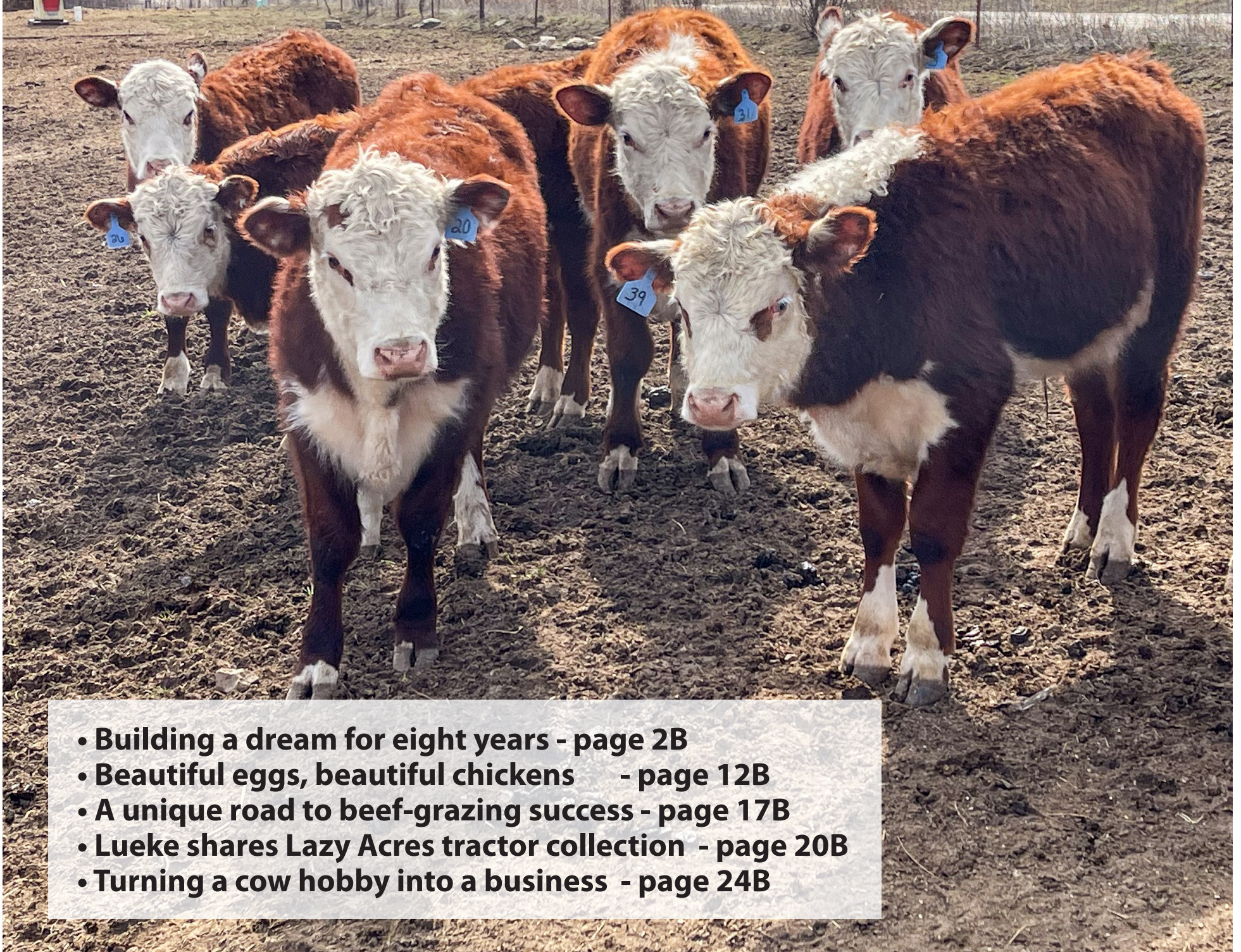


2024 Ag Times



- Building a dream for eight years - page 2B
- Beautiful eggs, beautiful chickens - page 12B
- A unique road to beef-grazing success - page 17B
- Lueke shares Lazy Acres tractor collection - page 20B
- Turning a cow hobby into a business - page 24B

MARCH 6, 2024 PAGE 1B-32B

Unterrified Democrat

Building a dream for eight years

BY ELISE BROCHU

Jake and Courtney Berhorst bought their 200 acre farm in Folk, Mo., then continued to work outside jobs for eight years while building their dream.

“We had this in mind when we bought the farm, but, I mean, it took eight years to get here, to where we could both do this full time,” Courtney said.

Jake was able to quit his outside job in December of 2022, then couple took on management of a neighboring 1,400 acre farm, both to supplement their income and to apply regenerative farming practices there as well. Courtney was able to quit her outside job in December of 2023, making 2024 the Berhorst’s first year as full-time farmers. Previously, they home-schooled their four children, Leni (8), Maximus (7), Rowan (4), and Huxon (2), but recently enrolled them in parochial school and daycare in order to make the time necessary to farm full time. The decision, Courtney said, was a good one, because their children love going to school.

“We’ve by no means ‘made it’, either. We’re making it,” Jake said good-naturedly.

“We’re living more simply to live this kind of life,” Courtney added.

Jake said, to him, regenerative farming is about regenerating the soil, regenerating the family farmer, and regenerating the community. He believes that regenerative farming helps make farming a viable business again by decreasing input costs. By farming

regenerative let, they have been able to eliminate the purchase of chemical fertilizer, herbicides, pesticides, and antibiotics, which saves a lot of money each year. The key is working with nature, instead of against it. The trade-off, he said, is time.

Jake said there are several key elements to regenerative farming. The first is that livestock be kept on a small piece of land for a short period of time, then moved, allowing that piece of land to rest for 30 to 80 days, depending on the season. “This intense animal activity stimulates the soil microbes and increases grass production. By moving the animals often, they do not ingest as many parasites and are moved away from fly pressure,” Jake said, then explained that fly larvae takes four days to hatch. High stocking density helps trample over mature plants, which feeds the soil and makes room for fresh grass to grow, and also concentrates the manure in each location. “Typically, our rest period is like 40 – 45 days, so they’ll be on that, example, two acres for one day, then they don’t come back for another month and a half,” Jake explained, noting that the rest period varies based on the growing season. Early in the spring, when the grass is growing faster, an area might only need 25 days. Later in the summer, it may take up to 80 days to grow back. Tight management, Jake says, is critical to regenerative farming. “If you’re trying to take out all the crutches, which is, like, chemical fertilizer, dewormers, all

See **BERHORST** on Page 3





We're Family Owned Too.

Legends Bank supports farmers with innovative loan programs and line of credit opportunities

Borrow funds for operations, equipment, livestock and more with favorable terms and competitive rates.

Talk to us today about our personalized lending solutions for your operation. Call or stop by your nearest branch for a one-on-one consultation.

Find us on:   



**Belle • Linn • East Linn
Jefferson City
• Loose Creek • Owensville
• Rolla • Rolla Forum
Taos • Union • Westphalia**

200 East Main Street • Linn
573-897-2204

155 Bank Road • Loose Creek
573-897-3611

1950 Hwy. 63 • Westphalia
573-455-2358



LEGENDS

BANK

www.legendsbk.com

Berhorst • from page 2

that... You can't just pull all the crutches out and not do the management portion. Otherwise you're going to have a lot of dead animals," he said. "And, truthfully, having a variety of livestock also helps with that," Courtney added, explaining that the different types of manure have different benefits.

The Berhorsts use as few chemicals as possible, so they don't use chemical fertilizer or weed killer, and they don't worm their animals. "Because you want the soil health to keep rebuilding," Courtney said.

"That all leads into your soil health. That's the foundation of your whole farm. If your soil's not healthy, then you're not going to be in business for very long. To get more earthworms and to get organisms within your soil, from my understanding, you can't be worming all your animals. It doesn't only kill the organisms in the cow's body; it kills the ones in the ground, too," Jake expanded.

"We've noticed the difference in our manure patties. In our old, old fields, the earthworms and the beetles that help to carry nutrients below the land, that was nonexistent in them before we started," Courtney said.

"If you go out during the growing season and look at a pile of manure that's been there for three or four days, there's going to be a million little holes in it, so there's some activity in there. That's a good thing. If it's just sitting there and there's nothing wanting to eat the cow's manure, that's a bad sign for you. There should be organisms and bugs and dung beetles and everything. If there's no holes in it, then they're probably trying to eat it and dying," Jake said.

"And just cost effective. I mean, we wouldn't be able to do this if we were farming the conventional way. We'd have to have a full-time job to be able to afford all the



fertilizers and pesticides," Courtney added.

Frequent moving of animals requires secure fencing that is also easy to move. Chickens are housed in 'the egg mobile', a large chicken house on wheels, which, when used with white electric netting, functions essentially like a giant chicken tractor, and is typically moved about once a week. For larger animals, the Berhorsts use movable electric fencing in addition to their existing cattle fences.

"When you're moving your cows every day, you see them every day," Jake said, which allows them to spot

potential problems sooner than they might otherwise.

They also use a deep bedding system for feeding the cows in the winter, which Jake explained starts with putting down a thick layer of wood chips. "I put like a foot of wood chips down on the whole thing. And what that does, it soaks up all the urine, right? And then as the year goes on, you just keep building out, right until the spring," he explained. Berhorst said this feeding method saves them

See **BERHORST** on Page 4

An advertisement for Pioneer and CorTEVA agriscience. The background is a close-up of a green corn plant. In the top left, there is a green logo with a stylized plant inside a rounded square, followed by the word "PIONEER" in large, bold, black letters. Below that is the CorTEVA logo, which consists of a blue and white stylized plant icon followed by the word "CORTEVA" in bold black letters and "agriscience" in smaller black letters below it. On the right side, there is a large green outline of the state of Missouri with the letters "OS" in white, stacked vertically. At the bottom, the text "Osage Seed and Chemical, LLC" is written in a large, bold, white font with a black outline, and below it, the phone number "573-897-3163" is written in the same style.

**CALL US AT:
573-455-9111**

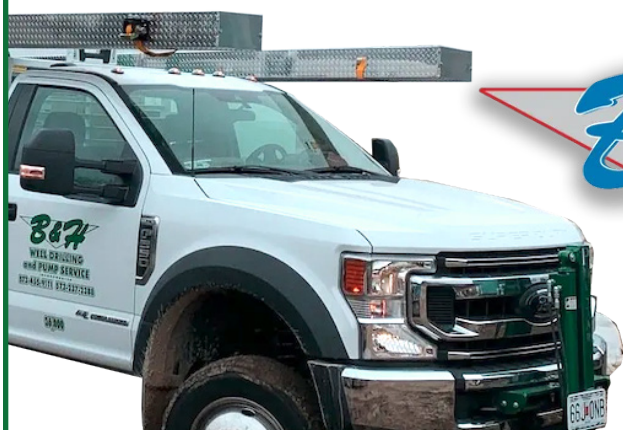


NEEDING A WELL DRILLED?

**We are Mid-MO's preferred
well drilling company!**

- Complete Water Well Installation
- Repair on Existing Equipment
- Geo Thermal Wells & Looping
- Cobett Waterers & Water Lines Installed
- Alluvial Irrigation Wells

With up-to-date equipment, we are Central Missouri's preferred well drilling and geothermal company.



B&H Well Drilling &
PUMP SERVICE, INC.
www.bhwelldrilling.com



Berhorst • from page 3

both time and money. By feeding the cows under cover, they can give them enough hay for three to five days at one time, and it stays dry in rainy weather, so less hay is wasted. "But whatever they have leftover, usually stems, I just throw it out here into the bedding pack again," he said. Jake said they had twice as many cattle before last year's drought, and were feeding them about six round bales every three days, but changing his feeding method meant the cattle only ate five bales every three days. "This keeps the cows from compacting and plugging the soil in our pastures during the non-growing season and saves us 15% on hay feeding. It also gives us a pile of manure that can be spread on our pastures," Jake said. The cows typically graze from around the beginning of April until the end of December. In the spring, when the cattle no longer require significant hay, the Berhorsts remove the deep litter from the feed barn and allow it to age before using it as fertilizer.

Jake hopes to clean out the lean-to on the other side of the barn by next winter, to add another deep bedding feed barn for the calves being weaned, then section off part of that field for them. "As soon they start having 48 hours in a day instead of 24," Courtney joked.

Cattle ready to be processed had already been moved to another field to await transport, and "next year's crop", as Courtney called the calves being weaned, had a field of their own. "Once we start rotating again, and the grass starts growing, we'll turn them back out with the cows. They just got to get fully weaned. And then we'll rotate them again until they're about 18 months old or so. And then, typically, we put them on feed to finally finish them off," Jake said. "We tried finishing them off grass-fed, but we just don't have a market. Everybody thinks they need to have grain for the marbling," Courtney added.

They explained that grass finished beef is leaner but most local consumers prefer the marbling that comes from finishing with grain. "It depends on the type, too. I mean, if you're raising, like, Angus and Herefords, you almost have to finish them out on some grain, where if you're raising a smaller type, like the South Poll, like a smaller breed, they can get fat off of grass," Courtney said, then added that they do have a smaller bull and are working on getting their size down, so cows can be grass fed. "It takes years to get the right genetics to be able to do grass fed," Jake said, "Basically, if you don't have an animal that can be fat and finished by 25 months old, at least, on grass, it's gonna be tough. If you get over that you're gonna have a tough piece of meat, so you don't want that. So, you got to get your genetics right before you can just start selling grass fed beef, you know. Until then, we'll probably stick with grain fed at the end." Courtney clarified that cattle will still be on the pasture, but will be supplemented with grain.

"Typically, we don't sell anything to the sale barn. We haven't for eight years. All the heifers get sold as breeding stock, or we keep them back for ourselves. Everything just goes straight to the consumer. We sell by the whole or half of a beef, or we have

See **BERHORST** on Page 6



MOSSY OAK® **PROPERTIES**

Central Missouri Land, Home & Auctions
America's Land Specialist

SELLING CENTRAL *Missouri* **LAND & HOMES**

OWNER/BROKER
DEWAYNE SPRENGER

Office Number 573/635-3544

Agent Brendan Baker 573/353-7288

Agent Bob Roark 573/694-0418

Agent Hayden Lee 573/644-4065

Agent Sierra Johnson 573/645-4911

Agent Denise Nolte 573/291-2002

Agent Josh Bond 573/680-9249

Agent Adam Weaver 573/230-5448



Scan the QR Code with your smartphone's camera to view listings and learn more about our agents.



Berhorst • from page 4

it state inspected and we sell in the store by the cut,” Courtney said, “If we sold them to the sale barn, we’d be getting a hit because they’re red, and they want black, but we like the demeanor.” Jake adds that Herefords are known for their calm dispositions. “Our wild cow is like most people’s normal cow. And we have four little kids, so we don’t need any wild cows,” he said.

Jake added that they’ll probably keep more heifers than usual this year, to build

their herd back up, since they had to downsize due to last year’s drought. “We do have way more sheep now than what we used to, so we’ve kind got to factor all the sheep. The sheep do eat, too,” Jake said.

This is the Berhorsts first year with a large flock of sheep. They have a mix of breeds, but Jake said they all have St. Croix in them. St. Croix are a small meat breed, known for their heat tolerance, foraging ability, and docile nature. They’re hair sheep, meaning they have hair instead of fleece, and don’t have to

be sheared. Jake said they’re also known for their parasite resistance, and that moving the sheep frequently means they don’t have to worm them. “Lamb is an expensive meat. And then, to find lamb that hasn’t been pumped full of dewormer is even harder, so it’s become one of our most popular items,” Courtney explained. “And the sheep grow on you,” Jake added, “They’re a pretty cute animal. I mean, they are very hard to resist. And they’re not going to hurt you. There’s nothing about a sheep that can hurt you. They’re not that heavy.” That’s important to the couple, as the safety of their children is paramount.

The Berhorsts have three sheep dogs of varying ages. “We’ve had sheep dogs that don’t turn out. That’s really been the hardest part about raising sheep. The last pair of sheep dogs we had killed some sheep,” Courtney said. Their last pair were pups, they said, and were just trying to play with the sheep, but ended up killing them. The Berhorsts ended up giving them back to the guy they got them from. “Then we got really lucky and found (our oldest dog),” Jake added. Courtney explained that a family was getting rid of their sheep and didn’t know what to do with the dog, so they took her along with part of her flock. Eventually, they may breed and train sheepdogs, because trained sheepdogs are so hard to find.

“They are very hard to find. Unless (people) are getting rid of their sheep, they’re not getting rid of their dog,” Jake said.

The dogs are also the most expensive part of the sheep operation, Jake said, because they need dog food. “And you don’t want them hungry,” he joked. The dog food also has to be put in special feeders to keep sheep from eating it.

The Berhorsts hope to eventually run the sheep with the cattle, but are still working out the best method and timing for combining flock and herd. The biggest challenge, they said, was making sure the sheep dogs see the cattle as part of their flock instead of a danger to them.

Although they kept pigs for a while, the Courtney and Jake ultimately decided the animals were too dangerous around small children. Their children help with farm chores and play outside, and their safety is critical. Courtney said they did one farrow session, then got rid of the pigs. “We like our kids to be free range, and we like them to explore and do things, but that’s why you can’t have dangerous animals. I mean, we’re with (the kids), but they can’t resist picking up a cute little piglet, well, the sow is going to eat you,” she said. “That’s another reason we moved the roosters out,” Jake added, explaining that their kids love playing

See **BERHORST** on Page 7



For generations farmers have been turning to Heritage Community Bank for their banking needs. We look forward to continuing to support the agricultural heritage of Mid-Missouri.

Contact us for your Ag Lending and deposit needs! We have been here for you in the past, we’re here for you now and look forward to serving you into the future!

HERITAGE COMMUNITY BANK

101 S. Main St. • Chamois, MO • 573-763-5958
 15967 Hwy 47 • Marthasville, MO • 636-433-2000
 100 E. Locust St. • Union, MO • 636-584-8880
 801 Franklin Ave. • Washington, MO • 636-239-1132

available 24/7 at hcbanks.com

Equal Housing Lender • Member FDIC

CHAMOIS AG SUPPLY

**FEED - SEED - OIL
 FERTILIZER
 AG CHEMICALS**



- ◆ Custom Ground Feeds
- ◆ Ag Chemicals
- ◆ Animal Health Products
- ◆ Pet Supplies
- ◆ and MORE!

108 N. Market | Chamois, MO | 573.763.5317

Berhorst • from page 6

with the hens, which leaves no place for aggressive roosters.

The store is a 150 year old school house that was used as a hunting cabin before the Berhorsts renovated it. They did most of the work themselves, even going as far as to source perfectly matching replacement flooring from a building that was being torn down, to replace damaged pieces of the existing floor. They use it to sell their own beef, pork, lamb, eggs, and their niece's duck eggs, as well as t-shirts and other local products they feel fit in, including balms and lotions that are made locally from their tallow. They do not sell milk, as, under Missouri law, raw milk cannot be sold in a retail store. The Berhorsts also carry a wide array of Little Buster Toys, and one last discontinued Little Buster Plush Hereford. The store is open on Saturday mornings or by appointment, and delivery is sometimes an option. In the spring, the Berhorsts often bring baby animals up so people can see them when they come to shop, and they would eventually like to host a farmers' market.

Courtney also plans to offer some classes this spring, although the schedule for those has not been set.

The couple is passionate about the importance of farming, and especially the importance of farming among future



generations. Courtney wants to encourage young people who find farming interesting not to be afraid to reach out to them or other young farmers, to ask how

they do it.

“At the end of the day, I’m pro-farmer. I don’t want to sound like I’m negative to any kind of farming style. I wish we had

more farmers. We need more farmers,” Jake concluded.

To find more information or order meat online, visit www.therootedtable.net.



WE GO OUT ON A LIMB FOR YOU!

- TREE TRIMMING & REMOVAL
- STUMP GRINDING
- FREE ESTIMATES

Fully Insured For Your Protection

Feeler Tree Service

Jim Robertson
33449 Hwy. 28 East
Belle, MO 65013
(573) 864-2759
or (573) 859-3798



your farm is special.
your coverage should be too.

simple human sense

FARMERS 280 FERTILIZER CO., LLC

6888 Hwy 63 • Freeburg, MO • 573-744-5271

Helping Farmers Every Day with Their Needs

All Fertilizer & Lime Sales

Steel Supplies • Tubing • Pipe • Flat • Angle • Etc.
Linde Air Gas Supplies • Building New & Repair Work

Jim “Porky” Boehm, Manager

Chris • Noah • Adam • Tom • Debbie

MUENKS INSURANCE AGENCY

105 W MAIN ST

LNN, MO

573-897-9900

Auto-Owners INSURANCE

LIFE • HOME • CAR • BUSINESS

Billions of cicadas bring buzzy magic to Missouri in 2024

BY LINDA GEIST

Missouri University Extension

KANSAS CITY, Mo. – Billions of cicadas will buzz this spring as two broods emerge at the same time. These broods last emerged together in 1803 and won't appear together again for 221 years.

That means that your grandchildren's great-great-great grandchildren likely will be the next group to experience the dual emergence of these cicada broods that appear in 13- and 17-year life cycles, says University of Missouri Extension specialist Tamra Reall.

"It will be crazy," she says, and she can't wait. Reall is a horticulturist in the Kansas City area and an entomologist known as "Dr. Bug."

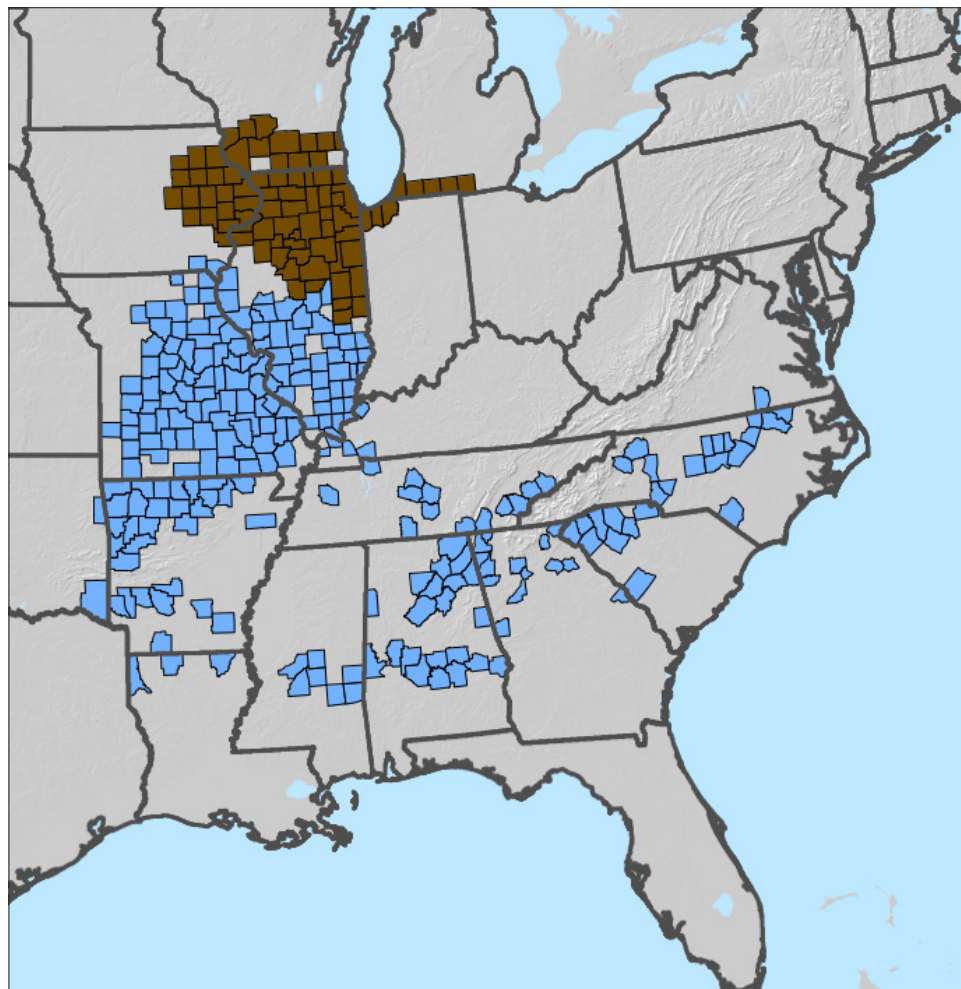
Periodical cicadas have the longest known life cycle of any insect. Broods are groups of cicadas that share the same emergence years. Broods receive a number listed as a Roman numeral. Brood XIII only emerges every 17 years while Brood XIX emerges every 13 years.

The last time these two particular broods emerged together was when Thomas Jefferson was president, decades before Missouri statehood. The next event will be in the year 2245.

Periodical cicadas belong to the genus *Magicicada*. "No surprise that it's called the 'Magicicada,' because it's magical," says Reall.

Emergence will occur in 18 Midwestern states. For the most part, most Missourians will only experience Brood XIX, the Great Southern Brood, which last appeared in Missouri in 2011. Expect them to emerge in late April to early May, says Reall.

See **CICADAS** on Page 9



MISSOURI WILL be a hot spot for cicada emergence in 2024. MU Extension horticulturist Tamra Reall encourages Missourians to get out to enjoy this noisy, magical emergence that won't happen again for many years. Brood XIII is shown in brown, and Brood XIX is shown in blue. Map from U.S. Forest Service.

It's more than land, it's a way of life.



For more than 100 years, we have helped people finance their dream properties from a handful of acres to thousands. Our passion for rural Missouri drives us but our experience and knowledge of rural financing and crop insurance sets us apart from other lenders.

Growing Relationships. Creating Opportunities.™

- ✓ Loans available for agriculture, rural homes and recreational property
- ✓ Fixed rates available up to 30 years
- ✓ Small to large acreage sizes
- ✓ Local team of loan and crop insurance experts service your account



FCS FINANCIAL
Growing Relationships. Creating Opportunities.™
— A FARM CREDIT COOPERATIVE —



FCS Financial in Jefferson City:
1.800.292.7131
WWW.MYFCSFINANCIAL.COM

**Contact Curtis Fischer,
Brad Deeken or Jessica Hamill
to learn more.**

Growing Relationships. Creating Opportunities. is a trademark of FCS Financial, ACA. Equal Opportunity Provider

Cicadas • from page 8

Those in northeastern Missouri near the Illinois border might see – and hear – both broods.

Cicada nymphs stay in the soil for 13 or 17 years, depending on their brood. They emerge when the soil warms to 64 degrees and dig their way out of the ground. They subscribe to the “safety in numbers” approach and emerge all at once. They climb trees, fence posts or anything vertical before shedding their hard skins. Then they head to treetops to mate, lay their eggs and die within four to six weeks.

Expect to see cicadas after a spring rain, and expect to see a lot of them – as many as 1.5 million per acre, says Reall. This creates a feeding frenzy for predators and litter so heavy that the sidewalks and highways may need shoveling.

Brood XIX, a 13-year brood, has four species. Other states that will see Brood XIX include Alabama, Arkansas, Georgia, Indiana, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee and Virginia. These will emerge late April through the second week of May.

Brood XIII, the Northern Illinois Brood, is a 17-year cicada with three species. It will appear in Iowa, Illinois, Indiana, Wisconsin and possibly Michigan in 2024. Some stragglers may make their way into southern Illinois and the St. Louis area. Expect emergence mid-May through June.

The loud sound you hear is from male cicadas as they send out their mating call, which can be as loud as a lawnmower and is unique to its species, Reall says. The synchronized male singing can be louder than a jet engine.

With five eyes each, they truly are on the lookout for a mate. They have only four to six weeks from the time they emerge from the soil to ensure the next generation of offspring. Once they mate, the males soon die.

After the female lays her eggs in the tree’s branches, her work is done as well, and she also dies. Her nymphs fall to the ground, burrow into the soil and begin the process all over again.

Cicadas are drawn to the vibrating sounds of power tools and lawn mowers.

Cicadas, while loud and messy, are harmless to humans and their pets, says Reall. They don’t sting or bite. She warns against using pesticides that will harm birds and beneficial insects such as butterflies, bees and moths. If there is concern about new trees or bushes, protect them with a loose cover of cheesecloth.

Reall urges Missourians to help map the cicada emergence using the Cicada Safari app, <https://cicadasafari.org>, created by entomologist Gene Kritsky.

Reall also recommends these sites for those who want to learn more:

- <https://www.fs.usda.gov/forestryhealth/docs/CicadaBroodInteractiveMap.pdf>
- <https://cicadas.uconn.edu/broods/>



KNOWN FOR their red eyes (photo far left), cicada eyes actually can be several colors, but not green. Photo courtesy of Gene Kritsky, Mount St. Joseph University.

THE ANNUAL cicada, left, photo left, and the periodical cicada, right. Photo by Tamra Reall.



241 Hwy. 50 • Rosebud, MO 63091 • 573-764-3393

1325 Main Street • Linn, MO 65051 • 573-897-2249

1073 Hwy. 100 • Morrison, MO • 573-294-7191

www.RosebudTractor.com

ROSEBUD TRACTOR

KIOTI.com

Disclaimer: *Offer available March 1, 2024 – May 31, 2024. Cannot be combined with any other offer. Rebates and/or financing based on the purchase of eligible equipment defined in promotional program. Pricing and rebates in US dollars. Additional fees including, but not limited to, taxes, freight, setup and delivery charges may apply. Financing is subject to credit approval. Customers must take delivery prior to the end of the program period. Some customers will not qualify. Some restrictions apply. Offer available on new equipment only. Prior purchases are not eligible. Offer valid only at participating Dealers. Offer subject to change without notice. See your dealer for details.

DOOLITTLE

TRAILER MFG.

CLEARANCE ON ALL '23 MODELS

**Doolittle
Top 12
Dealer!**

CHOOSE FROM:

- Car Haulers
- EZ Loader
- Dump Trailers
- Utility Trailers
- Enclosed Trailers
- Heavy Duty Gooseneck Trailers
- And More

**5
Year
Structural
Warranty**



Authorized Retailer

Need quality tools?
We've got you covered!

Doolittle Trailer Authorized Dealer

**THE LIGHT BULB
EXPRESS**

LIGHTING & ELECTRICAL SUPPLIES

2482 Hwy. 50 • Rosebud, MO 63091

573-764-3600 or 314-604-2094



SCN FEMALES on soybean plant. Photo courtesy MU senior research specialist Jeff Barizon.

Be on guard for older soil-borne and look-alike soybean diseases

BY LINDA GEIST
Missouri University Extension

COLUMBIA, Mo. – Farmers often struggled during the drought of 2023 to identify what was happening in their soybean as plants showed similar symptoms with different causes.

University of Missouri Extension plant pathologist Mandy Bish calls some of these causes doppelgangers, look-alikes that mimic other diseases with confusing similarities and perplexing differences. In addition, old soybean foes and emerging threats combined to create challenges, she says.

Sudden death syndrome (SDS), as its name implies, strikes quickly as plants begin to flower. However, initial infection is in the roots. Symptoms include yellowing and browning of the leaves between leaf veins, followed by tissue death. Bluish fungal growth may appear on the roots. Roots show signs of rot, and severely infected leaves eventually fall off.

The fungus can survive in the soil and on soybean residue for several years. It favors cool and wet soils at planting time, so wait to plant when soil is warm. Aim to plant fields with SDS or SDS-like symptoms last. Plant an SDS-resistant variety into well-drained soil, and always rotate crops. Seed treatments can help to reduce early-season infections.

Red crown rot has symptoms that mimic sudden death syndrome. This disease has not been confirmed in Missouri, but losses up to 30 bushels per acre have been reported in western Illinois.

The fungus that causes red crown rot can survive winter and infect soybean

roots shortly after planting. Symptoms include reddish discoloration in the root area near the soil line. Tiny, red ball-like structures called perithecia may grow on the crown and root. Wilting and death may not appear until late in the season. Leaves usually remain on the plant, unlike cases of sudden death syndrome. Co-infection can occur with plants having symptoms of both red crown rot and sudden death syndrome.

Later planting dates, rotation and avoiding poor drainage areas can help with managing the disease. Seed treatments may be helpful. Bish says that the disease can be spread through equipment.

Foliar injury due to fungicide applications was also observed in 2023. Symptoms on the leaves resembled SDS and red crown rot injury. This injury is typically due to triazole fungicides and more likely to occur in hot and dry conditions, such as those seen in 2023.

Charcoal rot favors dry, warm soils and is the disease to watch when drought conditions persist. Charcoal rot's fungus grows inside the roots and stem. Symptoms most often occur late in the season but, as was the case in 2023, can appear early. The fungus disrupts water and nutrient uptake, which can result in yellowing leaves, wilting and premature leaf death. Early-season symptoms may be mistaken for Phytophthora or Pythium rots, but drought conditions favor charcoal rot. Tin black fungal structures called microsclerotia fall from mature plants at harvest and return to the soil, where they can infect future crops. Disease symptoms typically appear first

See **SOYBEANS** on Page 11

Soybeans • from page 10

in the driest regions of the field, such as edges, hillsides and areas with compacted soils. Bish received reports of charcoal rot the week of June 5, which is very early for Missouri. Most samples submitted to the MU Plant Diagnostic Clinic in June came from central and west0central Missouri, and many samples throughout the season tested positive for both charcoal rot and SDS.

Phytophthora root and stem rot was substantial in areas along U.S. Highway 36 and north in 2023. Phytophthora generally favors warm and wet condition, so its appearance during a droughty season initially seemed unusual, Bish says. But it appeared in irrigated fields where moisture created favorable conditions.

This disease can infect soybean at any stage and cause 100% yield losses. The fungus survives on crop residue and in the soil. The pathogen is becoming more complex, says Bish. The best management tool for this disease has been planting resistant varieties. However, the same soybean genetics have been in use since 1985, and the pathogen continues to adapt. The most commonly used resistance genes, Rps1c and Rps1k, are rapidly losing their resistance in the United States and some other countries. Other strategies to help with disease management include good

drainage and seed treatments with active ingredients mefenoxam, metalaxyl and ethaboxam for early-season protection. To minimize spread, work suspect fields last and clean soil from equipment before moving to other fields or storage.

Soybean cyst nematode (SCN) remains a top yield killer in Missouri, especially during drought. Since 1968, most growers have relied on varieties that contain P188788 or Peking resistances, with 95% of available seed containing P188788. Bish says Peking is an option, but not a “silver bullet,” when used in rotation, and seed is sometimes hard to find.

Test your soil to know your nematode numbers. Bish is director of the clinic, will provide free SCN egg counts to farmers with support from Missouri Soybean Merchandising Council and farmers can contact the clinic by calling 573-884-9118 to learn more. Management of SCN includes rotation to non-host crops such as wheat or corn and rotation of SCN resistant varieties. For more information, see <https://www.thescncoalition.com>.

For more information on soybean diseases, visit the MU Integrated Pest Management website at <https://ipm.missouri.edu/cropPest/>.

If you suspect disease in your soybean field, send samples to the MU Plant Diagnostic Clinic. Visit <https://extension.missouri.edu> or call 573-882-3019.

BARRETT MATERIALS, INC.

BELLE PLANT

Crushed Stone • Sand • Gravel • Ag Lime • Hauling

265 Roberts Trail • Belle, MO 65013

Office: 573-859-6006



James L. Barrett
 3880 Boeuf Creek Rd.
 New Haven, MO 63068

Office: 636-239-1122
Residence: 636-239-2917
Cell: 636-357-2857
Email: barrett_materials@hotmail.com



GRASS FED & GRASS FINISHED LAMB • PASTURE PORK • PASTURE MEAT CHICKENS • PASTURE LAYING LENS FOR EGGS • GRASS FED GRAIN FINISHED BEEF
 LOCALLY MADE TALLOW LOTIONS AND LIP BALM MADE WITH OUR BEEF TALLOW

www.therootedtable.net • 573-694-3614

MILLER

FARM SUPPLY

For All Your Farm and Tire Needs

On-Farm Tire Service

MULCH

**Now selling
 Bulk Garden Seed**

*Feed & Water Lines
 Parts & Service
 Power Washers
 Generators
 Welders
 Hardware
 Tires & Tractor
 Tires
 Speciality Farming
 Supplies*

**Tire Service also available for
 Big Trucks and Tractors**

Hours:
7:30 a.m. to 5:30 p.m. Mon. - Fri.
8:00 a.m. to 12:00 p.m. Sat.

Jct. 50 & 63 • 573-455-9666

Beautiful eggs, beautiful chickens

BY ELISE BROCHU
SPECIAL CORRESPONDENT

Dee and Dave Luker worked for years to be able to afford their dream of “retiring” on a farm. They closed on their farm, roughly halfway between Linn and Chamois, on Dave’s birthday in 1996. Dee continued to teach, and eventually retired as an elementary school principal, and Dave quit his job to become a cattle farmer.

“During the COVID thing, we sold a ton of beef off the farm. And people were panicking for it. I felt bad for them. Most of it was ground beef, and hard to get slaughter dates. We had raised chickens for a number of years, and when we went in and started looking at buying baby chicks again, I was shocked at how much they cost. You know, \$5 for a broiler that you’re going to raise up and try and process yourself and sell and recoup your investment, and your time, it wouldn’t pencil out. So, I told Dee, I said, ‘Hey, why don’t we take a look at getting us a small commercial incubator. Let’s just raise our own chickens,’” Dave said.

They ordered the incubators in spring of 2023, then started looking at which breeds they wanted and which were available, eventually choosing Turkens and Delaware (to cross), American Bresse (touted as ‘the world’s most delicious chicken’) from a breeder in Mississippi, as well as a variety of egg-layers that would provide both the genetics and egg colors Dee wanted. “We bought some really nice introductory level commercial incubators. And with all our incubators running at the same time, we can set about 800 eggs at a time,” Dave said.

“We haven’t done that yet,” Dee was quick to point



out.

“No, we haven’t done that yet because we’re taking our baby steps. There’s one thing we know about chickens – you either sell them or smell them,” Dave joked.

“We’re setting close to 250,” Dee added, trying to steer the conversation back to the subject at hand.

“It’s taken us a year to get our breeding stock to a point where we actually have some egg production now. And it just made sense that if we’re going to do this for ourselves, we might as well just offer it to the public. To people that like to have a few chickens, have them local, great, you know, reach out, tell us what you want, what type of breed you’re looking for. If we have it, we’ll set them for you,” Dave explained.

Dave and Dee sell eggs to a health food store in St. Louis, along with beef, and Dee goes to farmers markets and swap shops. “We have some series egg production here, and we can’t compete with the local grocery store. I can’t sell a dozen eggs for \$3,” Dave said.

“Not the way we raise them,” Dee added.

“We have seven pure breeds, and then we do a multicolor mix. I have a house where, if I have a real pretty rooster or something that is a special egg color, you put them together. And it’s fascinating to watch as you combine the different colors,” Dee said, adding that colored eggs are also just fun.

“I started off with the Marans,” Dee said, “I just got one off Craigslist, (and) had no idea what I was getting. I got four and ended up with three roosters, but I did get one hen and I kept one rooster. Then, when they laid these beautiful eggs, I said I was hooked. They’re my favorites.” She then expanded to add breeds with different colors of eggs.

“We only go with purebreds, so you know what you’re going to get. If you go with an Easter-eager or and olive-egger or something, you don’t know what you’re going to get. I was looking for consistency, where I could sell them to people and they would know what they were going to get, each and every day,” Dee said. She’s fascinated by how breeds can be crossed to get different colors of eggs, and pointed out that people are now breeding for grey, purple, and pink eggs, although she has not gotten to that point yet.

Happy Farm Life Hatchery currently offers purebred

See **HATCHERY** on Page 13B

YOUR

LOCAL LENDING EXPERTS

HOME | LAND | EQUIPMENT | COMMERCIAL



Roger Dudenhoeffer
Commercial Lender
NMLS# 543706



Stephanie Blaske
Mortgage Lender
NMLS# 654210



Mike Copeland
Mortgage Lender
NMLS# 238560

JEFFERSON
BANK

there’s more.

Jefferson City | Owensville
573-634-0800
jefferson-bank.com



A Division of The Central Trust Bank. | Member FDIC | NMLS# 407985

Hatchery • from page 12B

Black Copper Marans, Silverrudd Blues, American Bresse, Delaware Broilers, Turkens, Americanaunas, and Ermine Americanaunas, as well as Easter-eggers and olive-eggers, as both hatching eggs and chicks. The next breed Dee hopes to add are Welsummers, which are known for their speckled eggs. "I'm getting top-notch stock, so that not only do you have beautiful eggs, you have beautiful chickens," Dee said. Her goal is to stay as close to the standard of perfection for each breed as possible. It was for that reason she drove to Georgia last year to pick up Black Copper Marans from the number one show line in America, so Black Copper Maran eggs and chicks from show stock are also available.

Dee is planning to get her flock NPIP (National Poultry Improvement Plan) certified this year. "They come out and do a blood test on every one of your chickens. All 120 of them. So, they will do that and certify your flock poliorum-free, which is a disease they have had out of the United States and are trying to keep it out," Dee said. That certification will allow Dee to ship both hatching eggs and live chicks out of state.

"First, I need to make sure that people are going to be happy with the product, and then that it can be reproduced," Dee said, adding that the process takes time, "You have to wait about six months to see what that chickens gonna lay. You have to remember, when you buy chicks, 50 percent of them are going to

be males."

"That's where the old saying comes from – you can't count your chicks before they hatch," Dave laughed.

"Like Dave said, we're doing we're doing the turkens and the Delaware's. We're doing them separately; we're doing them together. We're trying to produce a reproducible meat bird that we don't have to spend \$5 apiece for. So, we're homesteading, basically. We are a homestead. And so we are trying to produce just about everything that we need," Dee said, "And it's fun."

"If you enjoy it, it's not work," Dave concluded.

For more information, follow Happy Farm Life Hatchery Artisan Poultry Boutique on Facebook.



MFA
EXCHANGE - META

"Your Own Place of Business Since 1915"

**Feed, Seed, Fertilizer, Ag Chem,
Animal Health & Farm Supplies.**

501 W 4th • PO Box 6 • Meta, Missouri 65058
573-229-4239 or 573-229-4322 • Fax 573-229-8943

Scott Schulte
Manager

James Lueckenotto
Assistant Manager



Livestock Feeds & Nutritional Services

Westphalia: 573-455-2311

130 Mill Street Mon-Fri 9:30-5:00 Sat. 8:00-11:00

Beef • Dairy • Swine • Horse
Poultry • Goat • Sheep • Pets

"We can feed 'em!"

**NOW STOCKING
CTS PIPE & PUSH-TO
CONNECT FITTINGS**

**Becker Millwork
& Hardware**
Freeburg, MO
573-744-5204
www.beckermillwork.com



1" &
1 1/4"
PIPE

300'
ROLLS

250 PSI



SharkBite

Raising cattle in drought conditions

BY RALPH VOSS
OSAGE COUNTY CATTLE RANCHER

The summers and falls of 2022 and 2023 were very dry across most of the state of Missouri.

In 2023, a four-county area that took in Miller County to our southwest and included Eldon and the Lake of the Ozarks was beyond dry. That area was one of the driest in the country. Montgomery County to our northeast was also severely dry. Many places in the state got 10 to 15 inches of rain in late July and early August. Miller County and Montgomery County got nothing like that.

In Osage county in the past two years, many places received much more rainfall than others. It's fair to say that rainfall in the county was spotty.

Barely two months into 2024, we appear to be headed into our third dry year in a row. What's a person to do?

I don't have all the answers, but I do have a few. We need to look at the way the best in the business go about racking up their achievements. I've always found that trying to do things the way the best operators work is going to bring you considerable success.

Hay & Forage Grower magazine last

year published a story about some friends of ours from Hartville, Mo., Steve and Judy Freeman. Mike Rankin, the man who wrote the story, described the Freemans as "owning and operating one of the most highly regarded grazing operations in the United States." That is not hyperbole. The Freemans have earned that reputation.

Our thanks to the folks at the magazine for letting us run the article in this special section. Turn to Page 38 for the story.

As you read through the article, be sure to note that the Freemans use rotational grazing, moving their animals frequently, usually daily. Other practices they follow include frost-seeding legumes, keeping their cattle numbers in sync with their grass so they feed relatively little hay, which they purchase, rather than produce.

We all know how dry it was this past year. With these kinds of growing conditions, the Freemans will make it through this winter with feeding hay for only one month.

The Freemans have some native grasses, but for the most part their pastures consist of fescue and other grasses that have developed because of their grazing practices. They are witnessing a change in their pastures, as the frequent movement of the cattle are allowing other grasses to come

on. This diversity of grass is beneficial to the grass, the cattle and the soil.

It's important to note that the Freemans are seeing spectacular results without the use of commercial fertilizer.

One of the biggest mistakes I've made in the cattle business is to not make more use of native grasses. The Freemans are not making this mistake. They have some natives now and will be planting 180 acres of native grasses over the next three years, at 60 acres per year. The first 60-acre tract has already been planted.

It's important to have people like the Freemans that have demonstrated the benefits of good grazing practices. Here in Missouri we have another resource to learn from. Hamilton Native Outpost at Elk Creek (near Houston, Mo.) is one of the premier producers of native grass seed in the country. They will be holding field days this year. If you want to see magnificent stands of native grasses and learn how to develop native grasses, go to one of these field days.

In 2016 I planted 15 acres of native grasses – Big Blue Stem, Switchgrass, Indiangrass and several others. Twelve of those acres are looking good, while three are almost a total failure. The native grasses I planted are almost all warm season

grass. This means they do the bulk of their growing from spring through late summer. I should have incorporated cool-season natives as well. This would have given me several more months of forage. But more importantly, this would have meant that our fields with both warm- and cool-season natives would benefit from roots that are alive and functioning almost all year long, thereby bringing soil-improving, biological activity to our soils.

Last year I planted between 30 and 40 acres of Switchgrass and Gamagrass in one of our river bottom fields. In August, the Switchgrass was looking good, according to Gatlin Bunton, Missouri's foremost grass guru who runs the Wurdack Farm for the University of Missouri. Hopefully the dry weather that extended well into the fall did not cause significant damage to the baby Switchgrass plants. I'm told that once Switch germinates, it can withstand very dry weather. I'm hoping that's the case.

Regardless of your age, you need to consider planting natives. If you are 30 years old, you are foolish if you don't plant natives. You've got decades ahead of you to benefit from a wise decision. If you

See **DOUGHT** on Page 15

Largest Seller of **Farm, Lifestyle, Land and Country Properties**



REALTREE
UNITED COUNTRY
HUNTING PROPERTIES

National Exposure...Local Expertise.



United
Country
Real Estate

RESULTS REALTY & AUCTION

MARK JAMES ~ Agent/Broker

800-341-3802 | 573-405-0112

825 S. Bishop Ave | Rolla, MO

Email: markj@ucresultsrealty.com



See complete listings online at resultsrealtyandauction.com
For hunting property visit ozarkhuntingground.com

CHICK DAYS



**\$3.50/
EACH**

Order by: 3/23 | Pick up: 4/20

Call to Order! 573-897-2496

Red Sexlink • Road Island Red • Cinnamon Queens •
Golden Comets • Black Sexlink

MINERAL PROMOTION MARCH ONLY

PURINA MINERAL COUPON

BUY any 5 bags of Purina
Mineral and
Receive \$5 OFF
****While Supplies Last*

\$50 OFF All PALLETS!

BAGGED MINERAL
Purina, ADM or
Sioux Nation



Buy 9 Bags Of Kent Mineral
GET 10TH BAG FREE!



OSAGE FEED & SUPPLY, LLC

162 CO RD 402, LOOSE CREEK, MO. 573-897-2496

Drought • from page 14

are 60 years old, you are still foolish if you don't go with natives – possibly not as foolish as the 30-year-old, but still foolish. Come to think about it, maybe the 60-year-old is more foolish than the 30-year-old. If the 30-year-old waits 10 years, he's still got up to 40 years to benefit from his decision. If the 60-year-old waits 10 years, he may be able to graze the good stuff for a decade, but probably not much more than that.

Ten years ago, in this special farm section, I wrote a story about The Land Institute (TLI), a non-profit organization in Salina, Kan., that is working to develop perennial grain, legumes and oilseed crops. If TLI realizes its goal of turning a host of annual plants into perennials, that organization will have revolutionized agriculture. Seventy percent of the grain in the world is produced by annual crops, which means that these crops see more tillage and more chemicals than if they were perennials.

For years farmers around the world have been burning through their soils with harmful tillage and toxic chemicals. Farmers in this country have done their fair share of damage, but nothing like China, Russia and India. Vast swaths of those nations are no longer capable of growing crops because they have been converted into deserts or have been contaminated with toxic chemicals or heavy metals or both.

Google “Cancer train” and read about the cancer problem in India that is caused by the use of toxic chemicals. This is not a story from decades ago. It's an ongoing story. There are similar stories out there about other nations that have contaminated their soils. China may be worse than India. Five years ago our media reported stories about how Chinese farmers were literally destroying their soils by using toxic discharge from industrial plants to irrigate their crops. With the present regime in Washington, we no longer report stories like that because we no longer speak ill of China, even when they try to kill us with viruses.

If TLI can succeed in converting an annual plant into a peren-

nial, it will have taken a giant step toward improving the lot of people around the world. How successful has TLI been to date? TLI's most well-known accomplishment is a grain called Kernza, which is a wheat-like grain developed from wheatgrass. Kernza has been around for a number of years and is being used to make bread and beer, as well as other products, but will require a lot of work before it offers a realistic alternative to annual wheat. However, the TLI folks think it can be done. Currently, TLI anticipates that by 2040 Kernza will yield 75 percent of what annual wheat produces in Kansas.

A major impact has already arrived on the scene, although it appears this accomplishment is not as well known as Kernza. According to a TLI spokesperson, TLI has developed perennial rice with yields that are “on par with conventional rice varieties grown in Southeast Asia.”

My interest in TLI's work is focused primarily on what it will do for livestock forage production. While TLI is mostly interested in producing grain for human consumption, it does see what it calls “dual-use” possibilities for both grain and forage. One such dual-use situation is Kernza grown with alfalfa. It has also been noted that Kernza alone can be a great forage.

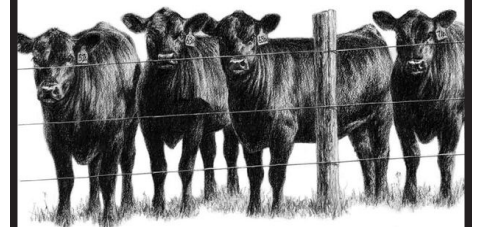
Ten years ago when I first wrote about perennial grains, I was given the name of a Salina-area farmer who had grown Kernza for TLI. His name was Charlie Melander and he told me how he had planted Kernza seed provided by TLI and explained that after harvesting the grain, which went to TLI, he then baled the stubble and subsequently grazed the regrowth. He was very pleased with the quality of the hay and the forage.

Kernza potentially offers livestock producers a fabulous forage. On page 17 is shown a man holding a Kernza plant with an obscenely huge root system. This plant would furnish nutritious

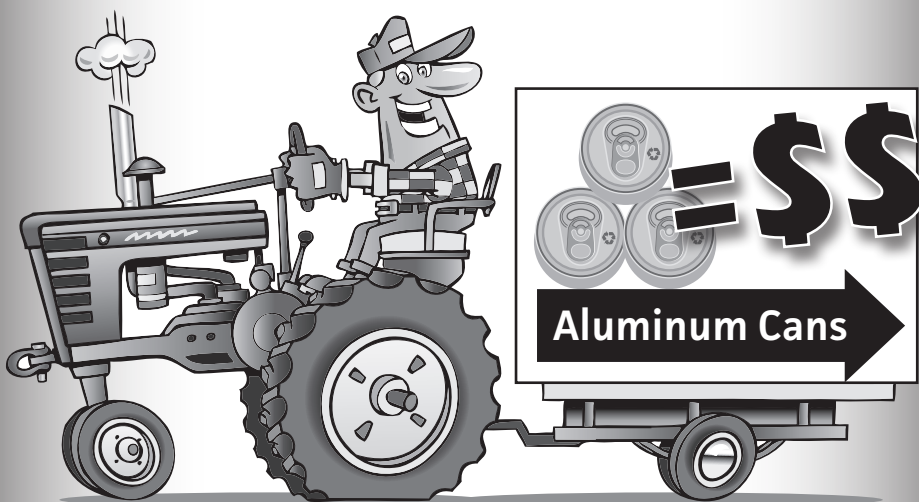
See **DOUGHT** on Page 16

SCHAEFER BROS. ANGUS CATTLE

County Road 801
Linn, MO
573-301-5726



REDUCE • REUSE • RECYCLE • REDUCE • REUSE • RECYCLE



WE BUY:
All Types of Aluminum
Copper ~ Brass ~ Scrap Iron
Car Radiators & Batteries
Catalytic Converters
& Much More!

Why trade it in?
Sell it for more \$\$\$

Get Cash for it!

RECYCLING ZONE

573-437-5050

1640-B, Highway 28 • Owensville, Missouri 65066

REDUCE • REUSE • RECYCLE • REDUCE • REUSE • RECYCLE

PATRONIZE YOUR MFA COOPERATIVE

FEED - SEED - OIL - FERTILIZER - AG CHEMICALS

Full Line of MFA Feeds • Ag Chemicals • Animal Health Products
• Farm Supplies • QLF Liquid Supplements • CTI Protein Tubs

Farmer's Elevator Co.,
Argyle ~ Vienna



MFA
AGRI SERVICES

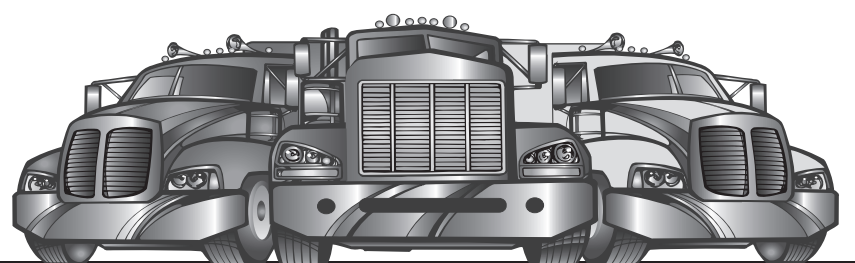
Vienna (573) 422-3182
Argyle (573) 728-6202
Farmer's 280, LLC
Bulk Plant (573) 744-5271



MEBRUER & SON TRUCKING, INC

Local and Long Distance Hauling

573-897-3398 • 573-291-0983



Drought • from page 15

forage for livestock, while helping build soil, improving water infiltration and being drought tolerant. Combine this plant with whatever other plants TLI can turn into perennials (for example: sorghum, soybeans, sunflowers and alfalfa), and we've got super forage.

I asked Tammy Kimbler, the chief information officer for TLI, what the institute needs to reach its goals. "For new perennial grains to succeed," she responded, "we need substantial investment from philanthropic, government, and private sectors in plant breeding, crop production, and early supply chain development today. With proper funding, perennial grains with high yields comparable to annual grain analogs can develop relatively quickly while retaining robust ecological co-benefits. Researchers in Yunnan, China, achieved high-yielding perennial rice in just 20 years, with support from The Land Institute and significantly less funding than is spent on annual incremental commodity grain yield improvements."

Another way to address dry weather is cover crops. By combining a number of grasses into one planting, the diversity of seeds makes the mixture survive dry weather much better than one grass alone.

In 2014 I explained in this special farm edition what was being planted in North Dakota. There in the Burleigh County

Soil District three test plots were put in side-by-side. In one plot Oilseed Radish, Purple Top Turnip, Pasja Turnip, Soybean, Cowpea and Lupin (a legume) were mixed and planted together. In the second plot a monoculture of Oilseed Radish was planted, while in the third plot, another monoculture was planted, one variety of turnips. From the time of planting in May, until July 31, one inch of rain fell on those plots. The two monocultures burned up, producing nothing. The diverse mixture of one radish, two turnips and three legumes thrived, growing to a height of 18 to 24 inches.

I've tried the multi-seed mix on at least two occasions – both in the fall – and both times hot, dry weather kept the seed from germinating in a timely manner. When moisture came later in the winter, I ended up with a great crop in the spring. I don't recall what year I planted the first crop, but the river flooded it before I had a chance to graze it. The second crop was planted in the fall of 2021, but didn't come on until 2022. We got about a week of grazing out of that field before we had to move the cows out because the Gasconade was on a rampage.

Why do I put cover crops in the bottoms? The answer is reasonable, in my opinion. The stand of grass in our bottoms leaves a lot to be desired. It's a rare year



that the Gasconade doesn't get over our bottoms at least twice. These floods damage the grass and also require us to stay off that ground for an extended period of time. Even in 2023, with rain in short supply, the river came on twice in the first part of the year. Fortunately, Johnsongrass and Reed Canarygrass came on strong last year and this helped tremendously. Without those two grasses, last year would have been horrible. We've reduced our cow numbers significantly to bring the size of our herd in line with the available grass.

The river not only damages our stand of

grass, but it makes us put too grazing pressure on our hills. As I mentioned above, in one of our bottom fields we hope to have 30-40 acres of Switchgrass to graze later this year when the weather warms up. That should help a great deal.

In the next few weeks, I intend to plant a spring cover crop on some of our hills. This planting will consist of two types of ryegrass, non-toxic fescue, timothy, red clover and lespedeza. If this crop thrives, 2024 should prove to be more pleasant than the two preceding years.

Supporting
Our Farming Communities...
in the past,
in the present,
and in the future.

Call today!
Ph# 844.836.9401

Make us your Lender: Farm | Livestock | Equipment

The Maries County Bank

Pride in our past... Investing in your future.



Member FDIC

Vienna | Argyle | Belle | Dixon | Iberia | Owensville
Richland | St. James | St. Robert | Vichy | Cuba

www.mariescountybank.com | Member FDIC

GIECK



LOGGING LLC BELLE MO.

Tony Gieck, Owner

203 Lehnhoff Dr.
Belle, Mo.

Cell: 573-368-9224

Home: 573-859-6923

NO JOB TOO SMALL



A unique road to beef-grazing success

BY MIKE RANKIN
HAY & FORAGE GROWER

The South Poll cows were red and slick. At their side — an equal number of 1-month-old or younger calves already grazing on spring fescue in a Savannah-like setting. Their owners and caretakers, Steve and Judy Freeman, both admired and surveyed the herd while perched on their respective utility vehicles. Had the late Grant Wood been there, he would have broken out his paint brushes for an updated American Gothic.

Steve and Judy Freeman were city kids by any definition. The former was raised in Long Beach, Calif., while the latter grew up in Los Angeles. Each had some animal lovers in their ancestral bloodlines, and both matured with a desire to be around animals. So, how did two free-spirited West Coast youngsters end up in Hartville, Mo., owning and operating one of the most highly regarded grazing operations in the United States? Read on.

The couple met in San Diego, where Judy was the manager of a thoroughbred racehorse ranch and Steve was an employee. “I considered a good date as going to the bookstore,” Steve said. “It was there that we started reading about — and became interested in — homesteading.”

Soon after, with no planned destination and some saved dollars, they left California in a 1-ton van with two 80-pound dogs as passengers. They meandered around the country for close to a year, living in the van. At one point, a friend told them about the Ozark Mountains, and it sounded like an area that would meet their minimalist needs. Eventually, that’s where they headed and arrived in the area’s rolling hills in 1978. They were married during that same year.

“We knew Judy could always get a job with horses, and her employer would have to hire me because I was a part of the package,” Steve chuckled. “We ended up in Springfield, Mo., where Judy was hired at a purebred Arabian ranch while we remained living in our van.”

Eventually, the Freemans bought a small 86-acre property near where they reside and farm today, about 50 miles east of Springfield. They started a Grade C goat dairy where Judy milked 30 goats by hand and trained border collies while her husband worked on a neighboring beef farm.

Steve explained, “We were good with numbers and knew we could make it work. Our plan was to pay it off in a year. Then, about six months in, our milk pro-

cessor put a quota on us and cut our price in half. That’s when we started raising some calves to supplement our income.”

While working on a beef farm and catching cattle for people with dogs that they had trained, Steve got really interested in grass and farming. “My employer was a great mentor who taught me a lot,” he said.

Steve also took a part-time job as a milk tester, thinking that he could learn about dairying, which might provide the couple’s ticket to independence. What he determined was that if there was a way — other than dairying — to make a living by farming, they should pursue it. “The early 1980s was not a time that inspired you to want to get into dairy farming,” he said.

Although the farm economy was in shambles, the young couple had saved money from an inheritance and figured it was a good time to buy a farm because land values had crashed. That was the beginning of their foray into the beef business. They sold their 86 acres in 1987 and

bought the 468-acre farm they now own and operate, expanding it to 900 grazeable acres. “That first year, we bought cow-calf pairs in March — the bottom of the market — and sold steers early the next year for what we paid for the pair,” Judy recalled. “Our timing was just blind luck,” Steve added.

The Freemans currently have 180 brood cows, breed 60 to 80 home-raised yearling heifers, and also purchase stockers to graze with the heifers.

“If we have a drought year, we don’t want to be put in a position of selling our breeding stock,” Steve said. “So, we like to keep a cushion and protect ourselves. However, we also want to utilize our grass during the good times. That’s where the stockers come into play, and it’s worked really well. We can sell those stockers in a week if we have to,” he added.

TRIALS AND ERRORS

Steve noted that there’s been a lot of experimentation to match the right number of animals to acres. “When you’re dealing with biology, that sweet spot is a moving target. But you’ve got to learn how to keep the canoe afloat and not drown in those dry years. Right now, we’re at about 3 animal units per grazeable acre. We’ve been under 2 animal units per acre, but that required feeding a lot more hay.”

The Freemans stopped making their own hay about 20 years ago and now purchase what they need. “When we sold the baler, that was liberation day for me,” Steve said, noting that he was making his own hay plus doing custom baling for neighbors.



“Haymaking took a lot of time away from our cows and grass. The cows have to be the number one priority when you’re in this business, and making hay just kept me from things I needed to be doing,” Steve said. “Admittedly, there have been dry years when we’ve had to pull the cattle off pasture and feed purchased hay in a sacrifice pasture. Afterward, we just renovate the pasture once conditions improve.”

TOXICITY MITIGATION

“All of our fescue is toxic,” Steve said. “We calve from mid-April through May, trying to match our cows’ nutritional needs and availability to the grass. Judy moves the cows — usually that means every day, but it could also be up to every three days. We try to take at least a third of the plant off each spring on all of our pastures to reduce seedhead formation.”

If needed, Steve will also clip pastures high to control seedhead development and promote tillering. That said, he no longer worries if some of their pastures get too tall. They’ve learned how to still use those pastures and also enjoy the wildlife benefits that taller pastures can offer. The Freemans don’t fertilize their pastures. “We feel like we get enough nitrogen cycling from manure and mineralization to keep pastures productive,” Steve said.

Through years of trial and error, the Freemans now have their 88 pastures fenced in rectangles or squares and use polywire and step-in posts to portion available forage to the cattle within the paddocks. “Flexibility is essential in this business,” Steve asserted, “and even those who don’t start that way eventually get to that point. We have about 120 watering points and strip-graze in the winter.”

Over time, their pastures have become more diverse, and their cattle often tend to graze the nonfescue species first. “We actually see more fescue toxicity effects in the fall when the pastures revert to a high-

er percentage of tall fescue,” Judy said.

Cattle are grazed the entire year, but the Freemans use bale grazing on stockpiled fescue to slow movement during the winter. Clover is also frost seeded into pastures. “I love to sow seed,” Steve said. “I’ll sow ryegrass where the pastures get damaged, and I’ve also seeded some chicory. I’ve been trying to grow warm-season grasses. That’s still a work in progress. We’ve had some failures and successes, but I still want to get more established,” he added.

SETTLED ON SOUTH POLLS

The long road of experimentation with grass has also extended to the cows. Through the years, there have been periods of Angus and Beefmaster, but the Freemans finally settled on South Polls.

“Before we switched, our cows probably weighed 1,300 to 1,600 pounds,” Steve said. “Calving ease became a real problem, especially for the first-calf heifers.”

It was Judy who suggested they do something different, so they bought some South Poll bulls to breed their heifers.

“Those bulls were small and gentle and didn’t seem to be affected by the heat like the Angus were,” Judy said. Steve added, “They were nonstop breeders, gained weight, and I swear, had a smile on their faces during the whole breeding season. It was amazing.”

The Freemans really liked the South Poll-Beefmaster cross and soon started keeping the calves after initially selling them. “Since then, we’ve been exclusively South Poll,” Judy said. “The South Polls really do well in our Missouri heat and have excellent reproductive performance. That’s important because we are breeding in July and August.”

Steve said that they keep all of the heifers and sell an equal number of cows

MU pesticide safety program vital to state's ag economy

COLUMBIA, Mo. – Sam Polly, coordinator of University of Missouri Extension's Pesticide Safety Education Program, wants to make Missouri a safer place that allows Missouri's agricultural economy to continue to grow.

Polly says the program is the backbone of agricultural and commercial pest management in Missouri. Agriculture, forestry and fisheries contribute \$369 million annually to the state's economy.

MU Extension and the U.S. Environmental Protection Agency observe National Pesticide Safety Education Month in February to raise awareness for pesticide safety education and share best practices for using pesticides in and around the farm and home.

In 2023, Polly and his team taught more than 3,300 people at 130 private applicator training programs and 1,600 people at 35 commercial applicator trainings statewide.

Licensed commercial applicators must pass an exam and participate in continuing education courses on environmentally sound uses of pesticides. The Missouri Department of Agriculture's Bureau of Pesticide Control mandates commercial applicator training.

Polly's MU Extension team includes agronomists, agricultural engineers, hor-

ticulturists and specialists in natural resources. Daniel Sjarpe serves as assistant coordinator.

In 2023, the team developed, updated or supplemented 18 of the 21 pesticide training manuals needed for Missouri applicators to comply with new federal regulations. The team also created an online private applicator certification/recertification portal for on-demand training.

In addition to teaching pesticide safety to adults, Polly and his team also taught younger groups through 4-H and FFA.

Polly suggests reviewing these tips during National Pesticide Safety Education Month:

- Always read and follow the labels on pesticides.
- Store pesticides in their original containers with proper labels.
- Store pesticides out of the reach of children and pets.
- Use the amount specified on the label. Using more will not be more effective and may harm you, your loved ones and the environment.
- Wash hands with soap and water after using pesticides. Wash clothes that have been in contact with pesticides immediately and separately from other items.



AGRONOMIST NICK Wesslak is part of a team of MU Extension specialists that presents pesticide safety training to adults and youths in Missouri. In 2023, the team, headed by Sam Polly, taught more than 3,300 people at 130 private applicator training programs and 1,600 people at 35 commercial applicator trainings statewide. Photo courtesy of Sam Polly.

- Don't let children and pets enter sprayed areas while they are still wet.
- Keep pesticides away from food and dishes.

To learn more, search for "pesticide safety" at <https://extension.missouri.edu> or visit <https://www.epa.gov/pesticides>.



Drone Sales & Service!

Crop & Pasture
Custom Spraying Application • Custom Seeding



573-418-7103

Located in Frankenstein, MO

Missourivalleydrone@gmail.com

www.movalleydrone.com



Black vultures continue threat to Missouri cattle

BY COLIN WILLARD
ADVOCATE STAFF WRITER
cwillard@wardpub.com

VIENNA — Farmers from around the region convened in the Knights of Columbus Hall in Vienna last Friday for the Central Missouri Forage and Beef Conference.

The annual event features dinner, trade show booths and guest speakers on a variety of agricultural topics. This year's conference included discussions on black vultures, farm succession planning, market outlooks, options for year-end grazing and common feed comparisons.

Jonny Fox, an assistant district supervisor (Southeast Missouri) with the United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Services (APHIS), gave a presentation about black vultures and the threat they pose to livestock. He said that this time of year black vultures pose the most threat because of calving.

APHIS's primary responsibility is dealing with animal damage management. Last year, the agency began working with the Missouri Department of Conservation, the Missouri Cattlemen's Association and the Missouri Farm Bureau to curb the effects of Missouri's expanding black vulture population.

"We wanted to put tools in the hands of agricultural producers to be able to proactively manage their herds and not experience livestock loss," Fox said.

Two types of vultures live in Missouri. Turkey vultures are longtime residents of the state, at least in the summer months. Some of the features that distinguish them from similar species are their bright red heads, wings that appear black with a silvery bottom half and V-shaped wings during flight. Turkey vultures often hunt primarily by smell though they also use sight. They are scavengers who feed on carrion such as roadkill.

Black vultures used to only appear in the southernmost part of Missouri, but over the last several years, they have become more common farther north. Unlike turkey vultures, their heads are black. Their wings also appear black from below, but they have white patches near the outer edges. During flight, black vultures tend to



flap their wings more often and keep more of a horizontal wing shape. They also tend to fly higher than turkey vultures because they do not rely on smell to find food. Instead, they use sight and often follow turkey vultures to carcasses.

Fox said the number of black vulture sightings in Missouri started to pick up around 2018. Reports of livestock losses soon followed. Fox cited a pattern of warmer winters as a reason for the black vultures' migration into the state. APHIS has confirmed black vulture sightings as far north as Columbia and heard unconfirmed reports as far north as Macon.

"They're becoming more of a problem just because we're seeing more of them on the landscape," he said. "They're just going to keep on moving north."

Black vultures can cause different types of damage to property, but the main focus of the presentation was livestock damage. The greatest risk to calves comes during the period from birth until when the animal is about two weeks old. They perceive newborn cattle as carrion, which causes them to attack and peck at the eyes of calves until they die from a combination of stress and blood loss. Sometimes, the birds strike as early as birth by landing on the mother's back as the calf is born. If the mother is able to defend the calf from one bird, more usually follow the initial attack.

"They're pretty aggressive creatures," Fox said.

When agents investigate a calf's death to see if a black vulture killed it, they usually begin by looking at the amount of blood

on the scene. Without much blood, cattle deaths are rarely vulture kills. Black vultures still scavenge the eyes first from still-born calves, so if the scene is not as bloody it is because the calf was dead when the vulture started eating it.

"After the eyes are removed, (the calf) goes to shaking its head and it flings blood everywhere," Fox said. "There'll be blood on the ground and it'll look basically like a Hollywood murder scene."

Although black vultures do act as predators toward new calves, attacking live animals is not their preferred way of finding food.

"They still prefer to eat carrion because they don't have to work for it," Fox said. "But black vultures are very visual hunters versus turkey vultures, which hunt by sense of smell. A calf lying there in a field looks to them to be dead."

Black vultures also cause damage to vehicles. Fox said he knew of cases where the birds had shredded boat and lawn mower seats or pecked rubber seals out of vehicles or doors. They also peck at shingles on buildings.

Fox said people living near cell phone towers may have a higher chance of noticing black vulture presence in their area because the birds like to roost on the towers. They do not often do the same for radio towers. They may also roost on playgrounds.

If anyone notices black vultures roosting near their home or cattle, they can use several methods of harassment to scare away the birds. Options include paintballs,

laser pointers, a variety of noisemakers or pyrotechnics such as bottle rockets. Property owners can prevent roosting by removing dead trees, which are the favorite hunting spots of the birds. Removing dead animals from a pasture as quickly as possible also helps to avoid attracting vultures.

"If there's a food source, they're really adamant about sticking with it," Fox said.

Fox said effigies are among the most effective deterrents for black vultures because they can stay in a place all the time. APHIS is able to provide effigies to people in need. In addition to using dead vultures, artificial effigies and instructions on how to make them are available on the internet.

USDA has a permit program in place for landowners who want to use lethal control on black vultures. Permits last for a year and allow holders to kill up to five black vultures.

"Typically, if you're integrating harassment with lethal control, that's about one of the most effective means we have to discourage them," Fox said.

He recommended that anyone using lethal force combine it with a non-lethal harassment method so the birds associate it with death. For example, someone could fire a bottle rocket at the vultures before killing one with a shotgun.

Black vulture permit applications are available at Farm Bureau locations.

"There's no reason that you should get a ticket because you are protecting your livestock," Fox said. "That's why we have these permits available free of charge."

The presentation also included a mention of the USDA's Livestock Indemnity Program, which helps farmers recoup funds after a herd loss of at least 5 percent. The program covers a variety of damages not limited to vulture kills. More information is available under the "Programs & Services" tab of the USDA website at fsa.usda.gov.

Although black vultures pose a threat to livestock, Fox reminded the audience that they serve an environmental purpose as scavengers of dead animals.

"I don't want to make it sound completely doom and gloom," he said. "These birds do have an important job in the environment. They just also have some bad habits."

Luecke shares Lazy Acres tractor collection

BY ROXIE MURPHY
ASSISTANT EDITOR
rmurphy@wardpub.com

BELLE — Jerry Luecke is an antique tractor enthusiast from Bland with more than 40 examples of traction motors in his possession At Lazy Acres Farm.

“Most of them I buy and restore,” Luecke said. “I do have a couple of people who restore them for me. From start to beginning it takes about a year to restore one depending on what they have to do to it.”

The antiques Luecke collects are usually rare.

“I have two buildings, one that is climate controlled,” the enthusiast said. “I have quite a few people who come out and see them.”

A devoted connoisseur of Oliver Farm Equipment Company and its agricultural machinery, Luecke’s primary focus has been on those collectibles

“I mainly go for the rare ones that’s very rare and have several different makes,” Luecke said. “But Oliver is the main thing I collect. I grew up on them.”

Unfortunately, he was never able to collect any of the pieces he had as a child, but he has several like them. As a devoted collector, Luecke doesn’t limit himself to Oliver.

“I am across the board – the rarest I can find,” he said. “I don’t have none from when I was a kid, but I buy some just like them and restore them.”

Restoring the machines is not his sole focus. Luecke enjoys sharing his admiration for the solid farm pieces by taking them to shows all over the country.

“I was in Florida last week for a show and Illinois last Saturday for a show,” he said. “The shows I’ve been to are the Florida Flywheelers Antique Engines and the Oliver Winter Show in Greenville, Illinois, and all the antique tractor shows around Missouri.”

He plans to attend the Missouri Valley Steam Engine Association Show in Boonville.

“We have a building there and are going to have a national show there in Sep-



JERRY LUECKE sits on his Cletrac Avery Crawler during the 2023 Gasconade County Thresher’s Show in Rosebud. This crawler was used during World War II to move planes. Luecke also took two other crawlers to the show an orange Avery (center) and a Greel Oliver HD.

tember, the weekend after Labor Day,” Luecke said.

Last year, Luecke brought three of his rare tractors to the Gasconade County Threshers Association Show in Rosebud, including a Cletrac Avery Crawler.

“It was a military Cletrac - used in World War II to move planes around with,” Luecke said. “I restored it. I did it personally myself about a year ago. It’s camouflage and is from 1941.”

The other two tractors at the Thresher Show last year were an orange Avery Crawler and a Greel Oliver HD.

“I think the year was 1940,” Luecke said about the Crawlers.

He has several favorites, such as the 770 Orchard, which is currently in Minnesota being restored. Only 10 were ever

produced.

“People walk by and look at (the tractors) and (the show) has a parade area,” Luecke said about the Thresher show. “They have tractor games and stuff that you can participate in. Another big show I go to is the State Fair on Ag Day — they feature antique tractors.”

Other rare and favorite machines in his collection include a 2255 Oliver front wheel assist that was restored a couple of years ago.

“Not many were built and they were the last years of Oliver,” Luecke said.

Oliver Farm Equipment closed its doors in 1976.

“My oldest tractor right now is a 1939 Oliver Hart-Parr that I just purchased in December,” he said. “Not sure how many

were made, but there are not many out there anymore. This is the only one I know of. I bought it restored.”

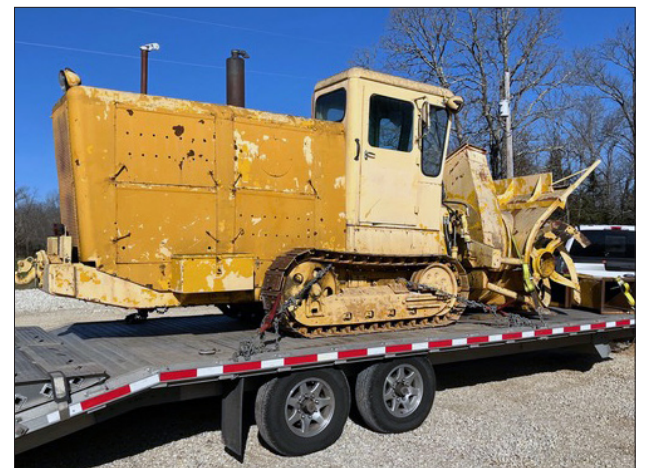
The next in line to be restored is an Oliver 2655 — one of the biggest tractors they built.

“It is a pretty rare tractor, a ‘74 I think, and is the rarest one I have,” he said.

Another long-time favorite and probably the most popular is the 1930s Thieman Hearse.

The Thieman Hearse is a tractor made into a Hearse,” Luecke said. “The front end is a tractor with a seat on it and the back is a hearse with a casket inside. That one gets some of the most attention. It is the only one known to exist that I know

See **LAZY ACRES** on Page 21B



ANTIQUA TRACTOR enthusiast Jerry Luecke has over 40 tractors in his collection in Bland including the three pictured above, from left — 1974 Oliver 2255 Front Wheel Assist with a 3150 Cat Motor, 1974 Oliver 2655 with a Moline diesel engine (this was when Oliver bought Minneapolis Moline), and 1965 Oliver Snow Blaster, this is the only one built (currently being restored.)



BROOKLYN WORTH (photo above), Luecke's granddaughter from Jefferson City drives a very rare 1965 Oliver 770 Orchard Propane. Stanley Heckman of Westphalia sits on a 1930 Thieman Tractor that was converted to a hearse by its previous owner from Nebraska. Black Adams from Owensville (photo right) takes this custom build Oliver pulling garden tractor, named the Little Ollie Miniature to pulling competitions. It sports an engine that runs on alcohol.

PHOTOS SUBMITTED



Lazy Acres • from page 20B

of.”

The previous owner of the Thieman Hearse was from Nebraska.

“I don’t remember his name,” Luecke said. “Supposedly he is in a nursing home and built it for him and his wife to have their last ride. Then they both got sick. I told the guy if something happens to them to let a family member know and reach out to me, I will bring it back up for them to have their last ride.”

Luecke has made many friends and contacts in his pursuit of the four-wheeled machinery and hoped to make two more connections over the weekend.

“Saturday I (was) in Kansas to pick up a White 4180 tractor — probably around 1976-78 all original,” he said. “It doesn’t look pretty. I have another coming in a day from out of Pennsylvania — it has been restored. It’s an Oliver OC-6 Crawler with a Ford flathead V-8 engine, which is not stock at all, but somebody put it in there and it’s pretty cool.”

Luecke thought the addition to his collection would fit well with his smallest tractor which isn’t stock either. A lawnmower-sized pull tractor.

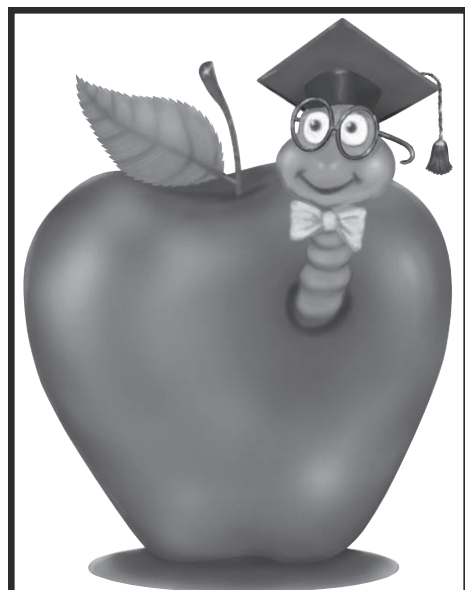
“It is called Little Ollie Miniature, a puller garden tractor with an alcohol engine,” he said. “Jeff Adams’ son Black Adams, who is 17 or 18, pulls garden tractors and is in Ohio this weekend — pulling it. He does win with it and he does pretty good.”

Grazing • from page 17B

to interested buyers, mostly for breeding stock. They also keep a few bulls to use and sell. Animals that don’t breed on time, or don’t perform well in their system, are freely culled.

“In the beef cattle business, you’ve got to be pretty bare bones. You have to increase your margins, and you’ve got to increase your turnover,” Steve said. “All of this hinges on how you manage your grass and your ability to keep the cows’ nutrition and intake needs in sync with grass growth.”

It’s been over 40 years since the Freemans left the West Coast shimmering in the rearview mirror of their 1-ton van. The journey since has been fraught with numerous trials and errors. These days, there are still challenges, but also a much higher level of contentment as the Freemans are more easily able to enjoy the cows, the grass, the plant diversity, and wildlife that all permeate their highly regarded beef operation.



**To Place An Ad
Call 897-3150
before Noon
Monday**

Looking for a Trailer that Works as Hard as you?

Give us a call/text today.



Sales, Service, Parts Section

JT TRAILERS

2073 South Highway 19 • Swiss, MO • 573-486-0212
www.JT-Trailers.com | f @JandTTrailers

Feedstuff Finder: One-stop shop for Missouri buyers and sellers

COLUMBIA, Mo. – Farmers and ranchers have a new tool to find or list hay and co-product feedstuffs for sale: Feedstuff Finder, developed by University of Missouri Extension for individuals looking to buy or sell products.

As drought and transportation issues make finding quality feed ingredients difficult, helps livestock producers and feed producers find each other easily. Sourcing and pricing alternative feed sources is made more intuitive with the website's mapping tool, said Wesley Tucker, MU Extension agricultural business specialist.

Sellers of co-products like soyhulls, distillers grains or corn gluten feed, as well as forages like corn silage or hay, can share prices, product information and locations with potential buyers at no cost, he said. Buyers

can view available products on an easy-to-navigate map, complete with product details and a delivery cost estimator. Feedstuff listings are free and can be sorted by forage or co-product type and price per unit.

"We hope to see Feedstuff Finder become the go-to platform for suppliers and livestock producers in Missouri," Tucker said. "This is a one-of-a-kind tool that can better connect the industry and make sourcing local feed products easier. This winter, many Missouri cattle producers are going to be searching for feed. A lot of hay and other feed ingredients are going to be hauled into and around Missouri. Feedstuff Finder can make the job of keeping livestock fed easier."

Feed is the most significant cost for many livestock producers, and major market risks

exist as a variety of factors can affect the availability, cost and quality of feedstuff products. As MU Extension works to double the value of Missouri agriculture, assisting the state's farmers and ranchers in mitigating risk is of particular importance, Tucker said.

"Feedstuff Finder has been developed to make farmers' lives simpler," said MU Extension agricultural economist Ryan Milhollin. "The platform helps producers and consumers of feedstuffs geographically find each other, cut transportation costs and manage tight winter feed supplies when feed costs and availability can be volatile."

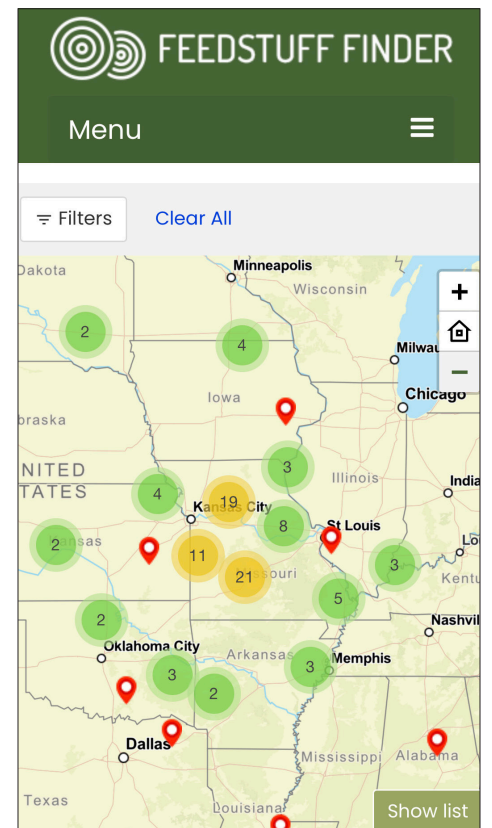
MU Extension is collaborating with the Missouri Department of Agriculture and the MU Agricultural Electronic Bulletin Board to populate directories and help users become familiar with Feedstuff

Finder. Instructional videos, in-person training and other resources will be available to assist new users.

Visit <https://feedstufffinder.org> to view feedstuff product listings; individuals can create a free account to post products for sale.

University of Missouri Extension offers producers a range of decision-making tools and workshops to support farm business management and agricultural landowner decisions. Learn more at www.muext.us/AgBusiness, and find us on Facebook at www.facebook.com/Ag-BusinessMU.

Funding for this project was provided by the North Central Extension Risk Management Education Center and the USDA National Institute of Food and Agriculture under Award Number 2021-70027-34694.



SCREENSHOT FROM Feedstuff Finder website.

Fuel Delivered to the Farm



- Dyed Diesel
- Clear Diesel
- Gas
- Oil (Quarts To 55 Gallon Drums)
- Grease

Mt. Sterling Oil
Mt. Sterling, Mo.

573-943-6393

BULK FERTILIZER LIME SPREADING & AG CHEMICALS

Call for any of your
agricultural needs

537-943-6321

Schaeperkoetter Store
Mt. Sterling, Mo.

Partnership helps southern Missouri landowner stave off feral hogs

BY LINDA GEIST
Missouri University Extension

SALEM, Mo. – If anything is worse than a pasture rooted up by feral hogs, it's a pasture that dries and hardens after hogs leave damaged areas the size of tractor tires.

Freddie Leroux's damaged pastures need to be repaired and reseeded. He waits for soaking rains to soften the ground so he can smooth out ruts.

Leroux works with University of Missouri Extension feral hog outreach educator Kevin Crider and others to eradicate feral hogs through the Missouri Feral Hog Elimination Partnership.

The partnership is funded by the 2018 U.S. Farm Bill and managed by the Missouri Department of Conservation. More than 15 federal and state entities, including MU Extension, the U.S. Forest Service and the U.S. Department of Agriculture, work together to eliminate feral hogs on public and private lands in 27 southern Missouri counties.

Leroux acquired the 1,600 acres of pristine rolling hills and forest that adjoin Missouri Department of Conservation property for conservation, recreation and hunting. The area is largely unpopulated, with deep ravines in the drainage system of the Current River.

The land is also premium real estate for feral hog herds called sounders that damage land, trees, water sources and wildlife.

Relatively undisturbed for centuries, no humans live there. Trees provide safe cover and a place for hogs to scratch with their bristly bodies and mark their territory. That's satisfying for the hogs, but it's usually deadly for saplings.

The woods are a buffet for feral hogs, with eggs of nesting turkeys and other ground nesting fowl, and vulnerable wildlife like deer and rabbits. Grubs and earth-

worms, their food of choice, grow in the warm-season grass ecosystem and beneath trees. Acorns are a fall favorite. Ponds, streams and rivers provide drinking water and serve as wallowing holes. It's pig paradise.

Acres of land used for agriculture and forestry "bloomed and mushroomed" with feral hogs when recreational hog hunting became popular in southern Missouri, says Leroux. Escaped hogs bred until the woods filled with the beady-eyed beasts.

Five feral hogs can quickly turn into 30 because of their prolific breeding habits, says Leroux. They breed early and often. Sows can breed by 6 months of age and give birth to two litters of 6-12 piglets each.

Leroux says he has only seen one feral hog on his land, but cameras on his property tell a different tale. As many as 30 feral hogs roam his land in a sounder at night. They use their snouts to root up pastureland, wildlife plots and fences. Worn paths throughout the woods show where they go on their nocturnal rampages.

Leroux says he is glad to support the Missouri Feral Hog Elimination Partnership and appreciates the expertise of Crider and USDA wildlife specialists. "MU Extension and USDA have this down to a science. It's a great example of partnership," he says.

He gives them full access to his land and helps to promote the partnership to other landowners. He also is glad that local Soil and Water Conservation Districts received funding to buy equipment to lend to landowners to repair damaged land. The equipment includes no-till drills, cultipackers and harrows.

Leroux tries to be a good steward of the land so that the next generation of his family can enjoy its natural beauty. He uses practices recommended by MU Extension, USDA Natural Resources Con-



FREDDIE LEROUX, left, is a landowner working with MU Extension feral hog outreach educator **Kevin Crider**, right, in the Missouri Feral Hog Elimination Partnership. More than 15 federal and state agencies and landowners work to eliminate feral hogs in southern Missouri, where hogs have damaged farm and forest land. With the group's help, feral hog numbers have decreased by nearly 65% in Missouri watersheds since 2016. Photo by Linda Geist.

servation Service, USDA Environmental Quality Incentives Program and Missouri Department of Conservation. He plants native warm-season grasses and wildlife food plots, performs prescribed burns and thins timber.

The success of the Missouri Feral Hog Elimination Partnership depends on landowners like Leroux, Crider says. The group removed 6,289 hogs in 2022, worked with 709 landowners and scouted 3.7 million acres, mostly south of Interstate 44.

With the group's help, the total number of acres of watershed occupied by feral hogs in Missouri has fallen by nearly 65% since 2016. 2022 marked the second year that numbers declined, with efforts in Iron, Shannon, Wayne and Reynolds counties netting the best results.

To report feral hog damage or receive assistance, call the Missouri Department of Conservation at 573-522-4115 ext. 3296 or visit <http://mdc.mo.gov/feralhog>.

Funding for this project comes from the Feral Swine Control Program through the USDA as part of the 2018 Farm Bill. Missouri Department of Conservation is the lead agency on the project.



FERAL HOGS uproot land in search of earthworms, grubs and acorns. The Missouri Feral Hog Elimination Partnership, comprising more than 15 state and federal agencies, works to eradicate feral hogs. Photo courtesy of Kevin Crider.

DRY FORK



STEEL & SUPPLY

All your steel needs for residential,
agricultural & commercial
General auto repair and services

info@dryforksteel.com
www.dryforksteel.com

1360 Hwy. CC • Bland, MO
573-417-0511

SPORTS AFIELD

Established 1887

REAL ESTATE

DALE STRUEMPH
Managing Broker | Land Specialist

- ☎ (573) 680-0878
- ✉ dale@sportsafieldre.com
- 🌐 sportsafieldre.com
- 📍 Licensed in Missouri & Kansas



Turning a cow hobby into a business

BY ELISE BROCHU
SPECIAL CORRESPONDENT

Cool Cow Cheese co-owner Tom Blatchford's day starts with milking 20 cows. "We bought an old milk parlor from Purina Farms, so it's similar to the (one) I milked on when I was a kid, at my uncle's farm. Nothing too modern," Tom laughed, "You want to have something you can fix in a hurry, because there's nothing worse than having something break down and you've got cows that need to be milked."

After milking, he dusts both the bed and breakfast and the store, then sweeps and mops floors to make sure everything is perfect before guests arrive. "This is what it's like if you're, you know, doing it all. You've got to do it all," he said good-naturedly.

Tom said he always liked cows and knew he wanted to be a farmer, but starting a farm takes financial resources he didn't have at a young age. He worked in the healthcare industry instead, which moved them around the country. His wife, Martha, bought him his first cow while she was pregnant with their son and on bed rest. "I think she really got me the cow to get me out of the house, to quit hovering around her," Tom laughed.

He named that first cow Morning Glory, because her mooing woke him up every morning. Morning Glory was apparently so particular about who milked her that anyone who helped out while Tom was out of town for work had to wear his overalls or she wouldn't give up the milk.

For their son, Ben, cows have been a part of life since the day he was born. Martha got sick shortly after, and, as Tom told it, "I have to milk the cow, (Martha's)



TOM AND Ben stand with Elizabeth. Elizabeth is a Jersey cow. Her heritage can be traced back to one of the first Jersey herds in the United States at the Biltmore Estates in North Carolina. This picture was taken just hours before she had her calf. Tom is holding his granddaughter Elizabeth as Ben holds Dorothy.

sick, she can't take care of (the baby), so I've got this picture of me with this two- or three-day old kid in my backpack, on my back, as I'm leaning over hand milking a cow." Ben now makes most of the cheese.

Tom once bought a cow online, by accident. "I was on the Jersey Association, and (it was) a really nice cow from a guy I knew," Tom said, "It came from a nice genetic line, so I just decided I'd bid on it

to warm it up, then I had to explain to my wife that I bought a cow, and that we were driving from Memphis, Tenn. to Lexington, Ky. to pick up a cow."

Tom went on to explain that when they moved to Owensville and expanded their herd, they bought cows from California. The cows were shipped to Iowa, where they were removed from the trailer, milked, and put back on for the remainder of their journey. "So, about nine hours later, on a Sunday night, the cows showed up on this trailer, and lo and behold, after we unloaded and everything was fine, the next day, when we counted cows, there was an extra cow. So, coming up with a strange cow seems like a theme in my life," Tom laughed.

"I used to laugh about it because where we lived in Olive Branch, Miss., before we moved out here, and we lived in a horse community, you know, and they used to call me the 'cow whisperer' because everybody else was riding their horses around the community and I would put a halter on the cows and let them chew the grass down in the ditches and stuff," Tom said.

When they decided not to stay in Mississippi, cheese was the driving force behind what they were looking for. Because what cows eat flavors the cheese, untouched native pasture was of primary importance, but they also wanted an old house near a small town. Tom said they were really lucky to settle in Owensville.

Martha found their farm online after a girls' weekend in Hermann. The property had been vacant for 20 years because the owner wanted it to be family farm instead

See **COOL COW CHEESE** on Page 25B



TOM GUIDES (above) one of his cows to a corral. Peeking out of their stalls at the photographer (photo left) are three new Jersey calves in the Cool Cow Cheese barn.

PHOTOS BY DENNIS WARDEN

Cool Cow Cheese

•from page 24B

of tilled up for row crops. “She found the property online on a Sunday, and I think we had called the real estate agent on that Sunday, made a deal, and by Wednesday the property was ours,” Tom said. That was 2010, and they moved onto it in 2011.

Tom said the community has been very welcoming, even when skeptical about his plan to make cheese in wine country. “At the end of the day, we’re extremely really lucky, because we’ve had so many people that have helped us along the line. This world out here, if you scratch underneath the surface, there’s a lot of people who are trying some unique farming to make sure their family farms are going to still survive. There’s traditional agriculture out here, but there’s a lot of non-traditional agriculture, which really makes it fun for us,” Tom said. He spoke of The Nutty Pig Farm, Homestead Farms Nursery, and SV Shrimp Farm. “They’re all doing and making it happen, just like we were making it happen, which gave me courage the whole way through that we were in the right location, and that we could get the support that we needed, and that the infrastructure was here,” Tom said.

Artisan cheese production has a lot of the same characteristics as wine production, Tom said, in that the land is what makes the cheese special, and what makes Cool Cow Cheese unique to Owensville. The native plants and grasses cows eat affect their milk very much the way native soil and weather affect grapes used for wine. “There’s eight steps. Variation of those eight steps and you get 3,000 different kinds of cheese, and then you can walk to a different farm, and because of the flavor of the milk, then that same 3,000 cheeses would all taste a little bit different,” Tom explained.

Cheese, like wine, is about blending science with artistry. Cool Cow Cheese is considered a small-batch cheese maker, as they make cheese using ‘only’ 1,000 pounds of milk at a time. Their vat was imported from Amsterdam, because it provides precise temperature control, which allows them to keep the temperature consistent within one degree throughout the vat, which, in turn, allows for a more consistent product.

Gouda cultures are imported from Holland, so Cool Cow Cheese can make a more traditional ‘farmer’s Gouda’, as opposed to American Gouda. Cows are artificially inseminated every few years with sexed semen from one of the top cheese merit bulls in the world, and those calves are kept to increase the herd.

Like winemakers taste their grapes, artisan cheese makers taste their milk every day, and the subtleties in flavor and texture determine what cheese to make from it. The milk changes every day, and every season, based on what the cows are eating, so the type of cheese produced changes throughout the year.

“We make a Havarti in the springtime, and we normally make Havarti when the dandelions are blooming, and as soon as



TOM (center, photo above) **AND BEN BLATCHFORD** bring in their Jersey Cows Sunday evening to separate the pregnant cows who are ready to calve.

PHOTO BY DENNIS WARDEN

the dandelions are gone, then Havarti production is over.

Just because that cheese is beautiful in color, mild in flavor, and it’s very creamy, and that’s when the cows are producing that kind of a milk,” Tom said, explaining that they prefer to keep their ingredients

to a minimum, “So it’s our taste buds that really help us, because, believe me, we’d like to make the most profitable cheese over and over and over again, but those cows – you talk to them, and you encourage them – but they don’t always do it.” Sometimes that’s a happy accident.

Cool Cow’s garlic cheese was born when their cows got into a patch of onions, ate the tops, and ‘ruined’ a batch of milk. The Blatchfords decided to cover the flavor with garlic, and that became one of

See **COOL COW CHEESE** on Page 27B

Jacquin
Excavating
Basements, ponds, lakes and clearing
- Free Estimates -
573-897-0564 (Phone)
573-694-6102 (Cell)
Paul Jacquin
 879 County Road 302 • Linn, Mo 65051



BEN BLATCHFORD (right) works with the cheese. His father, Tom, takes care of the Jersey cows that provide the milk for the cheese production.

PHOTO ABOVE BY DENNIS WARDEN,
PHOTO RIGHT SUBMITTED



Your Local Professional & State Inspected Meat Processing Plant

FRESH MEATS

MEAT PROCESSING



Big Bear's
BUTCHER SHOP
573-744-5888
bigbearsbutchershop@gmail.com
Monday - Friday: 8am - 5pm
Saturday: 8am - 12pm

BUSCHER



BACKHOE & LANDSCAPING

573-619-5042
192 Twins Lane • Freeburg, MO

Cool Cow Cheese • from page 25B

their most popular cheeses.

“Cheese curds is a green cheese, and that’s the only cheese that’s really edible right away, because the aging process is what makes cheese magical,” Tom said.

When they put in their cheese cave, the Blatchfords sourced local boards, then left it open to let natural yeasts and organisms populate before closing it off. “So now we have that local sourdough kind of yeast to help us with making our rinds. That’s all part and parcel of what I call, you know, a cheese maker bias. Having the native grass pasture is us saying that, as cheese makers, this is the bias that we’d like to build in.

When we reseeded some of our pasture, we put clover in, because clover will give the cheese a nutty flavor, and cows love clover, so we literally have a nutty flavor line all the way through all of our cheeses, so you can tell it’s our cheeses because there’s this little nutty note in every one of the cheeses,” Tom explained.

They also brine their cheeses instead of salting them. Because Jersey cows give really rich milk, the Blatchfords prefer to let the cheese and brine work together to determine how much salt is going into the cheese. “Most people think cheese is preserved through salt, but in actuality it’s the lactic acid from the cultures that preserve the cheese.

It’s the salt that helps you flavor the cheese, so we kind of let that happen on a natural basis versus our own taste buds,” he said.

“Those are all cheese maker biases that are built in to make cheese unique, and that’s what is really fun. If you’re a cheese connoisseur, you’re going to have a good time tasting all these different kinds of cheeses, with all these cheesemakers and their biases that they built in. Exactly like wine tasting,” Tom said.

Tom said they try to produce cheeses that go with the other foods produced in this region. “We have some cheeses that are really great with wine, we have some cheeses that we built because of all the sausages that are made around here, and we have some cheeses that we built because of all the grass-based beef, and things like that,” he said. He feels that if everyone did that, the food produced in central Missouri would be totally different than what could be produced anywhere else, due to both the land and the German influence.

In addition to creating cheese that pairs well with other local foods, Cool Cow Cheese is creating cheeses that incorporate local wines and spirits, and partnering with other

See **COOL COW CHEESE** on Page 28B



PINS ON maps of the world (above) and the United States show where guests who have visited Cool Cow Cheese are from. They include every state in the US except Vermont and over 30 countries.

PHOTOS BY DENNIS WARDEN

LOCAL SOURCED FARM RAISED PORK

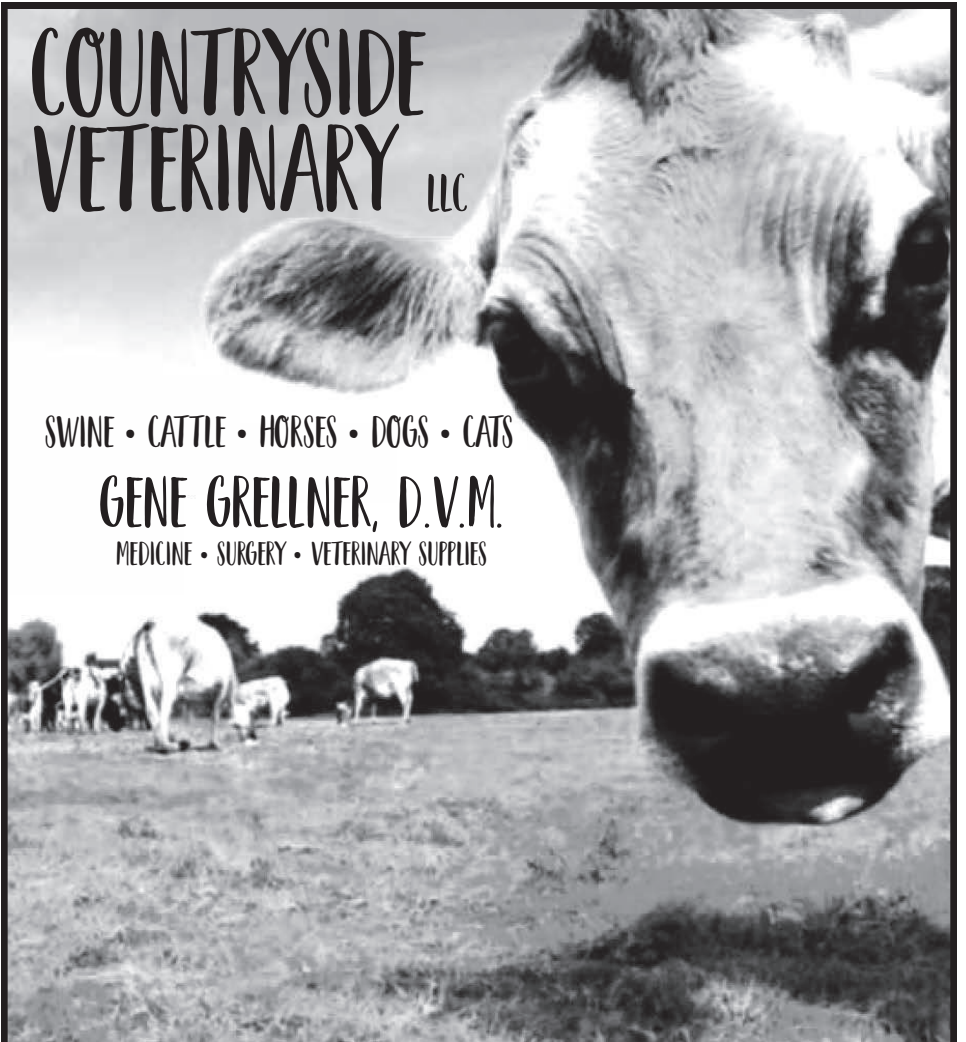


Sold at **Joe's MARKET**
Westphalia, MO 455-2307

COUNTRYSIDE VETERINARY LLC

SWINE • CATTLE • HORSES • DOGS • CATS

GENE GRELLNER, D.V.M.
MEDICINE • SURGERY • VETERINARY SUPPLIES



CALL FOR APPOINTMENT

Loose Creek/Linn
897-2231

Emergency
897-2231

“Serving Osage, Gasconade, Cole & Maries Counties Since 1988”

Cool Cow Cheese • from page 27B

local producers to create foods that contain their cheese.

“We make what we call a ‘stained glass cheddar,’ where we take a local winemaker’s wine and add it to the cheddar, and then we age it with that,” Tom said, explaining that they’re using the Röbller Vineyards wine that was mentioned in the wine bible, and also a chambourcin from Prairie Barn Winery in St. James.

In addition to that, they are experimenting with local whiskey/bourbon makers to add whiskey or bourbon to their line of cheddars. “We’re trying to be a food that is local, in the sense of it’s produced because of the other foods that are produced in this area, and we have some great whiskey and bourbon makers,” he said.

Their efforts don’t stop there. They’re working with Bavarian Smoke Haus in New Melle to make a das kreider sausage that contains Cool Cow Cheese gouda, and they’ve added a red pepper cheese for people who like a little more spice.

In their store, they sell their own cheese, Martha’s hand-made soaps, and other local products. Their full range of cheese can be purchased online at www.coolcowcheese.com, and you might find them in St. Louis specialty stores and at Tower Grove Farmer’s Market.

“We don’t have a lot of local customers and things like that, because that’s not probably the market we were after, but every time we have somebody local and they have family in town, the next thing you know, they show up at our doorstep and show off this thing that’s in Owensville. So I like that,” Tom said.

At the bed and breakfast, the Blatchfords have hosted guests from every state in the US, except Vermont, and from over 30 countries. “If you think about all of those

folks, from all these different countries, that come out in the middle of nowhere on the gravel road, it’s amazing,” he said adding that locals might forget how beautiful central Missouri is because they’re lucky enough to live here and see it every day, but people from other places are amazed by it.

The Blatchfords’ guests are treated to a breakfast that includes products from the farm and other locally sourced foods. They can help with farm chores if they want (and Tom says they usually do), and Tom will even teach them to make mozzarella if they want to learn. For dinner, Tom and Martha refer guests to local restaurants, including over 1,000 referrals to White Mule Winery’s steak dinners. The Blatchford family is planning to add more specialty weekends for B&B guests, in conjunction with events at other local business, to provide a cohesive regional experience for their guests.

Tom believes niche markets are key for the survival of family farms, but also diversifying within niche markets to use every available resource, including potential waste products. “I think that’s the old farmer way.

The farmers looked at what assets they had on their property, and if their land would grow vegetables, they would be a truck farmer. If their land would grow fruit, they were a fruit farmer. They had a different philosophy. They didn’t ram everybody into row crop business. They looked at their terra firma and said ‘this is what the property that I can afford, have, whatever it is, and this is what I can accomplish with it,’” he said.

This year, they plan to add a sunflower maze, both to draw customers to the farm and because his daughter-in-law loves sunflowers. They’re also working toward adding something for Ben’s daughters, so their family farm includes something each member of the family enjoys, as well as another venture he’s not quite ready to go public

with yet, because “if we haven’t got it perfected, we don’t introduce it.”

“I took a cow hobby and am busy making it into a business,” Tom said, “and we’re not done, by a long shot.”



BRINKMAN BED and Breakfast at Cool Cow Cheese farm has five rooms, each with a private bathroom. The Belgian Horse Suite (above) has three antique screen doors behind the king-size bed that the Blatchfords found in the attic of the 100+ year old stone farm house located on the property.

HERE FOR ALL OF YOUR CONCRETE NEEDS

Osage County Concrete



428 Highway 50 W • Linn • 573-897-2149

Friendly, Reliable Ag Lending Services Tailored to You!

Talk with a Mid America Bank lender today about your financing options!

MID AMERICA BANK
Member FDIC
midambk.com



New MU study examines variability of water, carbon in Missouri agriculture ecosystems and future impact on crops

BY COURTNEY PERRETT

One of the main reasons plants use water is to allow them to absorb carbon dioxide from the atmosphere. This means that, in plants, the water and carbon cycles are tightly linked. In a new study, researchers from the University of Missouri and the United States Department of Agriculture (USDA) used this foundational principle to identify sustainable farming practices aimed at helping staple crops like corn and soybeans thrive during extreme weather conditions that have become more common in the Midwest.

This study examined how farming practices affect crop resilience to climate change by examining water and carbon fluxes in three contrasting ecosystems: A business-as-usual tilled cropping system, an aspirational no-till cropping system with cover crops, and a native tallgrass prairie ecosystem.

This aspirational plot, covered by a soybean crop, houses its own eddy covariance “flux tower” device. Photo by Jeffrey Wood

“One of the big goals is what we call climate-smart agriculture, which can mean using crops to absorb carbon out of the air, but it also means trying to adopt farming practices that help farms adapt to the changing climate,” USDA research hydrologist Adam Schreiner-McGraw said. “As it gets hotter, plants get more stressed, and that means they often have lower yields. This research is focused on understanding adaptation and how to work toward more resilient agro-ecosystems.”

A comparison of rates of evapotranspiration — when water transfers from the land to the atmosphere — and carbon dioxide exchange revealed interesting patterns among ecosystems. In an analysis of data collected over the past four-year cycle, the native prairie ecosystem had higher rates of evapotranspiration than the tilled cropping system. In comparison, however, the prairie’s rate of evapotranspiration didn’t differ much from that of the no-till cropping system. Further, both cropping systems had higher amounts of plant growth (i.e., carbon uptake) than the native prairie.

From these findings, the tilled cropping site appears the most sensitive to environmental changes compared to the native prairie, which is most resilient to extreme weather, Schreiner-McGraw, who works in the USDA’s Cropping Systems and Water Quality Research Unit on MU’s campus, said. Moreover, because the no-till system has the most crop diversity, including corn, soybeans, wheat, and hay, it had the most variable rates of evapotranspiration. This phenomenon Schreiner-McGraw attributes to agricultural management strategies.

Understanding variable rates of evapotranspiration help scientists weigh if the ‘planned’ management has a bigger im-

act on the water and carbon budgets than the ‘unplanned’ weather variability, which can help with predictions for crop water and carbon uptake as extreme weather gets worse.

Another way to build environmental resistance is to plant a diversified rotation of crops over the long term, said Jeffrey Wood, an assistant professor in the MU School of Natural Resources. As climate fluctuations intensify — for Missouri, that’s warmer, wetter winters and drier summers with less frequent rain — understanding how best to support crop adaptation and which crops to plant at what times of the year has become increasingly necessary.

“The type of work we do lends itself to collaboration because we all share data in a community-based network,” Wood said, “People are always willing to share ideas, which makes it easy to work together and contribute to research that expands in scope from the problems one researcher might be working on locally to those another might face on a bigger scale.”

“Agriculture accentuates interannual variability in water fluxes but not carbon fluxes, relative to native prairie, in the



AN EDDY covariance tower, a tool which measures the breathing capacity of an ecosystem, sits in Tucker Prairie, Missouri’s largest remaining virgin tall-grass prairie. Photo by Jeffrey Wood

U.S. Corn Belt” was published in *Agriculture and Forest Meteorology*. Co-authors include Megan E. Metz, John Sadler and Kenneth Sudduth. This research is a con-

tribution from the Long-Term Agroecosystem Research (LTAR) network, which is supported by the USDA.

Voss Land & Cattle Co.

Ralph Voss

Linn, MO

573-694-1682

SOUTH POLL CATTLE ARE:

- BRED FOR FERTILITY AND LONGEVITY
- HEAT TOLERANT
- KNOWN FOR GENTLE DISPOSITION
- KNOWN FOR CALVING EASE AND STRONG MATERNAL INSTINCTS



This is Bull 101, a three-year-old that we raised and have used in our herd. We performed linear measurements on the bull on Nov. 10, 2023. His topline was 73 inches; his heart girth 75.5 inches and his rump girth 78 inches. He has proven to be an excellent breeder, with DNA results showing that he has sired almost 50% of the 2023 calf crop.

Study uses gene prediction tool to select premium grade Angus herds in Missouri and across the United States

BY COURTNEY PERRETT

Ranches across the Show-Me State manage approximately two million cattle — a significant number of which are Angus, a top-tier breed that has unrivaled success in the commercial beef market. In a new study, University of Missouri researcher Jared Decker and Thompson Research Farm tested a group of commercial Angus cows using a commercial genomic prediction tool called Zoetis GeneMax Advantage to investigate the ability of the test to predict their calves' performance and profitability. This project demonstrates an important step forward in helping inform the selective breeding of commercial cowherds and giving Missouri cattle producers a competitive market advantage.

While testing a sample of commercial Angus females and their offspring at MU's Thompson Research Farm, Decker found significant relationships between the cows' genetic merit and the performance of their calves. For



See **ANGUS** on Page 30

A GROUP of Angus cows and their calves graze at Thompson Research Farm. Photo by Kyle Spradley

We'll Keep You Growing Throughout the Seasons



Custom Pump/Flynn Drilling Company has grown to become one of the largest commercial/residential drilling and pump repair companies in the Midwest.

We employ over 60 people, with 8 drilling rigs, 14 pump rigs, numerous service trucks and related construction equipment.

We care about our customers and friends and are dedicated to upholding the most important guideline the company was founded on.

- ✓ **Water Well Drilling**
- ✓ **Geothermal Services**
- ✓ **Residential Services**
- ✓ **Pump Sales & Service**
- ✓ **Public Water Systems**



LICENSED MISSOURI WATER WELL CONTRACTORS
"Serving The Entire Area Since 1968"



Complete Water Services

2022 Highway 28
Owensville, MO
573.859.6107

16705 Doolittle Outer Rd.
Rolla, MO
573.341.8444

custompump.net

Angus • from page 30

the study, researchers focused on specific traits, such as weaning and carcass weight, marbling, fat, and ribeye area.

“In prioritizing the use of this technology, Thompson Research Farm recently harvested a set of 35 steers, 70% of which graded prime, the highest quality grade that the Department of Agriculture (USDA) ranks meat,” said Decker, Wurdack Chair of Animal Genomics in the College of Agriculture, Food and Natural Resources. “Compared to the industry, which grades Prime at a rate of 6%, this is really excellent.”

Decker believes this success stems from the technology that makes genomic predictions possible. In practice, DNA testing allows farmers to select better cows and refine the herd with good genetics on top of good management. As a specialist in the ways technology can streamline farming practices, Decker sees it as his calling to help producers corner the market.

“It’s a goal of mine to help producers innovate in ways that get them closer to harnessing a competitive advantage in this market,” Decker said. “I want to help them adopt new technologies like DNA testing and genomic prediction. For a while now, we’ve had historical data on the performance of calves in terms of growth and carcass performance. So, a key goal of this study was to demonstrate to farmers, ranchers, extension professionals, veterinarians and academics that this technology does, in fact, work. There is a significant relationship between calf performance and the cow’s genetic merit.”

Although genomic prediction has a legacy of success in seedstock cattle — purebred animals with documented pedigrees — this is the first time it’s shown to work in a sample of commercial cattle.

For Missouri’s beef industry, a leading driver of state revenue, genomic predic-

tion technology represents an opportunity for growth, both for producers and the economy.

“Genomic prediction tools allow farmers to go from not knowing the pedigree or any of the animal’s performance data to taking a DNA sample and receiving a very accurate prediction as to the heifer’s genetic merit,” said Decker, explaining that this technology opens doors for commercial producers to be more aggressive in selecting the right females to go back into the herd. “This gives farmers a chance to make informed decisions that enhance sustainable profitability.”

For family run farms, genomic prediction technology is not only affordable, but also provides opportunities for small operations to document calf crops that boast superior genetic score cards. This allows farmers to either hold on to the calves through their feeding period and make a greater profit off their carcass merit or to market the weaned calf at a premium based on their first-rate genetics, instead of at typical commodity prices.

“Farmers and ranchers really value this lifestyle; they value the family tradition,” Decker said. “That family tradition gives them the grit and the fortitude to deal with really challenging circumstances like drought or low prices or whatever the present big challenge is. So, helping them think strategically about how to create the best calf crop is something that will serve them and keep those family farms profitable.”

“Evaluation of Zoetis GeneMax Advantage genomic predictions in commercial Bos taurus Angus cattle” was published in Livestock Science. Co-authors include Brian C. Arisman, Troy N. Rowan, Jordan M. Thomas, Harly J. Durbin, William R. Lamberson and David J. Patterson.



**BRANDT
CHAIN SAW**

**Tillers, Lawnmowers,
Weedeaters, Chainsaw Repair**

We Sell Chainsaws & Stihl Power Equipment

573-763-5615

Steer clear.

Work safely.



One of the most important rules of operating machinery is the 10-foot rule. It simply means to be aware of your equipment’s height and reach, and keep it at least 10 feet away from power lines.

Whether you’re working in the field or moving equipment from one place to another, think and look ahead to be sure power lines are not in your path. The 10-foot rule will help you steer clear of danger.



**Three Rivers
Electric Cooperative**

With offices in Linn and Brazito • 573-644-9000 • threeriverselectric.com



Outstanding in our Field

We depend on you, the American farmer, three times a day.
You can depend on Shelter!

Jeff Wolfe

Linn, Mo.

Phone: 573-897-2190



We’re your Shield. We’re your Shelter.



BUILDING THE FUTURE OF AG SINCE 1984



Red-E-Mix, Inc.
TWO PLANTS TO SERVE YOU!

Vichy | Junction 63 and
Hwy 28. East
573-299-4222

Meta | N Hwy. 133
573-229-4886