



# Field Notes

## Kerr Center for Sustainable Agriculture E-Newsletter

*E-Field Notes*

November 2016

With the Thanksgiving holiday just past, we're reflecting on some of the **things we're thankful for:**

- We're thankful for **non-chemical approaches to preventing pest damage** to crops.
- We're thankful that **a cow's mouth can tell us whether she's ready to be culled**, or may be good for another calf.
- We're thankful that **some of the oldest agricultural traditions on the continent are still relevant in a modern organic home or market garden.**
- We're thankful that some of **our most abundant native grasses provide winter habitat for valuable pollinator species.**
- We're thankful that there are so **many informative and helpful sustainable agriculture events on the calendar.**

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As always, we're also deeply thankful for your support!

## President's Note: Netting for Pest Control in Crops

There has recently been work on using netted hoop houses and row covers to prevent insect and bird damage to crop plants. It is an interesting use of technology, but the work is also a case study in how one solution can lead to additional problems. Let me just say I am a fan of where the research is going on this, but am aware of the potential problems.

What works with netting? In many cases, mesh size can prevent insects from accessing the crop. It seems to work best on larger insects. Why? Screen netting size can reduce airflow in a hoop house, which can lead to disease problems. The larger the screen, the greater the potential airflow. Keeping out squash bugs is easier overall than keeping out whiteflies. Some growers have resorted to exhaust fans on netted houses to increase airflow, which means you need to have electricity close at hand.



Another concern is plant pollination. Any netting can keep out pollinators as well as pests. Some growers have used purchased bumblebees for pollination. There are concerns that the shipment of bumblebees can lead to the spread of diseases. This may even be one of the issues with the decline in bumblebee numbers. The science is still not definitive on this issue, but it has been brought up.

To avoid the use of purchased pollinators and still have the protection benefit of netting, some research is being conducted on opening the netted crop up to native pollinators at certain times of the day when the problem pest species is not active. This is an interesting approach, but requires careful timing and knowledge of the problem insect. Someone needs to be present to open and close the netting at the appropriate times. One critical aspect for this to work is to have a complete seal with no openings in the netting.

Making such systems work on a commercial scale will require evaluation of labor needs, cost, and maintenance over time. I have added several web links for you to begin your own research.

[Continue reading....](#)

# Understanding Cattle Teeth

Looking a gift horse in the mouth may be a bad idea, but **keeping a regular eye on cattle's chompers can yield valuable information for herd management decisions.**

Cattle have eight incisors across the front of their lower jaw. They're born with baby versions, and replace two of those per year with permanent teeth.

From age four on, a cow has the incisors she'll be using for the rest of her life. **The condition of those eight front teeth can give a rough idea of how old she is - and a much better one of how long she'll keep pulling her own economic weight on the ranch.**

The Kerr Center's [livestock library](#) holds a copy of a [handout](#) illustrating the wear on cattle's teeth over time, and a [video](#) in which Dr. David Sparks explains how the state of a cow's teeth can help decide when to cull her.



## Three Sisters Gardening

Corn, beans, and squash - the "three sisters" of Native American agriculture. The image of Europeans learning the ways of these native American crops from Native American peoples is a fixture of Thanksgiving lore. The crops themselves still usually feature prominently, in one form or another, on many a Thanksgiving table.



**There are sound agronomic facts behind the three sisters tradition.** Corn stalks provide a trellis for beans, beans' root nodules bank nitrogen in the soil for the following season's crop, and squash leaves sprawl over the spaces in between, acting as a living mulch to shade out weeds.

In 2012, the **Kerr Center horticulture program took a fresh look at incorporating the Three Sisters into its bio-extensive approach to organic gardening.** At the end of the season, we wrote up a report documenting **methods, results, and lessons learned.** The report, [Kerr Center's 2012 Three Sisters Trial](#), is available **free online.**

# Hidden in the Tall Grass: Pollinators in Winter

When we think of plants that provide pollinator habitat, most of us probably picture showy blooms dusted with pollen and dripping with sweet nectar. But where do pollinators go in winter? Some of them - skipper butterflies in particular - depend on **the persistent stalks and crowns of common native perennial grasses to shelter larvae from cold, ice, and snow.**

Female skipper **butterflies lay eggs on blades of various native grass species in summer.** The larvae, or caterpillars, hatch out and make "tents" of two or more leaves bound together with silk. The caterpillars go through several molts while living on the leaves. **They then spend the cooler months hibernating - some species in their tents of leaves, others below the soil surface - before completing the metamorphosis to the butterfly stage** of their life cycle with the return of warmer weather.



The Kerr Center's [pollinator plant profiles](#) offer **one-page information sheets** on several of the most prominent of the **native prairie grasses** that play host to skipper larvae during the cooler part of the year: [big bluestem](#) (*Andropogon gerardi*), [little bluestem](#) (*Schizachyrium scoparium*), [indiangrass](#) (*Sorghastrum nutans*), and [switchgrass](#) (*Panicum virgatum*).

# November Events: Conferences in All Directions

Two different conferences, a day's drive in opposite directions, kick off today: the **Southern Soil Health Conference in Belton, Texas** (Nov. 29-30), and the **Acres U.S.A. Conference, with its Eco-Ag University, in Omaha, Nebraska** (Nov. 29 - Dec. 2). Stay tuned for details about two more in January – the **Horticulture Industries Show** and the **Southern SAWG conference**.

The Kerr Center's online [events calendar](#) provides full details on these and many other sustainable agriculture goings-on all around the state and region. It also serves as a reminder for the dates of **monthly Kerr Center tours**, which run all year round, every second Tuesday by appointment.

The screenshot displays a calendar interface with the following events:

- NOV 29 Tue**: 2016 Acres U.S.A. Conference @ Omaha, NE (Nov 29 – Dec 2, all-day). Includes a green 'Tickets' button and a plus sign.
- NOV 29 Tue**: 3rd Annual Southern Soil Health Conference @ Bell County Expo Center (Belton, TX) (Nov 29 – Nov 30, all-day). Includes a green 'Tickets' button and a plus sign.
- DEC 13 Tue**: Tour the Kerr Center @ Kerr Center (Dec 13 @ 9:00 am). Includes a plus sign.
- JAN 10 Tue**: Tour the Kerr Center @ Kerr Center (Jan 10 @ 9:00 am). Includes a plus sign.
- JAN 13 Fri**: Save the Date: Horticulture Industries Show @ The Chancellor Hotel, Fayetteville, AR (Jan 13 – Jan 14, all-day). Includes a plus sign.
- JAN 25 Wed**: Southern SAWG Conference: Practical Tools & Solutions for Sustaining Family Farms @ Lexington, KY (Jan 25 – Jan 28, all-day). Includes a green 'Tickets' button and a plus sign.

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** (Outlook, Google+, etc.) as they are made.
- **Share events on the calendar** via a number of **different social media sites**, including Facebook, Twitter, and Pinterest.

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## Quick Links...

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## Contact Information

The Kerr Center for Sustainable Agriculture  
24456 Kerr Road  
Poteau, OK 74953  
Phone: 918.647.9123  
Fax: 918.647.8712  
[mailbox@kerrcenter.com](mailto:mailbox@kerrcenter.com)

