Field Notes

Kerr Center for Sustainable Agriculture E-Newsletter

E-Field Notes
April 2022

As spring ripens, crops are starting to come up - and so are the weeds and bugs. David Redhage reviews a **new SARE publication meant to help with the weeds** part of that, and we look at a **new study showing that cover crops may be a better cure to the bugs** part than insecticides.

If it seems like the **birds** are singing just a bit earlier than they used to, it may be because they are! At least, one recent study's found that many of them **are laying their eggs earlier** in the year.

If you've been sitting on the fence about **adding silvopasture to your livestock operation**, yet another new study's compiled information on its benefits - as well as identifying barriers to its more widespread adoption.

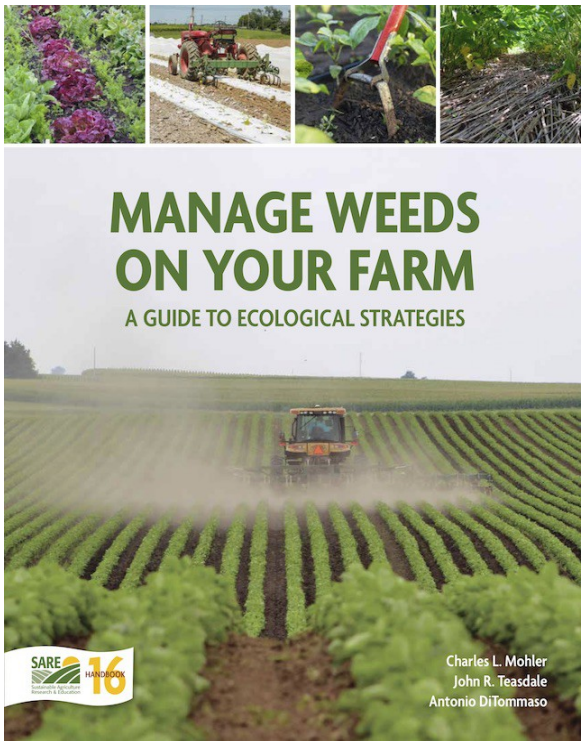
We think it's great if you've adopted silvopasture, and we also think it'd be great if you adopted *us* - by **donating to the Kerr Center**. **Thanks for your support!**

In this issue:

- **President's Note: Book Review - *Manage Weeds on Your Farm***
- **Cover Crops More Effective Than Insecticides?**
- **Birds Laying Eggs a Month Earlier**
- **Benefits and Challenges to Adopting Silvopasture**
- **Spring Events: Food & Ag Conference, Marketing Grants, Beekeeping, School Pollinator Garden Grants, Market Gardening School....**

President's Note: Book Review - *Manage Weeds on Your Farm*

Manage Weeds on Your Farm: A Guide to Ecological Strategies. SARE Handbook Series 16. Mohler, Charles L., John R. Teasdale, and Antonio DiTommaso. 2021. Sustainable Agriculture Research & Education (SARE). 415 p.



The **SARE program** has developed many excellent **publications**. The newest is entitled ***Manage Weeds on Your Farm*: *A Guide to Ecological Strategies***, and is available for purchase in softcover and downloadable **free as a pdf**.

The book covers both **cultural and mechanical weed management strategies**. It has a section on common weeds. The book is large, being 416 pages long.

One weed listed is important for the **monarch butterfly**. The common **milkweed** (*Asclepias syriaca*) is one of many species of milkweed, and is needed to support reproduction and survival of the monarch butterfly.

The text acknowledges this, and suggests, "maintenance of low densities in crop fields may contribute to a balanced landscape management strategy…". I was glad to see this in the text.

Cover Crops More Effective than Insecticides?

Pest problems in your crops? Reach for a seeder, not a sprayer. So says a new study from Penn State, that found that **cover crops** **were** **more effective than insecticides** at protecting corn and soybeans from insect pests.

The researchers said that early-season **cover crops fostered higher populations of beneficial predatory insects**, which reduced the population of insect pests more than either neonic-coated seed or an integrated pest management (IPM) approach.

While the insecticide treatments did impact the target pests, they caused even more damage to the beneficial insect population, resulting in higher pest numbers overall.

Researchers conducted the experiment in corn-soybean rotations. Each field was divided into an area with cover crops, and an area with no cover crops.

Within each of those areas, they compared three separate pest-management approaches: preventive neonicotinoid seed coatings, integrated pest management (IPM), and no management. (In the IPM approach, the researchers scouted the plots for pests and only used a pesticide - a granular pyrethroid, applied to the soil - when the population exceeded the threshold of economic damage.)

In one surprising finding, the IPM approach actually reduced populations of beneficial predatory insects more than the neonic seed coatings - probably, researchers said, because the pyrethroid insecticide used in that treatment is toxic to an even broader range of insects than neonics.

Overall, though, **while use of any insecticide slightly reduced insect damage to plants, there was no corresponding yield increase**.

Meanwhile, **the cover crop treatments proved more effective at reducing both pest density and plant damage than either of the insecticide interventions**.

The **study** was published in the March 2022 issue of the journal *Ecological Applications*.

Birds Laying Eggs a Month Earlier

The early bird may get the worm, but new data suggest that it's the early *egg* that's all the rage amongst our feathered friends.

A team of researchers has recently reported that, **out of 72 bird species surveyed in the upper Midwest, 24 species are nesting an average of 25 days earlier** than in the 1800s.

The researchers collected data on nesting dates from two sources. One was an extensive collection of eggshells at Chicago's Field Museum, which includes notes on when each specimen was collected. The eggshells in the collection were laid between 1872 and 1963.

The other, more recent dataset was compiled from observations the study's authors had made for other projects, covering the period from 1983 to 2015. All of these records, both historical and modern, were collected in a seven-county area around Chicago.

Twenty-four of the 72 bird species surveyed had shifted their date of first laying to an earlier point in the calendar, by anywhere from 11 to 50 days. Of the remaining species, all but one showed no change in average nesting date.

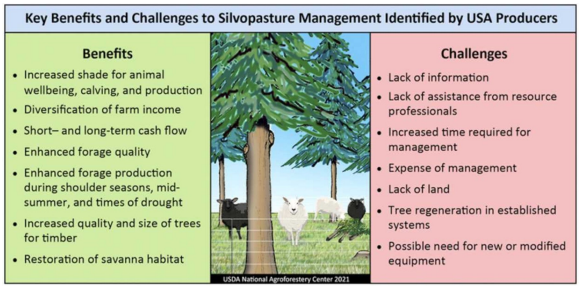
(The American robin (Turdus migratorius), for reasons known only to itself, has bucked the trend, now laying its eggs an average of two weeks later.)

The researchers point out that the shift to earlier nesting dates corresponds to a general warming pattern that has been occurring over the same time period. They also highlight the risks to bird species - particularly migratory ones - that may occur should the availability of their food sources not be changing in similar ways.

The **study** was published in the *Journal of Animal Ecology*.

Benefits and Challenges to Adopting Silvopasture

A newly published study makes a fresh tally of the **benefits of silvopasture systems** in agroforestry, but also charts the most common **challenges that producers face** in setting them up.



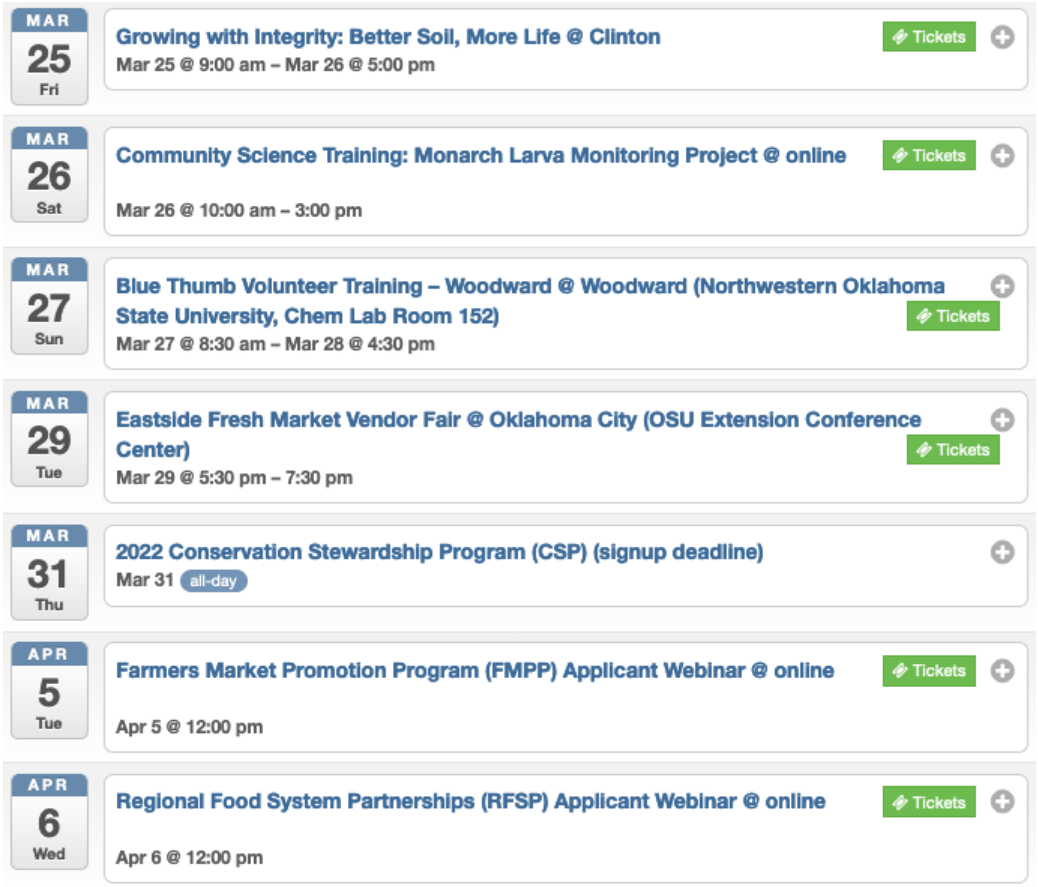
Researchers at the USDA's National Agroforestry Center **reviewed more than 50 studies** on the adoption of silvopasture practices. They identified **shade** for livestock and **diversification of income** as the **main benefits** of silvopasture systems.

The study found that **lack of information is the main obstacle** preventing producers from adopting silvopasture. However, **once producers do begin incorporating silvopasture, a large majority - 88% - continue the practice**.

Strong links emerged between silvopasture and other sustainable grazing practices, such as **management intensive grazing** (used by 98% of silvopasture adopters) and combining silvopasture with open pastures (96%).

The **study** was published in the March 2022 issue of the journal *Agriculture, Ecosystems & Environment*.

Spring Events: Food & Ag Conference, Marketing Grants, Beekeeping, School Pollinator Garden Grants, Market Gardening School....



Conference season isn't over yet! Go online for the Food & Ag Conference at Tuck (Apr. 26).

Schools may be letting out soon, but OSU Extension is just starting up its Beginning Farmer Market Gardening School (first session meets May 6), as well as offering a workshop on beekeeping basics (Apr. 29).

Grant deadlines coming up soon range from the national level - USDA's Federal State Marketing Improvement Program (FSMIP; Apr. 26) - to the local - the OKC Zoo's Living Classroom Grant Program (Apr. 30), which pays for monarch gardens in Oklahoma City-area schools.

Another banner event in the Oklahoma City area is the grand opening of the Eastside Fresh Market (May 3).

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.

Support the Kerr Center

Since 1965 the Kerr Center has been reaching out to folks in Oklahoma and beyond. Today, the Friends of the Kerr Center help us continue this vital work! If you enjoy reading this newsletter or visiting our website, please consider making a gift to the Kerr Center today!

Quick Links...

Kerr Center website

Find us on Facebook

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