



# Field Notes

## Kerr Center for Sustainable Agriculture E-Newsletter

*E-Field Notes*

May 2022

The warmer weather is intensifying - how do you cope, and keep your crops and livestock thriving?

Native plants can stand up better to the heat. David Redhage starts this month's issue with a look at **incorporating beds of native plants into lawns**.

Zooming out from lawn to pasture, we report on a recent study that found **native grass pastures are actually able to absorb the potent greenhouse gas methane** - tackling climate change, literally, at the roots.

**Organic no-till** systems in the country's warmer reaches rely on **warm-season cover crops**. We share the results of a Southern SARE producer grant project testing **sun hemp for weed suppression in fall broccoli**.

Finally, we take a look ahead to next month, when pollinator conservation reaches peak buzz during **National Pollinator Week**.

We hope these tips will help you keep your farming and ranching cool in the season's heat. We also think it's cool when you [donate to the Kerr Center](#) to show your support. [Thank you!](#)

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## President's Note: Native Plants in Beds

I recently read an article titled, "[America's love affair with the lawn is getting messy](#)," by Julia Rubin. It was interesting, and reminded me of a comment made by one of my college professors years ago. I'm not going to say when, or what decade, but it was a long time ago.



He would volunteer to pick up **foreign exchange students** at the airport and take them to their host homes. He was a philosophy professor and studied in Europe, and understood how different it was to visit the United States. He said he would take them through our subdivisions and let them see the houses and lawns. They **were shocked at how large our lawns were** compared to what they were used to.

It made me realize the concept of a large unbroken lawn with grass was somehow a unique part of the American landscape. **Think how much time and effort we invest in maintaining lawns. Mowing, irrigation, fertilizer, herbicide**, and all to maintain a monoculture of grass in a large area. If you think about it, that's **not a very sustainable model**.

The article pointed out that grass landscapes in some form will always be part of culture, but some individuals are **breaking it up with beds for more shrubs, trees and flowers - especially [native flowers to help pollinators](#)**.

Eliminating grass can lead to a **reduction in irrigation, fertilizer, and herbicide usage, as well as less time spent mowing**. I have seen western landscapes around homes just covered in small rock.

I worked to add beds to my landscape, and it's nice, but trying to maintain a bed in eastern Oklahoma can be a challenge. The lawns are mostly bermudagrass, which grows up into the beds over time if you don't maintain some sort of barrier or spray a grass killer herbicide on the border.

I also **don't try to maintain a weed-free lawn**. Clover, dandelions, and plantain don't bother me. But if you have burweed or puncturevine, you can have a problem. With these two you don't want to go barefoot in your lawn. They can also bother pets. However, I think if you have problems with these weeds it would be an incentive to decrease the lawn and add beds.

[Continue reading....](#)

## Study: Oklahoma Native Grasslands Give off Some Greenhouse Gases, But Mitigate Methane

It's widely recognized that turning prairie into plowland transfers carbon from the soil to the atmosphere - but **what happens in undisturbed grasslands?**

A recently published study assessed **native grassland sites across Oklahoma** in an attempt to answer that question. The results were mixed.

The study looked at big bluestem pastures near Admore, El Reno, and Marena; the El Reno site also included a pasture of introduced Old World bluestem.



At each of those study sites, **researchers measured emissions of three different greenhouse gases** - carbon dioxide, nitrous oxide, and methane - in different seasons of the year.

**Both native and introduced pastures emitted carbon dioxide throughout the year, peaking in summer.** The emissions were lower from the Old World bluestem pasture, which had more ground cover, and higher when more water was available - suggesting that **soil microbial activity was the main source of CO<sub>2</sub>.**

Likewise, **all the sites also emitted nitrous oxide**, though for that gas, **the introduced grass pasture was the largest source.** That's probably not surprising, since **that was also the only pasture that received synthetic nitrogen fertilizer.**

The most surprising finding was that **all the sites also absorbed, rather than emitted, methane.** That's a particularly positive result, since methane from cattle rumens is one of the largest components of the livestock sector's greenhouse gas emissions. The **native grass pastures absorbed more of this potent greenhouse gas than the introduced pasture.**

The study was [published](#) in the fall 2021 issue of *Agrosystems, Geosciences, & Environment*.

## Sunn Hemp for Weed Control?

We've previously published a report on using **summer [cover crops](#)**, including **sunn hemp**, for weed suppression in **[organic no-till pumpkins](#)**. Last fall, a Southern SARE Producer Grant reported results of a similar cover crop mix for fall broccoli production.

Wild Hope Farm, in Chester, South Carolina, ran a two-year trial of **sunn hemp, both alone and in combination with various other summer cover crops, including millet, soybeans, and buckwheat**.

For sunn hemp alone, there were two termination treatments: tillage and crimping. For the mixes, crimping was the only termination method.



**Sunn hemp was more effective at suppressing weeds in combination with other cover crops than alone, but the timing of crimping and the weight of the crimper were important for ensuring complete termination.**

When these factors were not properly adjusted, regrowth of the cover crops could become a bigger impediment to yields than the weeds they were meant to control.

**Broccoli yields were highest in the combination of sunn hemp and millet.**

**[More information on the project](#)**, including a full final report, handouts, a slide presentation, and a short video, is available from the **[Southern SARE Producer Grant webpage](#)**.

# Pollinator Week!

**National Pollinator Week** isn't until next month - **June 20-26** - but it's such an important event that we wanted to make sure you got plenty of advance notice.

In 2006, the U.S. Senate unanimously passed a resolution designating a week in June as "National Pollinator Week." According to Pollinator Partnership, this "marked a necessary step toward addressing the urgent issue of declining pollinator populations."

Pollinator Week has now grown into an international celebration, promoting the **valuable ecosystem services provided by bees, birds, butterflies, bats, beetles, moths, wasps, and flies.**

People across the planet have pledged to continue **promoting pollinator health and well-being through their Pollinator Week events. These include virtual and in-person gatherings, webinars, planting sessions, garden and farm walks, and monument lightings.**

Check the [Pollinator Week website](http://www.pollinator.org) for **events in your area.** If there aren't any near enough, you can **add your own!**

(Pollinator Week is managed by Pollinator Partnership, the largest non-profit organization in the world dedicated exclusively to the protection and promotion of pollinators and their ecosystems.)



# Late Spring Events: Ag Legal Issues, Canning, Cattlewomen's Boot Camp, Organic Perennial Biodiversity, Agroforestry, Elderberry Workshop/Tour....

Farm Commons' "Guiding Resilience" **virtual workshop** series on **agricultural legal issues** kicks off on June 1. On June 7, NRCS offers a **webinar** on **how to create and maintain biodiversity in organic perennial systems**. On June 9, you can catch the final installment in NCAT's **webinar series on advanced grazing techniques for regenerating soil**.

**In-person**, OSU Extension is running a workshop in

Oklahoma City on **water bath canning** to help you keep your garden produce from going to waste (June 2). OSU's **Cattlewomen's Boot Camp** runs June 6-8 (Chickasha). June 9-11, there's an **elderberry workshop and orchard tour** at River Hills Harvest (Columbia, MO).

For those interested in agroforestry, there's also an **agriculture/forestry summit** from June 9-10 (Nacogdoches, TX).

The Kerr Center's **tour** season is also open, by appointment only. [Come visit us!](#)

Full details on these and other sustainable agriculture learning opportunities, as always, can be found on the Kerr Center's online [events calendar](#).

Don't forget that you can also use our online calendar to **keep yourself and your friends up to date** on these and other upcoming events, including our tours:

- **Subscribe to our feed** and receive **updates to your personal calendar** as they are made.
- **Share events on the calendar** via a number of **different social media sites**, including Facebook, Twitter, and Pinterest.

Date	Event Title	Time	Location	Notes
Jun 1 (Wed)	Guiding Resilience: A Legal Workshop for Ag Service Providers @ online	11:00 am - 1:00 pm	Online	Tickets available
Jun 2 (Thu)	Water Bath Canning Workshop @ Oklahoma City (Oklahoma County OSU Extension Center)	1:00 pm - 4:00 pm	Oklahoma City	Tickets available
Jun 6 - 8 (Mon)	OSU Cattlewomen's Boot Camp @ Chickasha (Grady County Fairgrounds)	all-day	Chickasha	
Jun 7 (Tue)	Creating and Maintaining Biodiversity in Organic Perennial Systems (webinar) @ online	2:00 pm - 3:00 pm	Online	
Jun 9 - 10 (Thu)	Agriculture/Forestry Summit 2022 @ Nacogdoches, TX (Nacogdoches Co. Exposition & Civic Center)	all-day	Nacogdoches, TX	Tickets available
Jun 9 - 11 (Thu)	Comprehensive Elderberry Workshop & Orchard Tour @ Columbia, MO	all-day	Columbia, MO	
Jun 9 (Thu)	Advanced Grazing for Regenerating Soil and Enhancing Animal Nutrition @ online	5:00 pm - 6:30 pm	Online	Tickets available

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