Field Notes

Kerr Center for Sustainable Agriculture E-Newsletter

E-Field Notes
April 2018

In this issue:

President's Note: Cows Eating Weeds

Farming with Walk-Behind Tractors

Milkweed Seedlings

New Use for Old Tires

Spring Events: Goat Field Day, Monarch Meetups, Grad Student Grants

This month we offer two new publications:

- ***Farming with Walk-Behind Tractors*** captures **ten years of lessons learned** with BCS **two-wheel tractors**, and their various attachments, on the Cannon horticulture plots.

- ***New Use for Old Tires*** is a **revised and updated version** of our first fact sheet on **turning used heavy equipment tires into economical, long-lasting livestock watering points**.

In conservation news, there's now a quick and easy source of **native milkweed seedlings, pre-selected to suit your ecoregion**. If you're a school, nonprofit, or large restoration project, they even come **free**.

But first, check in with **David Redhage** for his **report** back from the **recent national SARE conference**, where he heard about how some managers are **treating weeds with... cattle?**

We can produce **quality publications** like these, and keep our finger on the pulse of **sustainable agriculture news** around the region, because people like you support the Kerr Center with your **donations**. **Many thanks!**

President's Note: Cows Eating Weeds

While at the National SARE Conference in St. Louis, Missouri, I moderated a session on livestock in sustainable agriculture.

One of the speakers, Kathy Voth, talked about training livestock to eat weeds.

Several points were made, but the one I'm sure most would be concerned with is the potential for weeds being toxic. You need to know if your plant is potentially toxic before training livestock to eat it.

Rather than explain how it works, I have included these links to websites outlining how it was done:
- What Should I Do About My Pasture Weeds? (On Pasture)
- Educated Cows Eat Weeds! (Livestock for Landscapes)

Image from OnPasture.com

Farming with Walk-Behind Tractors

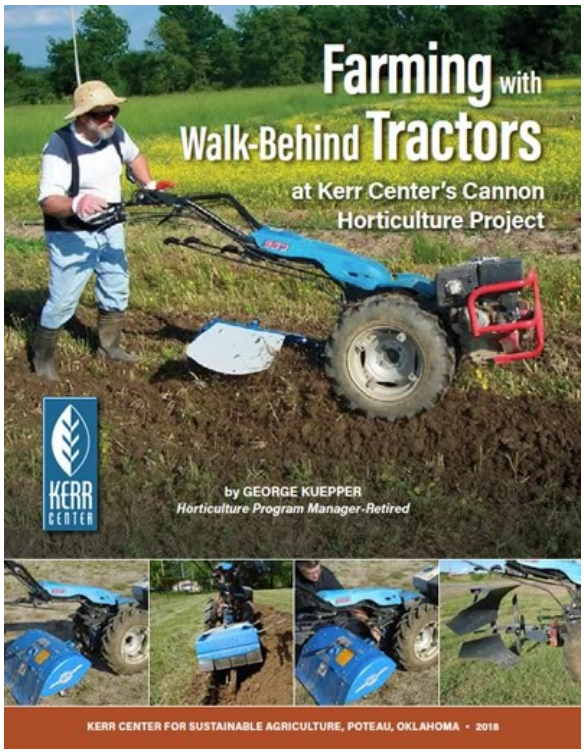
Many market gardeners need **something more than hand tools or garden tillers** to handle their field operations, but may have **trouble justifying the cost of a full-size tractor** - or even fitting it into their fields.

The Cannon Horticulture Project spent several years evaluating a technology that fits right into that niche: **two-wheeled, or walk-behind, tractors**.

Now, a **new report** lays all that **hard-learned information** out in an easy-to-digest format.

Written by retired Horticulture Manager George Kuepper, ***Farming with Walk-Behind Tractors*** covers his and the Kerr Center's decade of experience using walk-behind tractors in the Cannon Horticulture Project.

The report serves as a **backgrounder** for people trying to decide whether two-wheel tractors are a fit for their own operations.



It also works as a basic **how-to manual**, offering tips on the use of several implements: rototillers, crimper/rollers, hay rakes, and three types each of plows and mowers.

The report is **extensively illustrated**, with diagrams showing plowing patterns and suggested approaches to hitching and unhitching different implements.

The report is available as a downloadable PDF for $5.00. A printed version is available for $13.00, including shipping. **Order your copy today!**

Milkweed Seedlings

Establishing monarch habitat just got easier, thanks to an initiative by Monarch Watch. The nonprofit organization has flats of **native milkweed seedlings for sale**.

For qualifying schools and nonprofits, as well as larger habitat restoration projects (two or more acres)**, seedlings are free.**

The seedling sales site, **shop.milkweedmarket.org**, has a ZIP code search bar to **match milkweed species to the ecoregion** where they'll be planted. Seedlings come 32 to a flat for $74, with shipping included. (For Texas and Oklahoma, flats contain 50 seedlings, and the cost per flat is $93.50.)

For areas where seedlings are not available or have already sold out, the site offers a list of more than 200 vendors who sell native milkweeds in various regions of the U.S.

Schools and nonprofit organizations can apply for a free flat of milkweed seedlings. Preference will be given to applications that show clear educational goals, long-term plans for maintenance of the planting, adequate space and light, additional nectar sources, and administrative support. Full details, and links to application materials, are available **here**.

Habitat restoration projects at a scale of two acres or more can qualify for quantities of milkweed seedlings ranging from four flats to 2,000 or more plants. Trails and roadsides qualify; gardens and landscaped areas do not. Monarch Watch recommends planting milkweeds in patches of three to four plants, with 10 to 13 such patches per acre. Candidate projects are required to demonstrate that they have a management plan and that the site has, or will have, additional nectar sources; the **recipient pays shipping costs**. Full information and application materials are available **here**.

No matter where you source your milkweed, remember that the Kerr Center offers a handy **guide to Oklahoma native milkweed species**, as well as another **manual on other native Oklahoma pollinator plants**.

New Use for Old Tires

"New Use for Old Tires" is now a new fact sheet about an old management practice on the Kerr Ranch: **turning used tires** from heavy equipment **into durable, long-lasting, and economical watering points**.

This fact sheet explains why we like to use old tires from heavy equipment as watering tanks on the Kerr Ranch, and describes how we go about setting them up.

Nylon tires from heavy equipment (larger than tractor tires) are rugged and durable. Set partially down into the ground, they can **keep water from freezing all winter** long, and also keep it **cooler during high summer**. They **last longer than galvanized metal tanks**, and are **less expensive**. Using old tires in this way also **diverts waste from landfills and incinerators**.

Over the years, the Kerr Center has installed many "tractor tire water tanks" around the ranch. The tires are actually the type used on heavy construction equipment. The bottom is filled with cement, and the upper sidewall is removed so that cattle can reach the water.

This is a unique way to recycle old tires. The tire tanks replace galvanized and cement tanks, and last a long time. Also, during winter weather, due to better insulation, they do not freeze as readily as other types of tanks.

We use nylon tires rather than steel-belted ones. The nylon tires are easier to cut with a saw, and there are no wires to injure animals. Used tires are generally available free of charge. We have also had them hauled in from Oklahoma City, Dallas, and Houston.

Depending on tire size and weight, a semi can carry around fifteen tires. Including freight charges, this gives a total installed cost of around $200 for a 500-gallon tank. This compares favorably to about $200 for a 300-gallon galvanized tank, which only lasts a few years.

We prefer a tire that is around 3' deep and 6' wide (holding approximately 500 gallons). This size tire can be maneuvered with a tractor and front-end loader capable of handling 1,000-1,200 pounds (the weight of a 4' x 6' round hay bale). Larger tires are too heavy to handle with normal ranching equipment.

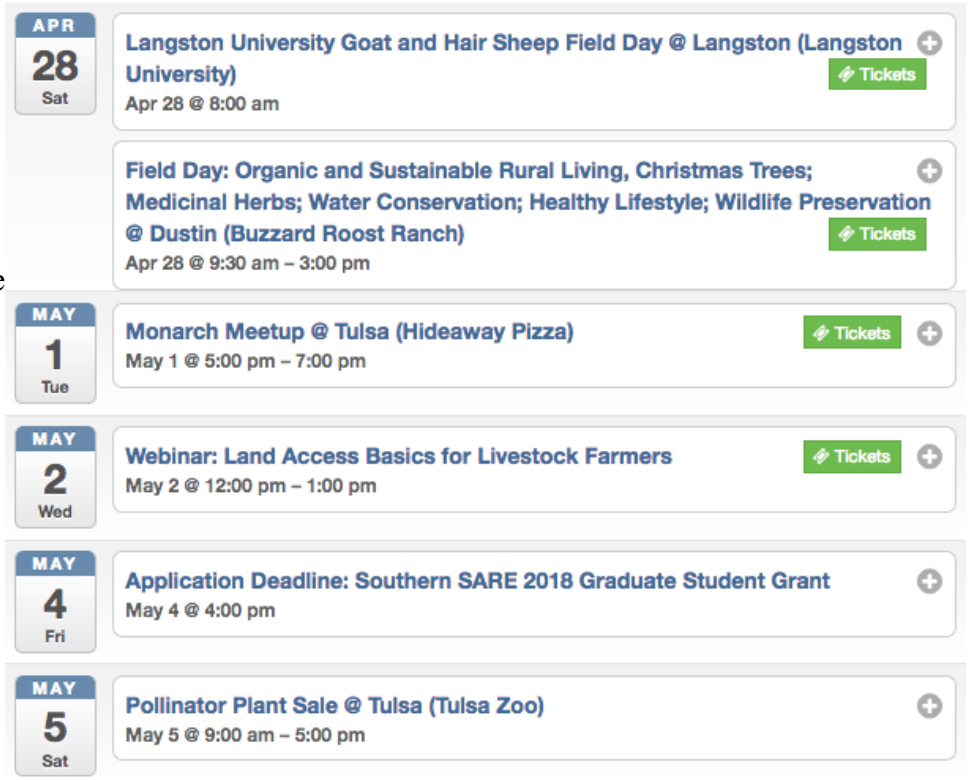
To make more water available, multiple tires can be linked together with PVC pipe. Only one tire has a float valve, and the rest are filled by gravity flow.

To set up the water supply, drill a 1" hole in the bottom sidewall to bring a 3/4" inch line into the tire. We prefer a 1/2" drive drill with a 1" speed bore wood bit. With a 1" hole, the tire will self-seal around a 3/4" PVC line. This also allows some flexibility, to keep the inlet pipe from breaking. This works better than putting the pipe through the concrete in the center of the tire.

On early attempts, we used galvanized pipe; however, now we only use PVC pipe because it is more flexible and slower to deteriorate. We also remove only half of the upper sidewall, leaving an overhanging lip to protect the float underneath and discourage cattle from getting into the tank.

To remove the top sidewall, we use a heavy-duty reciprocating saw, equipped with the most aggressive wood blade available. Drill several 1"

Spring Events: Goat Field Day, Monarch Meetups, Grad Student Grants



Langston University's yearly goat field day (now covering hair sheep as well) happens April 28. OFRA is also hosting a **multi-topic field day** on April 28. Okies for Monarchs' **Monarch Meetups** continue in different locations around the state, and May 4 is the deadline for **Southern SARE graduate student grants**.

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.

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