallgrasses like yellow indiangrass.

As stewards, let's all just take a Christmas moment reflection and a deep breath of blue grama. Did you know that blue grama is the most common plant found throughout the mixed prairie? Even more impressively, blue grama possesses the most general distribution thriving as far north as Canada and as far south as Mexico.

For more information, be sure to check out the full publication Some Conditions and Influences Pertaining to the Native Forage Crop of the Northern

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