



Field Notes

Kerr Center for Sustainable Agriculture E-Newsletter

E-Field Notes
January 2021

Best wishes for 2021 from the Kerr Center!

David Redhage starts us out with a **disheartening update on western monarch population numbers**.

But after the year just past, we're all ready for some **good news**. In the rest of this month's issue, we share some:

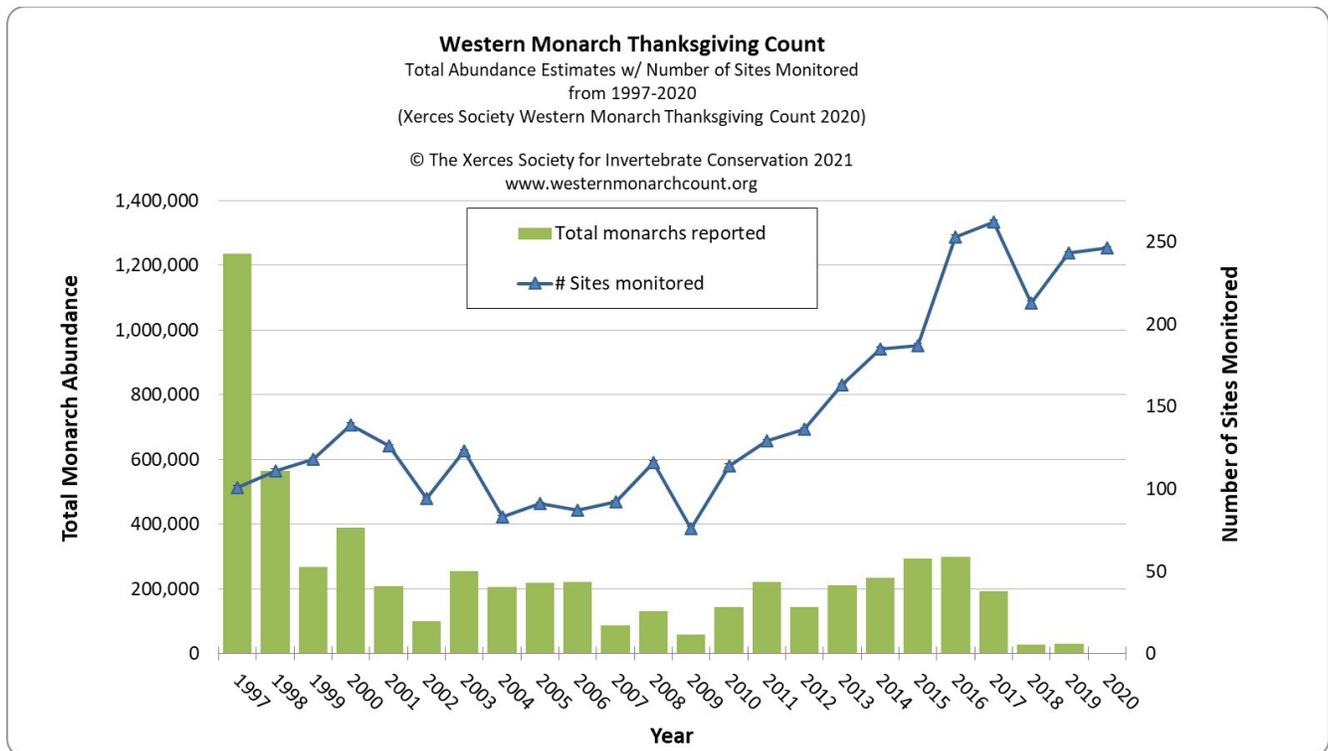
- USDA scientists have developed a promising **new treatment for a problematic parasite** of sheep and goats.
- One of our most popular publications, on **tools for small-scale home and market gardens**, is being published in serial form by *Rural Heritage* magazine.
- There's also a new report out on the **benefits of soil biodiversity**.

In this issue:

- **President's Note: Western Monarch Population in Decline**
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It's always good news to us when you [donate](#) to support the work we're doing. [Thank you!](#)

President's Note: Western Monarch Population in Decline



The Xerces Society has released the [latest count numbers for the western monarch](#). The past two years, the count has been around 30,000, which is **critically low**. This year, the count resulted in a total of 1,914 overwintering monarchs in the western flyway!

Monarchs have two different flyway populations in the United States - the central and western flyway populations. Here in Oklahoma, we are focused on the central population, which has fluctuated over several years. The total monarch population has been considered for listing as an endangered species, but was [recently declined for listing](#). For more information, visit the [Okies for Monarchs website](#).

The monarch butterfly is an iconic species. Most of us can remember learning about butterfly development in grade school, and the example species was often the monarch. I hope we don't lose this species.

Here at the Kerr Ranch, we try to maintain our [landscape for monarchs](#) and have [milkweed](#) in our pastures. Everyone can include some monarch habitat in their landscape. Every little bit helps.

New Treatment for Barber Pole Worm

The U.S. Department of Agriculture's Agriculture Research Service (ARS) has developed a [new treatment](#) for the **barber pole worm**, a **common parasite of sheep and goats**.



ARS researchers partnered with Virginia Tech and the University of Massachusetts' Medical School to combat infections of the parasite *Haemonchus contortus*, or barber pole worm. The parasite infects the stomach of ruminant mammals, feeding and interfering with digestion, before ultimately affecting the animal's overall health and stability.

In recent years, the barber pole worm has developed **resistance to practically all known dewormers**. The new treatment relies on a "para-probiotic" - a protein derived from bacteria that occur naturally in the soil. The protein binds to receptors in the intestines of the parasites, killing them.

[Learn more....](#)

Small Scale Tools Report in Rural Heritage

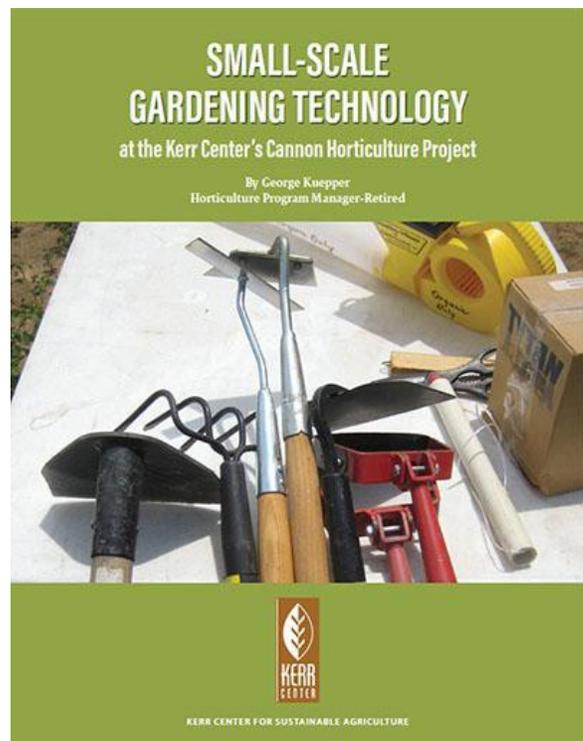
[Rural Heritage](#) magazine has begun publishing a popular Kerr Center report on **small-scale gardening tools** in serial form. So far, the magazine has run the chapter on **broadforks** in its October/November 2020 issue, and the chapter on **wheel hoes and push cultivators** in the December 2020/January 2021 issue.

[Small-Scale Gardening Technology at the Cannon Horticulture Project](#) relates the Kerr Center's experiences with small-scale farming and gardening tools during a decade of [bio-extensive management](#) on the Cannon Horticulture Plots.

Tools evaluated in the 30-page report include spades, digging forks, broadforks, hoes, soil rakes, cultivators, hay rakes, and wheel hoes.

The report is available for \$3 in electronic format or \$7 (including shipping) in hard copy.

[Learn more....](#)



New Report Highlights Importance of Soil Biodiversity

A **new report** shines a spotlight on **biodiversity in soils**, highlighting the contrast between the importance of soil organisms for **food production and ecosystem services** on the one hand, and the degree, on the other, to which that importance is **underappreciated**.

“The rich diversity of **soil organisms** drives many processes that **produce food, regenerate soil or purify water**,” the report reads.

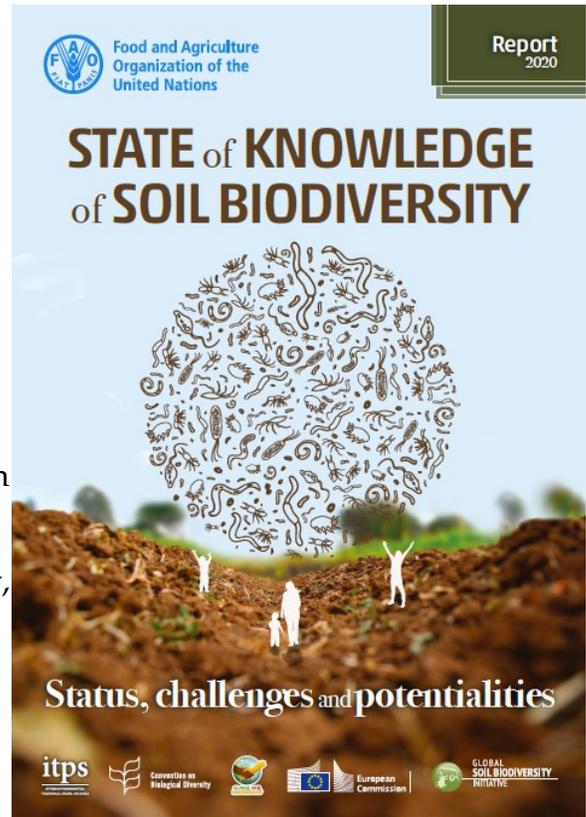
Published for World Soils Day 2020, [*The State of Knowledge of Soil Biodiversity*](#) summarizes **current knowledge** of soil biodiversity, and indicates gaps in that knowledge as areas for **future research**.

The report also identifies **threats to soil biodiversity**, and charts **trends in soil degradation**.

More than 300 soil scientists and experts on soil biodiversity from around the world contributed to the report, which is published by the Food and Agriculture Organization of the United Nations.

“Soil biodiversity could constitute, if an enabling environment is built, **a real nature-based solution to most of the problems humanity is facing today**, from the field to the global scale,” the report reads. “Therefore efforts to conserve and protect biodiversity should include the vast array of soil organisms that make up **more than 25% of the total biodiversity of our planet**.”

[*Learn more....*](#)



Winter Events: Agroforestry, Sheep & Goats, Emerging Farmers, Mushrooms...

January has always been conference season. One silver lining in the pandemic may be, with so many having gone virtual, that you can attend several at once - all from the comfort of home.

The University of Missouri's annual **agroforestry conference** is right around the corner (Jan. 28-30). Attend that in the morning, then learn the **basics of raising sheep and goats** in the evening (Jan. 29) - or skip over to the **emerging farmers** conference (Jan. 29-30) in the meantime.

In February, continue the learning with virtual sessions on **heirs' property and sustainable forest management** (Feb.

6), running **nursery operations with social distancing** (Feb. 11), preparing gardens for **spring** (Feb. 19), and **growing mushrooms** (Feb. 24).

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.

The screenshot displays a calendar interface with the following events:

- JAN 28 Thu:** 12th Annual Agroforestry Symposium: Community Health & Resilient Food Systems @ online (Jan 28 @ 9:00 am - Jan 30 @ 12:30 pm)
- JAN 28 Thu:** Raising Sheep & Goats 101 @ online (Jan 28 @ 6:30 pm - 7:30 pm)
- JAN 29 Fri:** Emerging Farmers Conference @ online (Jan 29 - Jan 30 all-day)
- JAN 30 Sat:** Blue Thumb Volunteer Training @ Stillwater (Oklahoma State University) (Jan 30 @ 8:30 am - Jan 31 @ 4:30 pm)
- FEB 8 Mon:** Virtual Conference: Heirs' Property & Sustainable Forest Management @ online (Feb 8 @ 8:00 am - 4:00 pm)
- FEB 11 Thu:** Webinar: The "Socially Distant" Nurseryman @ online (Feb 11 @ 1:00 pm - 3:00 pm)
- FEB 19 Fri:** Step Into Spring: Virtual Workshop @ online (Feb 19 @ 9:00 am - 12:00 pm)
- FEB 24 Wed:** Grow Your Own Mushrooms @ online / OKC (Feb 24 @ 6:00 pm - 7:30 pm)

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