



Field Notes

Kerr Center for Sustainable Agriculture

E-Newsletter

E-Field Notes

February 2018

As we move toward the start of spring, David Redhage offers some **insights into agroforestry enterprises** based on years of experience on the Kerr ranch.

For anyone who's ever puzzled over how to figure out **where to put temporary fences for a managed grazing system**, we share some pointers that should help clear things up.

As planting time draws nearer, we revisit reports on our work with various **heirloom variety demonstrations** to help you get gardening outside the box. If **flour corn, three sisters planting, or organic no-till** sound interesting, read on!

If the president's note piques your curiosity about **agroforestry**, a couple of articles can help you learn more - including the **fine details of some of the Kerr Center's plantings**.

The work you read about in each issue of our newsletter is funded by earnings from our endowment, and **donations** from supporters like you. [Please help us out if you can!](#)

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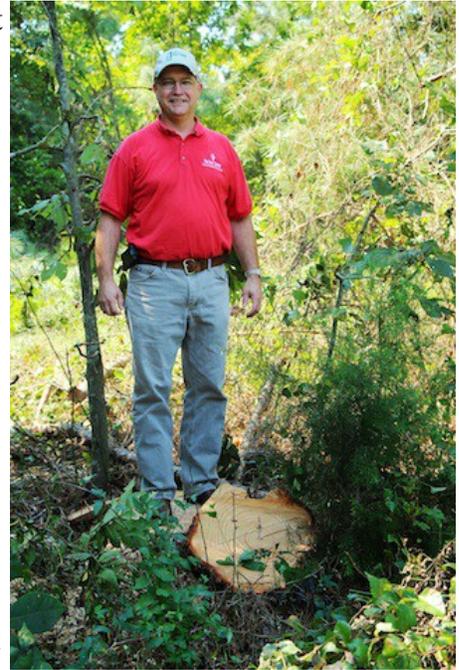
President's Note: Agroforestry

Agroforestry has been an interest of mine for many years. Just what is agroforestry? It is the combining of trees and crops or livestock on the same area. The trees can be for timber production, nut production, or fruit production.

Timber production alone is difficult to justify economically, due to the long rotations involved. By using a type of agroforestry, the understory crop can produce income early in the rotation, with the trees providing income at the end of their rotational age.

As with any agricultural system, there are pros and cons to the system. As trees grow, the ground shade increases, which can reduce the yield on some crops. Additionally, the trees themselves can interfere with equipment use unless the spacing between rows is carefully decided at the beginning of the rotation.

Choosing your potential end market for the trees is important as well. Veneer black walnut logs, pulpwood, saw logs, or simply fruit and nut production are all potential final uses for the trees. Many current crops are sensitive to shade, so as the trees grow, yields drop. In many cases, the final use after canopy closure is some form of grazing or silvopasture.



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Placing Temporary Fences

In last month's livestock article, we talked about [how to estimate the amount of available forage](#) in a pasture.

Once we have that estimate, we still need to know **where to place our temporary fence**.

This will depend on several factors: the dimensions of the pasture, the number of animals to be grazed, and the desired forage utilization rate.

That may sound like a lot of numbers to keep track of, but in practice each one helps determine all the others. Taking it step by step helps to keep things manageable.

Continuing with the example from the article on estimating available forage, we know that our pasture has 2,129 pounds of dry matter per acre.

To know how long that will last a herd of cows, we need to know how many cows are in the herd, and how much they weigh - information that, as managers, we're likely to have. In this example, we have 68 cows, weighing 1,200 pounds each.

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Heirloom Variety Demonstrations

As you're planning your garden, have you considered branching out from the usual tomatoes, sweet corn, and watermelons? How about **flour corn** - maybe planted with beans and squash in the **Native American "three sisters"** style? Or even **summer cover crops**, to establish **organic no-till** management?

Over the years, the [Cannon Horticulture Project](#) worked with all of these crops and techniques, and published reports to share its findings:

[2011 Flour and Meal Corn Demonstration](#)

The United States is famed for its vast acreage and production of corn, but most of that is dent corn used for livestock feed. Sweet corn and popcorn are also popular at smaller scales and in niche markets and gardens. **Corn varieties bred for flour and meal production are relatively unfamiliar** to home and market gardeners. In an effort to help change that, we ran a demonstration trial of **four varieties**.



[2011 Organic No-Till Pumpkin Demonstration](#)

This demonstration did **triple duty**. It compared **six different pumpkin varieties**, planted in mid-summer to dodge the spring wave of squash bugs and still have time to ripen before frost. The late planting date allowed the planting area to be prepared with **warm-season cover crops**, three of which - **crotalaria, sesbania, and pearl millet** - were also evaluated as part of the demonstration. Those cover crops were **mechanically killed**, and the **pumpkins were planted directly into the resulting mulch** - making this a demonstration of **organic no-till management** as well.

[2012 Three Sisters Demonstration](#)

In a variation on the triple-duty theme, this demonstration looked at **growing three crops together: the corn-bean-squash combination** known as the "three sisters" of Native American agriculture. Rather than planting in the traditional mound arrangement, though, it attempted to **translate the approach to row cropping** to allow for easier use of **mechanized equipment and drip irrigation**. Like the no-till pumpkin demonstration, it aimed at **minimal tillage**, following a soybean cover crop with **strip tillage for corn planting**.

Much, much more information on our other [heirloom variety trials](#) - as well as many other topics - is available in the Kerr Center's [online horticulture library](#).

Agroforestry Articles

Tim Snell, who worked at the Kerr Center when some of the older agroforestry plantings were established, wrote two articles about the practice, both collected with other resources on our [agroforestry page](#).

["Agroforestry Practices"](#) covers general concepts and approaches in agroforestry. It includes references and a reading list, as well as tables of planting distances, and lists of tree species suitable for southeastern Oklahoma.

["Oklahoma Projects Combine Timber Production with Cattle Grazing"](#) is an article published in the periodical *Temperate*

Agroforester (vol. 6, no. 1) that describes the implementation and results of two agroforestry projects (Between the Lakes and New Fescue) undertaken on the Kerr Ranch in the 1990s. It describes the technique of mulch planting, and gives detailed information on establishment costs and stocking rates.



Winter into Spring: Regenerative Agriculture; CSP Signup

You can still head over to Oklahoma City to catch the **Regenerative Agriculture** sessions there on Tuesday - part of the **Oklahoma Association of Conservation Districts statewide meeting**. The end of this week is the deadline - March 2 - to visit your local NRCS office and **sign up for the 2018 Conservation Stewardship Program**. Get paid for your conservation practices!

The Kerr Center's online [events calendar](#) provides full details on these and many other upcoming sustainable agriculture events 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.

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.

FEB 27 Tue	Regenerative Agriculture: Staying the Course @ Oklahoma City   Feb 27 @ 8:30 am – 4:30 pm
MAR 2 Fri	Deadline: 2018 Conservation Stewardship Program Enrollment  Mar 2 
MAR 13 Tue	Tour the Kerr Center @ Kerr Center  Mar 13 @ 9:00 am
APR 3 Tue	Our Farms, Our Future Conference: The Next 30 Years of Sustainable Agriculture @ St. Louis, MO (Hyatt Regency at the Arch)   Apr 3 – Apr 5 
APR 10 Tue	Tour the Kerr Center @ Kerr Center  Apr 10 @ 9:00 am
APR 24 Tue	Eastern Oklahoma Ag Trade Show @ LeFlore County Fairgrounds  Apr 24 @ 8:00 am – 1:30 pm
MAY 4 Fri	Application Deadline: Southern SARE 2018 Graduate Student Grant  May 4 @ 4:00 pm

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