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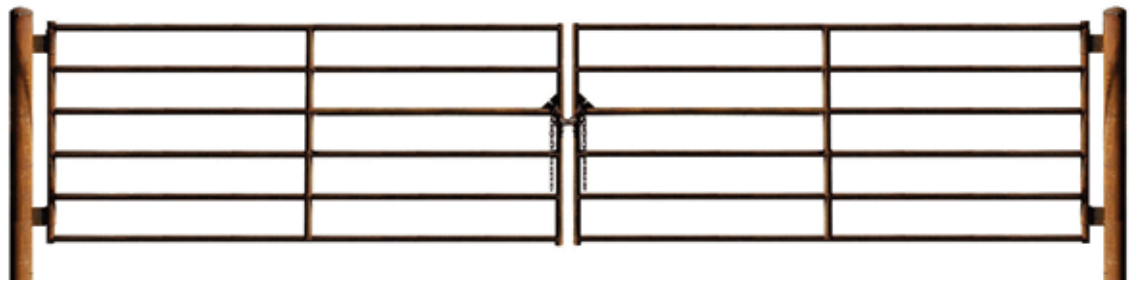

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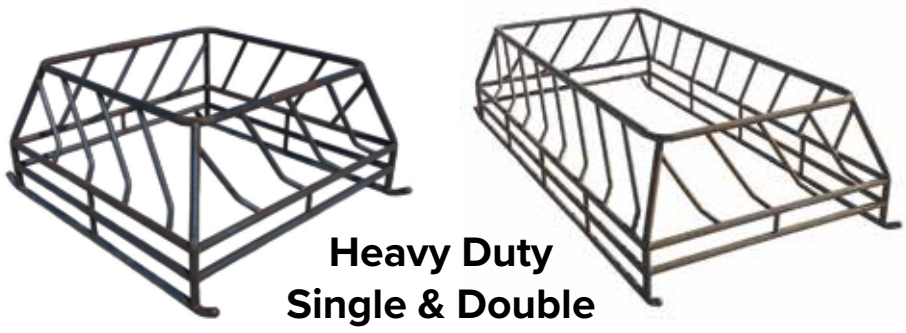

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ON THE BLOCK

We've had a lot of things happen that looked like would help the market, and it's done nothing but get cheaper. Japan has opened the market back up for U.S. beef. It's likely that will help us in the long run, but here in the short term the market seems focused on a variety of weather events we're facing.

The winter prolonged the marketing of a lot of slaughter cattle, and that segment of the industry has traded $12 to $14 lower than it was 30 days ago. We also saw the board pretty much crash and burn, sliding $14 in 10 days. So, some really good news hasn't really had a very good effect on the market. Eventually, I think we could see a big impact. We have some really positive things on the horizon, but we have some real negatives that we've got to deal with before we can ever get feeder cattle and calf prices back to where we want them to be.

The value-added cattle that have been weaned and vaccinations with a health history are pretty attractive to buyers right now, especially with the wet and muddy environment we've seen in so many parts of the country. The calf market could get a lot better if the weather would cooperate so farmers could get their crops planted, and then focus on buying cattle.

We're gearing up for a big video sale on July 2, which is a good one if you want to look to market your cattle July through December. The past few years that has been a really good opportunity to capture some value. A lot of folks should have their work caught up by then and will be looking to buy some cattle.

Good luck and God bless.

Jackie

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JOPLIN REGIONAL STOCKYARDS
CATTLEMENS NEWS

Cattlemen's News, published by Joplin Regional Stockyards, is a nuts-and-bolts news magazine dedicated to helping cattle producers add value to their operations. From "how-to" articles to economics and industry trends, our mission is to put today's producers in touch with the information and products that will make them profitable for tomorrow. Published monthly. Circulation 10,000.

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INSIDE THIS ISSUE

About the Cover

Find out how you can benefit from using drone technology in your operation. Read about it on page 20.
—Cover photo by Rebecca Mettler.

Features

14 Technology: At Work in the Field
18 Connecting the Unconnected
20 From Cell Phones to Drones
22 USDA Releases Agriculture Census
23 By the Numbers
26 Training Tomorrow's Cattlemen, Cattlewomen
30 Answering the Call

In Every Issue

3 View from the Block
6 Data-Driven Decisions with Justin Sexten
8 Health Watch with Dr. David Rethorst
11 Home on the Farm with Anne Kennison
12 Under the Wire with Gary Hodgson
29 Network Know-How with Erin Hull
37 Event Roundup

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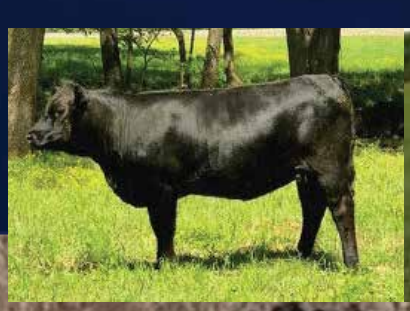


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DATA-DRIVEN DECISIONS

Traceability Beyond the Ranch

Sorting through the challenges of transparency

By Justin Sexten for Cattlemen's News

Traceability is in the news everywhere we look. The largest U.S. retailer recently announced an effort to enhance their beef supply chain transparency by adding a traceable product line. Although the product quality and value-added production characteristics based on how the cattle would be managed were mentioned, the discussion clearly focused on system traceability.

In April, the USDA announced a timeline to move to radio frequency electronic identification (RFID) for animals that require tagging as part of the Animal Disease Traceability (ADT) program by 2023. This will phase out the once common metal tags used for those beef and dairy cattle requiring official identification to move interstate (all dairy cattle and sexually intact beef cattle less than 18 months of age).

USDA's ADT program continues to remain technology-neutral in what type of RFID producers can use to meet the new requirements. Whether high or low frequency, they have not suggested a preference. Traceability efforts are moving forward, and expanding technology will ultimately automate the process minimizing the need to visually read the tag and correctly write down the 15 digit numbers.

When most cattlemen think about traceability I suggest we think traceable from ranch of birth to harvest. Yet I suspect most consumers consider traceability to encompass the entire supply chain from ranch to plate.

Harvest-to-plate traceability has received little attention simply because the logistics of tracking more than 25 wholesale primals per carcass side (excluding trim) through a modern processing facility into a box and through distribution channels is a monumental task. Part of this challenge was addressed in a recent Translational Animal Science article from Tristan Foster and co-workers at Michigan State University. They evaluated two methods of primal tracking to better understand traceability logistics and relative cost from harvest to the box.

Cattle were individually identified using RFID at the ranch and maintained through finishing at Michigan State. At harvest the RFID was transferred to the carcass. The novelty of the experiment begins here, when the carcass is broken into wholesale primals and sub-primals.

Working with a small processing facility, the Michigan State team looked at processing either one carcass at at time (serial) or multiple carcasses simultaneously (parallel). A modern processing facility would use a combination of these methods with carcasses processed in serial order but multiple people working in parallel.

The challenge of tracking multiple carcasses simultaneously proved twice as costly ($18/carcass) as serial processing one carcass at a time ($9/carcass). This was due primarily to greater time spent tracking cuts and increased labeling costs.

As the demand for beef delivered to the table with attributes increases, the need for system traceability will also grow to verify these claims. The authors suggested these methods offer opportuni-

CONTINUED ON NEXT PAGE

TRENDING NOW

Wet Pastures: Watch for Foot Rot

Prevention and treatment options

By Glenn Selk

Spring rains have filled ponds and saturated the ground in many pastures. But as temperatures increase, a common challenge will be cattle congregating around or in ponds or other standing water.

Foot rot is a common cause of lameness in beef cattle on pastures. Foot rot is an infection that starts between the toes of the infected animal and usually is a result of the introduction of bacteria through broken skin. The infection causes pain, and lameness often results. The lameness can cause decreases in weight gain of young cattle, milk production decline of adult cows and reluctance to breed in lame bulls.

Treatment of foot rot can be successful when completed early in the disease process. Most cases require systemic antimicrobial therapy. Your local large animal veterinarian will advise you on recommended antibiotics and dosages for your situation. Severely infected animals that do not respond to initial treatments will need to be re-evaluated by the veterinarian, and more involved treatments may be required to salvage the animal. Because lameness could be the result of another issue, proper diagnosis is important before treatment begins.

Preventative measures revolve around prevention of mechanical damage to the foot. Recently brush-hogged weeds or brush stubble will often be very sharp and cut the skin between the toes allowing the entrance of the infective bacteria. If possible, avoid forcing cattle to spend long periods of time standing in very wet lots or pastures. Using a good mineral program that contains the micro minerals zinc, selenium and copper will aid in disease prevention. A three-year study in Kansas has shown that zinc methionine added to a free-choice mineral supplement reduced the incidence of foot rot in steers grazing summer pasture. Since cattle with foot rot are commonly treated with antibiotics, it is critical that producers follow their veterinarian's instructions and label directions precisely. Because these are individual treatment incidences, ranchers may neglect to keep the proper records of the treatments. Record the date, the dosage, route of administration, the lot number of the antibiotic given and the person giving the treatment. Then observe the drug withdrawal times completely before marketing the animals that have been treated.

—Source: Glenn Selk is an Oklahoma State University emeritus extension animal scientist.

BEYOND THE RANCH
FROM PREVIOUS PAGE

ties for small processors to gain competitive advantage by capturing value through smaller, specialized markets. On a larger scale, more work is needed to automate these processes at a faster speed of commerce.

As traceability moves from value-added toward a market expectation, processors will continue to evaluate systems and solutions to address the logistic challenge. A small but significant note to this experiment was that the cattle were traceable when they arrived at the harvest facility.

Carcass traceability has little, if any value if cattle move through the supply chain anonymously. Now is the time to consider ways your marketing plan might benefit from a management system with built-in traceability.

—Justin Sexten is vice president of strategy, Performance Livestock Analytics.

New Technology, Old Diseases

Are you doing all you can to protect your herd?

Story by David Rethorst for Cattlemen's News

Many of the technological advances in the beef industry in recent years are related to genomics. While genomics is grabbing the headlines, there have been advances in diagnostics that have made it much easier to diagnose and deal with a number of animal health issues.

Early in my practice career we struggled to accurately diagnose bovine virus diarrhea and identify the persistently infected carrier. In the 1990's, with the use of immunohistochemistry (IHC) we were able to readily identify these carriers and remove them from the herd, but each ear notch had to be evaluated under the microscope, which was very time-consuming. Next came the ELISA (enzyme linked immunosorbent assay) test, which was much easier and quicker to run. This test is still popular today as evidenced by its widespread use in smaller BVD labs. More recently the development and use of the PCR (polymerase chain reaction) technology, which looks for the DNA of the virus, has increased the sensitivity and specificity of BVD testing. These technologies have made the identification of animals persistently infected with BVD quick, easy and accurate, yet is underutilized particularly in the cow herd.

Culture of feces has been the gold standard for the diagnosis of Johne's for years. This disease, which crept into the beef herd from the dairy industry, causes chronic diarrhea, weight loss and is untreatable. Because calves are infected shortly after birth and do not show clinical signs for several years, it is difficult to manage. This is compounded by the fact that culturing takes several weeks in the lab before we know if the sample is positive or negative. PCR testing has reduced the lab time to a matter of days and allows animals to be identified earlier in the disease process.

When I was in veterinary school, we were told that we would never have to worry about trichomoniasis in the state of Kansas because it was a disease seen in grazing cooperatives in the mountain states. Today, I know from personal experience that trich does exist in the Great Plains states, and it can be very challenging to diagnose. Some inherent problems in testing for trichomoniasis exist in that since it involves scraping the prepuce, care must be taken to get a good sample — and the sample must be handled properly so that the diagnostic lab receives good material with which to work. Inconsistency in sampling is one of the reasons that three tests are recommended to say a bull is trich-negative. The gold standard culture methods for trich require that the cultures be evaluated for several days under a microscope, so the process is slow and labor-intensive. Additionally, the sensitivity of the test is not great in that on culture alone Tritrichomonas foetus cannot be differentiated from fecal trichs. Once again, PCR technology has improved trich testing because it can be done rapidly and the specifity is greatly improved, allowing T. foetus to be differentiated from other trichs based on the DNA of the parasite.

Now to get to where I am really heading with this column. In 41 years of beef cattle practice, I have never diagnosed vibriosis, now called campylobacteriosis. A number of veterinarians can make that same statement. Vibrio vaccination is very effective if the proper product is used in a timely manner, but as an industry we have become somewhat complacent about this vaccination.

CONTINUED ON NEXT PAGE

NEW TECHNOLOGY FROM PREVIOUS PAGE

Testing for vibriosis, like trichomoniasis, involves scraping the prepuce and transporting the sample in the proper media, in a timely fashion. Culture in the lab requires special media and is again time-consuming. In the past couple of years, a PCR test for vibriosis has been validated, and the results are opening more than a few eyes.

Clinically, vibriosis appears nearly identical to trichomoniasis. Early embryonic death, low pregnancy rates, and prolonged calving season are the norm with both diseases. The economic impacts of either in a herd are very high, and managing the infected herd is frustrating.

One of the ranches that I do some work for has a cow-calf operation on one ranch; their yearling and heifer development operation is on another ranch. They had trich in their cow herd several years ago and were able to clear up the disease. Recently, they had an infertility problem that they assumed was a reoccurrence of trich, but all of the tests were negative. Upon testing the bulls for vibriosis, a very high percentage of the bulls were found to be positive. Bulls on the heifer development ranch were found to be positive, also.

Concerning trich and vibrio, do not forget that biosecurity is a good animal husbandry practice that will help keep these diseases out of your herd. Maintain fences, know your neighbors, don't lease bulls or buy used bulls, and maintain a good vaccination program. Consult with your veterinarian to make sure you are using the proper vaccine at the appropriate time.

The moral of the story is that when problems arise, don't be afraid to consider old diseases that we tend to think are not around anymore. New diagnostics developed using current technology are more consistent and more accurate than the old gold standard tests. With breeding season upon us, make sure that you are doing all you can to prevent these costly diseases that are spread by breeding.

—Source: Dr. David Rethorst is a veterinary practitioner and consultant, BeefSolutions, Wamego, Kansas.

TRENDING NOW

Missouri House Passes SB 391

Bill moves cattlemen's priority to governor

The Missouri House of Representatives passed Senate Bill 391 May 14, 2019, with a 103-44 vote. The vote was the final hurdle for the legislation in the 2019 legislative session, which concluded May 17. The legislation now moves to Governor Mike Parson for his signature. The Missouri Cattlemen's Association was a driving force in moving the legislation forward, and its president, Bobby Simpson, wasted no time in calling the passage a "historic victory" for farm and ranch families.

The legislation, sponsored by Sen. Mike Bernskoetter (R-6) and led in the House by Rep. Mike Haffner (R-55), prevents county governments from passing rules and regulations on farm and ranch families that are more stringent than scientifically founded rules and regulations promulgated by the Department of Natural Resources and other agencies. Proponents argue that a patchwork of county-by-county regulations creates regulatory uncertainty for farm and ranch families and prevents them from expanding and stops new operations from starting. The list of proponents include nearly 30 organizations.

Opponents of the legislation include the Humane Society of the United States, Missouri Rural Crisis Center and Sierra Club. They argue that the legislation only benefits corporate farmers. Simpson said the wild accusations are false and a direct assault on farm and ranch families in the state. He said he is thankful legislators were willing to think independently and sort fact from fiction.

Simpson is optimistic Governor Parson will sign the legislation.

—Source: Missouri Cattlemen's Association Prime Cuts.

MANAGEMENT MATTERS

To Creep Feed or Not

Calculating the pros and cons of creep feeding

By Glenn Selk

Feed conversions of calves fed creep feeds have been quite variable to say the least. Conversions of 5:1 or 5 pounds of grain consumed to 1 extra pound of calf weight are very rare and the best that can be expected when producers are using a "typical" high-energy creep feed. Conversions may get as poor as 15:1 (or worse) in some situations.

Several factors come in to play to determine the amount of creep feed that is consumed for each additional pound of gain.

Cows that give large amounts of milk to their calves will provide enough protein and energy to meet the growth potential of their calves. In that scenario, it is reasonable to assume that the feed conversion from creep feeding could be quite poor (10:1 or worse). If however the milk production of the cows is limited for any reason, then the added energy and protein from the creep feed provides needed nutrients to allow calves to reach closer to their genetic maximum capability for growth.

Calves from poor milking cows may convert the creep feed at a rate of about 7 pounds of feed for each pound of additional calf weight. Poor milking can be a result of genetically low milk production or restricted nutritional status. Nutritional restriction due to drought situations often adversely affects milk production and therefore calf weaning weights.

Shortened hay supplies and reduced standing forage due to drought or severe winter weather often set the stage for the best results from creep feeding. These feed conversion ratios become important when making the decision to buy and put out creep feed for spring-born calves. As you are calculating the cost of creep feeds, remember to include the depreciation cost of the feeders and the delivery of the feed. Then of course, it is important to compare that cost of creep feeding to the realistic "value of added gain."

To calculate the value of added gain, determine the actual per head price of the calf after the added weight gain (due to the creep feed). Then subtract the price per head of the calf if it was sold at the lighter weight (not fed creep feed). Divide the difference in dollars by the amount of added weight. Although 500-pound steer calves may bring $1.80/lb at the market, and a 550 pound steer brings $1.71/lb, the value of added gain is about 80 cents per pound. Therefore the estimated creep feeding cost per pound of added gain must be less than 80 cents for the practice to be projected to be profitable

Different ranching operations will come to different conclusions about the value of creep feeding. In fact, different conclusions could apply to different groups of cows within the same herd. Creep feeding may be more beneficial to calves from thin, young cows and less efficient for calves reared by mature cows that are in better body condition and producing more milk.

—Source: Glenn Selk is an Oklahoma State University Emeritus Extension animal scientist.

Home on the farm

by Anne Kennison

Life on the farm right now is suspended between two busy times: hay feeding and hay making.

Gone is the rush to feed cows before sunset, break water and then return to feed my little minions. Now the cows feed themselves! (That's why I love cows so much.)

And while the cows have been relishing in their spring diets of green grass and sunshine, the husband has been making the rounds tidying up fence. He has been rotating herds and bulls and making plans for the upcoming hay season.

And let me tell you. While it is nice to not have to feed hay, the anticipation for the upcoming hay season is real.

I liken the run-up to the anxiety felt before a big game. You've got to get the fertilizer on at just the right time. Next, you pray like crazy for rain. You pray that the cold leaves when it is supposed to and it doesn't get too hot but just hot enough for the grass to grow. Oh, and then it's the battle of the thistles. Seems like the waiting time while the grass is growing is spent finding thistles, thistles, thistles and spraying, spraying, spraying. And one day you wake up and BOOM!

It is hay time!

You hurry and get the pastures mowed. Now your prayers ring up a different tune: "Please, NO rain." Once the grass cures and is baled: "OK, ready for more rain!"

All of these anxious prayers are shot up continuously along with the ever-present "Please, no breakdowns today."

We are new to cutting our own hay. We had been paying an old-time farmer in our area for years to do it. After he passed away, the husband decided it was time. So we took the leap and purchased some used equipment and have been chugging along ever since.

It is terrifying and gratifying being able (barring equipment malfunctions) to mow when you think it's time without waiting on anybody.

Plus, I have never seen a man as satisfied as my husband after a long, successful day in the hay fields. There is just something about putting up hay, and really farm work in general, that is so satisfying. It's a good tired.

Nope, those famous lazy days of summer don't live on a farm.

At least they don't live around here with all the gardening, baseball and haying going on.

It is not for everybody, of course. But when this life — this life on the farm — is your destiny, no amount of stress will convince you to move to town. That feeling you get after one of those long days gathering up the hay to feed your stock in the winter will overshadow all those anxious moments.

The pendulum is fixin' to catapult us right into those non-lazy days of summer. Right into times of unknown. Will the rain keep coming? Will the baler or the tractor or the rake or the whatever break down? Will we get it all done? Will we have enough hay for the winter?

The questions are as thick as thistles this time of year. But that is always the case. Every season here on the farm is full of possibilities good and bad. But so is life. The key is trust. Trust it will all work out. Trust that when we sling all of those questions up, they do not fall on deaf ears. He picks them up and carries them making our load lighter. We are able to handle the burden of this life and all its unknowns.

That is exactly our plan as we head into the summer. Sling all of our cares onto Him. God will handle the rest.

Here is a family recipe to make while it's still cool enough to heat up the oven. We find this pound cake is excellent when paired with some freshly picked strawberries.

POUND CAKE

3 cups flour
1 T. powder
3/4 tsp. salt
3 cups sugar
1 cup unsalted room-temp butter
1/2 cup room-temp shortening
5 large eggs
1 cup milk

Oven preheated to 350 degrees. Grease bundt pan. Sift dry ingredients except sugar. Blend next three ingredients, adding one egg at a time. Add in dry ingredients alternating with milk. Bake about 55 minutes. Cool 15 minutes before turning onto cooling rack. Enjoy!

Under The Wire

by Gary Hodgson

Calf and kid. Ever notice they southd like they both begin with the same letter? Given my spelling prowess (first spelled that word prowuse), I may have actually interchanged the first letters on both a few times. That's why Sue proofs (profs?) all these stories before you see them.

I believe there is a reason that these two words, calf and kid, sound so similar. When you get right down to basics, they have much in common. I have always said, "Everything I know about people, I learned from a cow." Most of what I know about kids, I learned from watching calves. I only had four kids, but hundreds of calves. It took that many calves to answer my questions about kid behavior.

Life begins basically the same for both: born very cute, cuddly and dependent on Mom. Only real difference comes right here. With cattle, Mom does it all, Dad lays in the willows. Humans feel Dad should participate more than that. Some Dads do a great job of joining in while some tend to be watchers from the willows. In my early years of fatherhood, a couple of dirty diapers sent me to the willows.

As the kids began to grow very quickly, the bull...er... Father's role seems to demand more time in the willows. From there, we begin watching the calves and kids exhibit very similar behavior.

Mom, previously very attentive and protective, puts the kids on the bus for kindergarten where someone else will watch them. A few days into the little calf's life, Mom leaves a bunch of calves with a single cow or two to baby sit while they go off for water and to lick salt.

The next stage is primary school, first through third grade. Human calves make friends, join little groups and play together on the playground while little bovine kids do exactly the same. A couple of grades later, the youngsters of both groups are now self-confident, wandering off to explore without parental supervision. Encouraged by the group's confidence, they wander a bit too far, then notice Mom is farther away than they realized. First one breaks into a run for mommy, quickly followed by the rest.

Around 2 months old, the calves are now "young adults" in their minds. You fill in how old humans are at that age.

Now their self-confidence is very high. "The world has never seen anyone as smart as we are," our quickly grown-up red calves seem to say as they watch us with cocky arrogance. Soon, one, wanting to impress the others, decides to climb through a fence, just to see what's on the other side. The others quickly get bored with his heroics and wander off. Mr. Big Shot discovers he is all alone in a strange place. His reaction? He begins to bawl, loudly. In human words he would be saying, "I want my Mommy!" Sure enough, here comes his mother to coax him back through the fence, give him a snack and take him back to the herd. See the similarities between kids and calves?

The only true difference I have found is, since cattle don't build houses and thus don't have basements, their kids tend to grow up and move on. Doesn't always work out like that for us humans. Kids and calves, it's just in the spelling.

—Gary and Sue Hodgson ranch near Brush, Colorado. Together they team up to produce Livestock News Network, They can be reached at (970) 842-2902 or office@hodgsonmedia.com.

MANAGEMENT MATTERS

Cow-Calf: Adjusted Stocking Rates

Grazing system that is good for steers can boost cow-calf operations, too

Researchers at the Kansas State University Agricultural Research Center have found that a grazing system shown to be beneficial for the performance of steers also has great potential for cow-calf producers.

For several years, beef producers have capitalized on modified, intensive early stocking, a grazing strategy that focuses on double-stocking steers in pastures for the first half of the summer and pulling the heavier steers off the grass later in the grazing season.

John Jaeger, a beef cattle scientist in Hays, said much of the research points to the fact that when steers were managed this way, producers reported a 26 percent increase in pounds of beef produced per acre, and their net returns increased by nearly 19 percent.

So Jaeger, range scientist Keith Harmoney and their research team set out to see if modified, intensive early stocking could similarly benefit cow-calf pairs.

"We've just completed our fourth year of data collection," said Jaeger. The project focused on weaning calves from the cow at an average of 150 days of age, instead of the traditional 200 days. They also increased the early-summer stocking rate of cow-calf pairs to 1.45, compared to the normal 1.00 rate.

The results were astounding.

"The first and most obvious thing is that we continue to see those early-weaned cows being about a half body-condition score better in October compared to conventionally weaned cows," Jaeger said.

And, he adds, "The really good news from all this is that they are carrying that added body condition through the winter, and they still have an advantage at calving. The following May, when they are being turned back out, they are still three-tenths of a body-condition score better than the cows that were conventionally weaned in October."

The bottom line, he notes, is that the research is showing an economic advantage for cow-calf producers who are willing to adjust their stocking rates early in the summer, much like what has been shown for many years with steers.

Jaeger notes that early-weaned calves in the modified, early intensive stocking system "had about a 10-pound, 205-day adjusted weight advantage compared to the season-long stocked calves. And we are getting 1.45 times more calves off the same amount of pasture compared to season-long stocked animals."

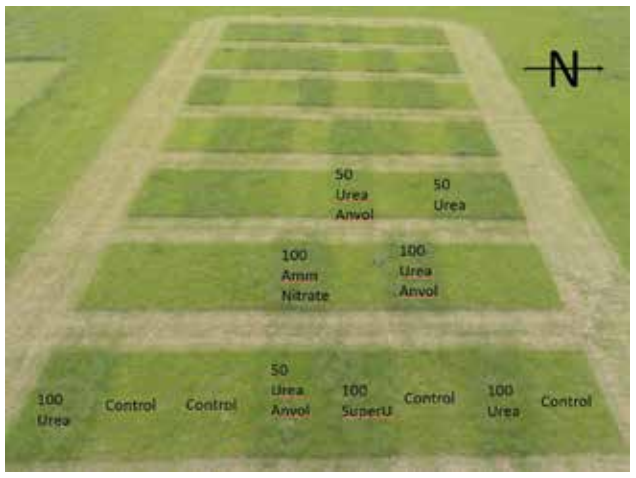
The researchers also noted a benefit in pregnancy rates. Cows in this system had a 10% greater first-service conception rate and a 5% greater rate of conception compared to conventionally weaned cows.

"Perhaps one of the largest benefits of utilizing this system is that there was almost no incidence of bovine respiratory disease in calves weaned in late July and early August, compared to calves weaned at the more traditional time in October," Jaeger said.

He added that the researchers believe that warm, dry days and more consistent temperatures in late July and early August play a significant role in helping avoid the higher rates of bovine respiratory disease normally observed during fall weaning.

Many factors are involved, including weather and the availability of forage, but Jaeger said the research points to an economic opportunity for beef producers.

—Source: Kansas State University Extension release.



This drone photo of the Anvol study at the Southwest Research Center demonstrates the effects of varying spring fertilizer applications on tall fescue forage production during the 2019 growing season.
—*Photo courtesy of the University of Missouri.*

TRENDING NOW

Technology: At Work in the Field

Forage production central to MU's Southwest Research Center

By Rebecca Mettler for Cattlemen's News

It's not uncommon for forage production to take a backseat to high-value crops such as corn and soybeans. However, a productive forage base is a fundamental building block of the beef industry's cow-calf and stocker enterprises and deserves attention.

Producers who invest time, resources, and stay current with new technologies related to forage production could easily add value to an operation's bottom line. Even so, producers are sometimes hesitant to devote more attention to their pastures.

"Producers can be slow to adopt new forage technologies. They don't think they can afford it and maybe they are unsure of the results they will see, " according to Matt Massie, senior research specialist with the University of Missouri Southwest Research Center near Mount Vernon, Missouri.

Forage production and grazing have been long-standing priorities for the Southwest Research Center with a lot of that research hinging on one forage variety in particular. Massie believes that the introduction of Kentucky 31 tall fescue into southwest Missouri in the mid-1900s ultimately led to the high concentration of beef cattle that the area of the state is now known for.

"We are in cattle country because of tall fescue. It's a blessing and a curse at the same time because of the fungus that lives inside the plant."

The persistence, quality (if harvested at the right time) and yield of toxic endophyte-infected tall fescue is desirable, but producers are often plagued with decreased animal performance and other fescue toxicosis symptoms due to high levels of toxins produced by the endophyte fungus.

Enter novel endophyte fescue varieties, of which the Southwest Research Center has a demonstration plot of several varieties. The plot is featured each year at the Novel Tall Fescue Renovation Workshop through the Alliance for Grassland Renewal part-

CONTINUED ON NEXT PAGE

TECHNOLOGY: AT WORK IN THE FIELD
FROM PREVIOUS PAGE

nership. The sixth annual workshop was held at the center in March 2019.

“In my opinion, the best forage technology available to producers is still novel endophyte fescue,” Massie said.

The percentage of producers who have switched over to novel endophyte fescue varieties is small, so there’s room for improvement on adoption rates, according to Massie.

Though establishing a stand of novel endophyte fescue is a sizable investment, it can improve reproductive efficiency in females and calves can experience a 1/2- or 1-lb. boost in average daily gain.

Massie said, “What else could you do to put that kind of weight on?”

If cattle producers aren’t able to renovate pastures to novel endophyte varieties, Massie suggests they try measures to dilute the amount of endophyte toxins ingested by the cattle.

“Add clover into the pastures, use warm season grasses, supplement with corn gluten, supplement with alfalfa balage, or any other non-toxic feed resource available to lessen the dose of toxic fescue.”

Research at the Southwest Research Center has often focused on mitigating the effects of fescue toxicosis, including two current projects on the topic. Both studies work with suppressing fescue seed head production. Since the majority of endophyte toxins are found in the seed head, a reduction in the number of seed heads leads to less fescue toxicosis," he said.

Chaparral™, an herbicide from Corteva Agriscience, is currently on test on at the Southwest Research Center. The product has been on the market for several years and can suppress fescue seed head production if applied a short window of time (mid-April if applying in the Four-States area). The center will evaluate variables such as stocker calf gain, forage yield, toxicity levels and the number of seed heads when comparing control groups with Chaparral-applied paddocks, along with varying levels of fertilizer applications to some of the Chaparral applied paddocks.

The center has also set aside an area of land to study the control of seed head production with timed burning versus mowing during March or April. The study, in its preliminary stages, is looking to record yield, production of seed heads, forage quality and toxicity.

Another ongoing research project involves the comparison of Anvol, a new nitrogen stabilizer product by Koch Agronomic Services compared to SuperU, ammonium nitrate, and urea alone at 50- and 100-pound levels for both spring and fall applications to tall fescue.

A nitrogen stabilizer can be added to urea fertilizer to decrease the amount of volatilization that can occur during specific times of the year. This is particularly important during late-summer/early-fall applied fertilizer when stockpiling fescue for winter grazing. Since urea is a cheaper product on a per unit basis compared to ammonium nitrate, provided volatilization doesn’t occur, this study has the potential to impact farmers and ranchers’ bottom lines.

As an endnote, Massie urges producers to not forget the basics of soil testing for lime and fertilizer application to increase forage production. There’s the potential for huge gains in forage production and quality when lime and fertilizer are applied according to soil test recommendations.

TRENDING NOW

Forage Production Optimized

Southwest Center research to study seedhead suppression

The University of Missouri Southwest Research Center will begin a grazing experiment this spring under the direction of Eric Bailey. This research aims to identify chemical application strategies to optimize forage production and reduce ergot alkaloid concentrations in Kentucky 31 tall fescue.

Nitrogen fertilizer is commonly applied to tall fescue in the spring and/or fall to increase forage production and subsequently stocking rate. Producers might be hesitant to apply high levels of nitrogen in the spring as it has been shown to increase ergot alkaloid concentrations by a considerable amount.

However, increases in ergot alkaloids are not equal for all plant parts. Alkaloids are found in significantly higher concentrations in the stem and seedhead portions of the plant compared to leaf blades. When fertilized, concentrations increased in these two portions by twice the amount of leaf blades. Knowing this, the goal of the study was to play with the plant physiology to reduce alkaloid production in response to nitrogen fertilization.

Chaparral™ effectively suppresses seedhead production in tall fescue. The plant is kept in a vegetative state going into the summer months when forage quality usually drops off and is less than desired. The absence of stems and seedheads also means lower concentrations of alkaloids in the forage consumed. Cattle grazing seedhead-suppressed pastures have reported forage intake increases of 50% and ADG increases of nearly 40% compared to untreated pastures. A slight depression in forage yield can be seen, but the response of tall fescue to Chaparral and increased nitrogen fertilization is unknown. Increased spring nitrogen fertilizer in combination with chemical seedhead suppression could provide additional forage yield without a corresponding increase in alkaloid concentrations for tall fescue.

The study will contain paddocks assigned to one of four treatments: Chaparral with either 0, 60 or 120 lbs. of nitrogen per acre or a negative control with no fertilizer or Chaparral. Nitrogen was applied in early March and the Chaparral in early April. It is recommended that Chaparral be applied from three weeks before seedhead emergence to boot stage at 2 ounces/acre in order to attain optimum seedhead suppression. Steers weighing 600 pounds will graze the paddocks from mid-April to mid-July. We will measure steer performance, ergot alkaloid concentrations, seedhead production, forge yield and quality in response to the treatments.

What we hope to discover is if using both nitrogen fertilizer and metsulfuron will negate some of the unfavorable effects of these chemicals while retaining the positive effects. The findings of this research could result in the development of new management practices that improve beef production. Increased spring nitrogen fertilization without the negative impact of increased alkaloids would mean more forage, improved forage quality, less fescue toxicosis and increased animal performance.

Disclaimer: Reference to any specific commercial product or corporation name is for the information and convenience of the public and does not constitute endorsement, recommendation or favoring by the University of Missouri. Research with branded products is being conducted without financial support from the entity marketing the product.

--Source: University of Missouri Southwest Center.

How OSHA Impacts Farms

A quick refresher on OSHA rules

Why was OSHA created?

According to OSHA.gov, OSHA started with the Occupational Safety and Health Act of 1970. Congress created the Occupational Safety and Health Administration (OSHA) to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education and assistance.

OSHA covers most private sector employers and workers in all 50 states, the District of Columbia and other U.S. jurisdictions either directly through Federal OSHA or through an OSHA-approved state plan.

Jim Ingle, owner and founder of HR Professional Solutions, LLC, based in Monett, Missouri, is an authorized OSHA Trainer and provides his services for Specialty Risk Insurance and its clients. Ingle has 48 years of experience with OSHA and safety regulations. He also holds a senior professional in human resources certification and has been human resource certified for 27 years. He has been through more than 25 on-site OSHA inspections in addition to numerous OSHA complaint inspections via phone. He is highly regarded as an expert in the field of human resource management. Ingle weighs in on the key things that agricultural workers should know, backed by his source, OSHA.gov.

Jim Ingle

Are agricultural operations exempt from OSHA?

OSHA has standards that cover agricultural operations, information on solutions to common agricultural hazards, and other resources such as publications to help employers and employees create and maintain safe and healthy work environments.

Agriculture ranks among the most hazardous industries. Farmers are at very high risk for fatal and nonfatal injuries. Farming is also one of the few industries in which family members (who often share the work and live on the premises) are also at risk for fatal and nonfatal injuries.

OSHA can cite any farm for any violations under the General Duty Clause, Section 5(a)(1) of the Occupational Safety and Health Act. Employers are required to provide their employees with a place of employment that "is free from recognizable hazards that are causing or likely to cause death or serious harm to employees."

Hazards and controls

Farmworkers are exposed to numerous safety, health, environmental, biological and respiratory hazards. These include hazards related to grain bins and silos, hazard communication of chemicals, noise, musculoskeletal injuries, heat and others. Learn about controls and solutions related to these and other hazards.

- Animal-Acquired Infections and Related Hazards
- Grain Bins and Silos
- Hazardous Equipment and Machinery
- Heat
- Ladders and Falls
- Musculoskeletal Injuries
- Noise
- Pesticides and Other Chemicals
- Respiratory Distress
- Unsanitary Conditions
- Vehicle Hazards
- Youth in Agriculture

Why Or when would OSHA come to an ag operation?

- Worker Death (Must call OSHA within eight hours of death)
- Amputation (Must call OSHA within 24 hours of occurrence)
- Loss of Eye (Must call OSHA within 24 hours of occurrence)
- Hospitalization (Must call OSHA within 24 hours of occurrence)
- Worker Complaint (OSHA can show up at any time to investigate the complaint)

Costly Penalties

Below are the maximum penalty amounts adjusted for inflation as of Jan. 23, 2019.

For more information on OSHA, visit OSHA.gov/agriculture or contact your workers' compensation insurance carrier.

Violation Type	Penalty
Serious	$13,260 per violation
Other Than Serious	
Posting Requirements	
Failure to Abate	$13,260 per day beyond the abatement date
Willfil or Repeated	$132,598 per violation

PASTURE PLANNING

Connecting the Unconnected

Boosting broadband internet access for a stronger rural Missouri

By Rebecca Mettler for Cattlemen's News

When the United States Department of Agriculture reports that something has the potential economic impact of $47 billion, the agriculture community tends to sit up and listen. This is the exact figure that the agency recently released regarding the impact of deploying broadband internet to all farms and ranches throughout the United States.

Fortunately for Missouri, providing rural areas of the state with better access to high-speed Internet has been a priority of Missouri Director of Agriculture Chris Chinn since she was appointed to the office in 2017.

"Living in rural Missouri and experiencing firsthand the challenges we have conducting business without high-speed internet really drove me to continue fighting for this issue," Chinn said.

Missouri is currently ranked 42nd in the nation for broadband connectivity. Roughly 20 percent of Missouri's population doesn't have access to high-speed Internet. While the percentage itself might not seem too concerning, 61% of the 1.257 million Missourians without internet access live in rural Missouri.

Specific to southern Missouri, several coverage gaps exist, especially in the area around the Mark Twain National Forest, which can be attributed to rough terrain that prevents fiber from being laid.

"We are excited that rural electric cooperatives in the southern part of the state are interested in trying to find a solution to this challenge," Chinn said. "While they may be one of the biggest areas with gaps, they may be one of the first ones to see those gaps filled in now."

Chinn reports a goal of 90% connectivity by 2025, first by focusing on unserved areas, and then broadening the work to include underserved areas with slower broadband speeds.

Unfortunately, it's expensive to lay fiber optic cable needed for broadband access; Chinn has been told the cost ranges from $32,000 to $35,000 per mile. The expense is a prominent factor contributing to the lack of Internet connectivity throughout the U.S.

In early May 2019, $5 million was appropriated to the Missouri Rural Broadband Development Fund within the approved for the 2020 fiscal year budget available starting July 1, 2019. The fund is designed for a 50% match from state funds and a 50% match from federal funds. Funding will be administered through the Missouri Broadband Development Office, which is a joint partnership with the Missouri Department of Economic Development and the Missouri Department of Agriculture.

"This is a start, and it's a big project," Chinn stated. "They are going to have to get some maps laid out and determine how to invest that money. With $5 million in our first year, it's going to help us give us more (internet) connections than we have now."

Missouri also received $254 million of federal funds from the Federal Communications Commission Connect America Funds, Phase II, which is enough for an estimated 95,000 new connections to homes and businesses.

"What we are doing on the state side combined with the federal level will have a huge impact," she said.

Lack of internet access to rural Missouri keeps our state's farmers from using advanced technologies to more efficiently manage their operations. Precision agriculture is just one area where Missouri's farmers could use technology on a more routine basis if internet access were more easily obtained. Farmers attempting to upload soil maps and yield maps may not have internet speeds fast enough to efficiently complete the process, so they end up driving a couple of hours to meet the agronomist. This is just one example where slow or no internet is reducing the speed in which Missouri agriculture can operate.

"The longer it takes for us to have access to high-speed internet, the more of a competitive disadvantage our farmers are facing compared to farmers in other states who have it," Chinn said.

Rural communities are also at a disadvantage when trying to attract new business or grow existing businesses. High connectivity rates would also change the way doctors provide rural health care. Currently, it's hard to find doctors and nurse practitioners that travel to rural areas, which places a strain on rural community members.

"The ability to add telemedicine in our rural communities would cut down on travel time and have a huge impact on the community as a whole," Chinn said.

Bottom line, if Missouri wants the next generation of agriculturalists to come back to the farm and rural communities to have the opportunity to survive and thrive, it's time for increased access to high-speed, reliable internet.

"Connectivity is an indicator of the quality of life and is very important to get the next generation back home to our rural communities," Chinn said.

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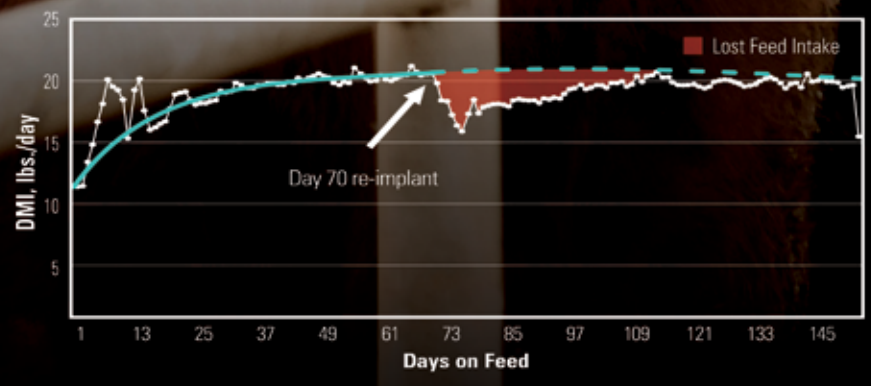

*Feed intake data from cattle re-implanted with Revalor®-S on day 70.

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1. Study Number HR-2S: Evaluation of Implants Containing Reduced-Dose Combinations of Trenbolone Acetate and Estradiol on Performance and Carcass Merit of Finishing Steers.

MERCK Animal Health

From Cell Phones to Drones

Putting drone technology to the test: Is it for you?

Compiled by Joann Pipkin, Editor

Without question, technology changes the face of agriculture every single day. In the last 30 years, the cellular phone alone has brought the industry time and money savings not to mention increased communication capabilities.

How technology is applied on the farm and ranch can help you stay on the cutting edge of beef production — if you choose to explore the opportunities presented.

We recently caught up with University of Missouri Southwest Research Center Superintendant David Cope to find out how drone technology is changing the face of research projects at the facility and in production agriculture on his own farm.

CN: ***How has drone technology affected the Southwest Center?***

Cope: Using a drone has allowed us to expand the functions we do at the Southwest Center. For example, we now can take inexpensive aerial photos of our research activities. We can also email photos in real time of the research work conducted at the center, which decreases transportation costs because researchers don't have to travel to see the research as often. Drones also allow us to distinctly show differences in various fertilizer application rates in plots on a research trial.

We have greatly increased the center's education and outreach efforts because of drone technology. We use photos and video to document research projects, giving the researcher, as well as the Southwest Center, more visual information to use in presentations, on social media and in other outlets.

As we continue the artificial insemination and genomics research on our cowherd, documentation becomes very important. You can give the numbers and weights of calves born in the future, but a picture is worth a thousand words. We are taking pictures of our cow herd, and calves to show how they will change over time with this research program.

In the construction of our new facility, we have been able to keep the public more informed through social media of the building progress. In documenting this through drone video and pictures, we've been able to send pictures to campus facilities personnel of the progress, reducing the need for them to come to the center as often and decreasing transportation costs. We have already used pictures taken last year during the groundwork phase to find exact locations of buried electric and water lines.

We also plan to create a video and picture time-lapse presentation of the building construction at the ribbon cutting ceremony. These videos and pictures are taken with the use of programmed flying routes to get approximately the same videos and pictures each time.

CN: ***How has drone technology changed your thought process on daily work?***

Cope: Throughout the last several years, drone pictures and videos have helped us on multiple occasions. For example, we can decide placement of temporary fencing. The technology also helps us document water and electric lines as well as current research projects. We are also able to gather pictures of storm damage, car accidents, etc. We can then use this information in the future when needed.

Since this is my personal drone, I have also used it in many places away from the center. I've driven cattle with it, found lost cattle in another pasture, checked on calving cows and so much more. It has really proven to be a useful tool in a variety of situations.

CN: ***How can drone technology help producers with their crops and cattle operations?***

Cope: Today, we're basically at the beginning of drone use in agriculture. More and more people are using drones every day. Some drones are for crop scouting with a variety of infrared camera options, saving countless hours of walking crops. The ability to document what is happening right now to be used as a resource later is a game changer. Growing up, I have heard countless times, "I wish I had a picture of this" or "I wish I could fly over there and look at that." Now with a drone, you can. Nothing beats boots on the ground, but if you want to quickly count, check cattle or find cattle, you can cover a lot of country relatively quickly with a drone. Checking fences after storm damage, or evaluating pond water are also potential uses. Livestock producers can do all this and also drive cattle if the need arises.

CN: ***What are some advantages and disadvantages of using drone technology?***

Cope: Drone advantages:

- Cheaper to buy, maintain and operate than an airplane or helicopter to get photos and videos.
- Ability to get to places aircraft cannot go, or go safely.
- Reduces risk of worker injury by getting to places that could expose workers to harm, such as heights, places with gas or radioactive problems, etc.
- Drones can document from a perspective you would not normally see.

Disadvantages of drone technology:

- Drones can and do crash, which could harm people and assets, and potentially lead to costly fixes.
- Privacy is certainly an issue with drones. They could be used in ways that could jeopardize the rights of others.

A drone is a tool in the toolbox. I wouldn't rely on a drone solely for certain chores. For instance, nothing replaces boots on the ground when it comes to checking cattle. You can't see every tiny detail on your phone or iPad screen when you're flying. Many times, I wish I could have taken a picture of research plots or animals at a different angle, or would have taken a closer picture or video to see how a cow was getting along. You can do a more complete assessment of the situation if you're there in the truck, on the horse, or walking.

CN: *Is drone technology worth the investment?*

Cope: I would say this depends on what you want to do with it. Many good basic drones sell for $300 to $400, and the cost is falling as technology gets better. For a 4k camera and a newer-type drone that may have obstacle avoidance capabilities, the cost increases. Need and usage requirements would dictate the type and cost of the potential drone.

However, a drone can save time and money by doing something faster and farther than you could otherwise. In many cases it will go somewhere you cannot. This savings should be factored into whether a drone's initial sticker price is too high. Sometimes when you need it, you need it now. Sometimes, owning a drone can give some peace of mind to accomplish a certain task.

CN: *How can producers use drones to add value to their operations?*

Cope: The more you use a drone, the more uses you can find for one. The uses listed above are just scratching the surface of what producers will use drones for in the future. As camera resolution gets better and as they are able to fly faster, farther, longer, I see it becoming a game changer like the ATV was. You can get there in a hurry, see what you need to see, and get back home. Time becomes something that will be saved. In looking at what can be gained from this technology, make sure to factor in other items such as time and fuel.

CN: *What's your advice to folks in the market for a drone?*

Cope: Again, it goes back to application. What are you going to use it for? Do you need a high-resolution camera? Search the internet for the potential drone applications you are considering. YouTube has many great drone videos that will get you thinking about potential uses. Check out local stores to see one in person, and visit with those there to get a feel for what you might like and not like in a certain drone model.

When you do get one, buy extra batteries. The more you use it, the more uses you will have, and having extra batteries to change out will be worth the initial battery cost. Also, buy an extra set of propellers. If you hit anything with the propellers, and you will at some point, you'll be glad for the extra set. Buy several high-capacity, high-recording-speed memory cards that you can change out if needed during battery changes. High-resolution video takes up a LOT of space on a card.

Another thing to keep in mind is if you want to keep the footage and pictures. Over time, this will add up. I have several external hard drives that I use in addition to my computer hard drive to keep drone data. Most won't probably take the next step, but if you are going to produce video presentations, a high-speed computer with plenty of RAM is needed, along with a video production program of some kind. These are all things to think about. If you want to do this commercially, a remote pilot's license from the FAA needs to be looked at. Going through the study process and taking the test will help all those who fly drones, not just those who want to make a business out of it. I found it very helpful.

CN: *How user-friendly is the technology?*

Cope: For the most part, it is user-friendly to own and operate a drone. Avoid the very cheap drones. They won't last. Look at ones that use GPS and will stay steady in the air when you are flying and let off the controls. These are pretty stable and fairly easy to fly. Make sure to read the manual and understand preflight checks. The first time I flew mine, I got it out and didn't read the book, and it crashed right off the bat because it needed the compass calibrated and was in the wrong setting for takeoff.

If you are fairly proficient with technology, a drone isn't hard to learn. If you're getting a drone, you probably have a smart phone to fly it with, and a computer to look at the video and pictures you will take. Take some time to search YouTube about your specific model. Find out how to fly before you do to reduce the learning curve and possible mistakes. A wreck will happen eventually, whether by a tree or something else, and increasing your knowledge beforehand will hopefully reduce the severity. Know where you can fly and how high you can fly. Right now the legal limit for height is at 400 feet, with a few exceptions. If you are around larger airports or other restricted areas, there are limits on where you can fly. Some drones, such as DJI, come with "geofencing" software that helps to keep you from going places you cannot legally go.

Line-of-sight limitations are in place regarding flying around buildings, so keep that in mind. Also, the farther you fly the drone away from the controller, the less the drone can keep in contact with the controller. Most drones are designed to return to the takeoff point if they lose contact with the controller. I've had mine over a mile driving cattle and had no problems controlling it. Other times in hills and through brush, it hasn't been near that far, lost signal and came back to me.

Drones are a great help in many ways. They are fun to fly and can provide you with excellent pictures and video to share. I've taken many great pictures and videos for research and for fun that I would not have been able to get otherwise. They are great tools, and I am excited to see what the future holds for using drones in agriculture.

TRENDING NOW

USDA Releases Agriculture Census

Farm numbers decline, beef cow operations increase

By Lisa Henderson for Cattlemen's News

The number of farmers is declining in America, and their average age is creeping higher. That might not be surprising, but it was documented in the release of the 2017 Census of Agriculture, conducted every five years by the USDA's National Agricultural Statistics Service (NASS). The 2017 census found the number of farms in the U.S. declined by 3% from 2012 to 2017. Since the 1997 census, the number of farms in the U.S. has declined 7.8%.

According to the NASS, the total number of farms on Dec. 31, 2017, was 2,042,220, which was 67,110 fewer than reported in the 2012 Census of Agriculture. Overall, USDA said the trend of more of the largest and smallest operations and fewer middle-sized farms continues.

While the number of farms declines, the average age of farmers was reported at 58.3 years. Over the past 30 years, the average age of U.S. farmers has grown by nearly eight years, up from 50.5 years in the 1987 Census of Agriculture.

In contrast to the declining number of farmers, the number of cow-calf operations increased slightly in the five years from 2012 to 2017. NASS reported 729,046 operations with beef cows in 2017, which is about 36% of total U.S. farms. The increase in number of operations with beef cows was 1,140 when compared to the 2012 Census of Agriculture.

With 31.722 million beef cows in 2017, the average herd size of all U.S. producers was 43.5 cows.

While the number of beef cow operations inched higher, the overall number of operations with cattle and calves was reported down 3.3%. That number of operations, 882,692, includes dairies and stocker operations that do not maintain an inventory of beef cows.

Despite the slight increase in cow-calf operations in 2017, the overall long-term trend is fewer cow operators. Between 1997 and 2017, approximately 10% of cow-calf operations left the business which equals 75,549 fewer operations, or a loss of about 3,777 operations annually.

U.S. feedlots with more than 500 cattle on feed increased in numbers 12% from 2012 to 2017, while during the same period feedlots with fewer than 500 head on feed declined in numbers by 5%. NASS counted 25,776 feedlots with at least one animal, which is 3% fewer than the 26,586 feedlots counted in the 2012 Census. The 2017 Census found 15,025,052 cattle on feed, 4% more than in 2012.

The number of America's largest cattle feedlots has gradually increased. The 2017 Census found 700 operations with 2,500 head or more on feed, combining for 10.6 million head, or 71% of the total on feed. Seven more feedlots fell into this category than five years earlier.

Feedlots with 1,000 to 2,499 cattle on feed totaled 645, or 141 more than five years earlier. Those feedlots accounted for 973,247 cattle on feed, or 6% of the total. Combined, the two largest feedlot categories (1,000 head and greater) account for 77% of the cattle on feed.

The top three categories of feedlots – those with 500 head or more – totaled 3,171 lots, accounting for 12.87 million cattle on feed (86%).

Both farms and beef operations are growing in size. NASS found the average size of farms in 2017 was 441 acres, up slightly from 434 acres in 2012. However, the total number of acres in farms in 2017 was down 1.5%, totaling slightly more than 900 million acres.

The number of farms with cropland declined 5% from 2012 to 2017, yet the number of acres farmed in crops increased 1.7% to 396.4 million acres.

While NASS found the overall number of farmers declined, the declines occurred among mid-sized farms. Both the smallest sized farms (less than 9 acres) and the largest farms (2,000 acres or more), showed increases. Farms with fewer than 9 acres (273,325 farms) increased by 18% since the 2012 census, and farms with more than 2,000 acres (85,127) increased 3.5%.

For specific crops, NASS reported a decline of nearly 13% in the number of farms growing corn, an 11% decline in the number of cotton farms, a 25% decline in farms growing sorghum for grain, and a 31% decline in the number of farms raising winter wheat for grain.

Among livestock operations, the most significant decline in number of farms was among dairies. From 2012 to 2017, NASS counted a 15% decline in operations, leaving a total of 54,599 farms with milk cows in the U.S.

Contrasting with the decline in dairy farms, both beef cattle and hog farms saw increases in total farms in the 2017 NASS numbers. U.S. farms with hogs and pigs totaled 66,439 in 2017, a 5% increase. U.S. farms with laying hens saw a 15% increase to 232,500. Farms with broilers and other type meat chickens sold saw a slight decline to 32,751.

TRENDING NOW

By the Numbers

A look at what the Ag Census says about the 4-state area

By Lisa Henderson for Cattlemen's News

Nineteen percent of America's cow-calf operations are in the 4-state area of Missouri, Kansas, Arkansas and Oklahoma. That's according to the latest Census of Agriculture data released by USDA's National Agricultural Statistics Service (NASS).

Overall, the Ag Census counted 729,046 U.S. operations with beef cows. The state with the most beef cow operations is Texas, with 134,250, followed by Missouri at 48,122. With 4.57 million beef cows, the average herd size in Texas was 34 cows. In Missouri, with 2.16 million beef cows, the average herd size was 45 cows. The national average was 43.5 cows.

In the four-state region, Missouri was followed by Oklahoma with 46,080 beef cow operations and 2.13 million beef cows for an average herd size of 46 cows. Kansas reported 23,682 beef cow operations and 1.5 million beef cows, for an average herd size of 63 cows. Arkansas, with 23,036 operations and 927,278 beef cows, recorded an average herd size of 40 cows.

While Missouri has the most beef cows in the 4-state region, Kansas and Oklahoma have more total cattle. The total cattle and calves number includes dairy cattle, stockers, and cattle on feed.

For total cattle numbers: Kansas, 6,278,772; Oklahoma, 5,090,919; Missouri, 4,060,220; and Arkansas, 1,759,375.

NASS counted 761 feedlots in Kansas with 2.445 million cattle on feed. Oklahoma, 110 feedlots, 329,926 head on feed. Missouri, 788 feedlots, 78,336 cattle on feed.

NASS reported a total of 2.04 million farms and ranches in the U.S., down 3.2% from 2012, and the average farm size 441 acres. Other national highlights:

The 273,000 smallest (1-9 acres) farms make up 0.1 percent of all farmland while the 85,127 largest (2,000 or more acres) farms make up 58 percent of farmland.

Just 105,453 farms produced 75 percent of all sales in 2017, down from 119,908 in 2012.

Of the 2.04 million farms and ranches, the 76,865 making $1 million or more in 2017 represent just over 2/3 of the $389 billion in total value of production while the 1.56 million operations making under $50,000 represent just 2.9 percent.

Farm expenses are $326 billion with feed, livestock purchased, hired labor, fertilizer and cash rents topping the list of farm expenses in 2017.

Average farm income is $43,053. A total of 43.6 percent of farms had positive net cash farm income in 2017.

Ninety-six percent of farms and ranches are family owned.

The average age of all farmers is 57.5, up 1.2 years from 2012.

The number of producers who have served in the military is 370,619, or 11 percent of all. They are older than the average at 67.9.

There are 321,261 young producers age 35 or less on 240,141 farms. Farms with young producers making decisions tend to be larger than average in both acres and sales.

More than any other age group, young producers make decisions regarding livestock, though the difference is slight.

One in four producers is a beginning farmer with 10 or fewer years of experience and an average age of 46.3. Farms with new or beginning producers making decisions tend to be smaller than average in both acres and value of production.

Thirty-six percent of all producers are female and 56 percent of all farms have at least one female decision maker. Farms with female producers making decisions tend to be smaller than average in both acres and value of production.

Female producers are most heavily engaged in the day-to-day decisions along with record keeping and financial management.

In the 4-state area, Missouri has the most farmers/ranchers with 95,320. Oklahoma is second with 78,531; Kansas with 58,569; and Arkansas with 42,625.

Kansas has the most land in agricultural production with 45.8 million acres. Oklahoma is next with 34.2 million acres; Missouri with 28 million acres; and Arkansas with 13.9 million acres in production.

Kansas also leads in market value of agricultural production with $18.8 billion. Missouri is next with $10.5 billion; Arkansas at $9.65 billion; and Oklahoma with $7.5 billion.

Top 5 Beef Cow Counties In The 4-State Region

Missouri	# Cows	Oklahoma	# Cows
Polk	56,448	Caddo	51,265
Lawrence	52,362	Craig	46,453
Texas	48,991	Muskogee	45,312
Barry	48,103	Bryan	43,648
Newton	47,865	Lincoln	41,105
Arkansas	**# Cows**	**Kansas**	**# Cows**
Benton	48,583	Labette	31,448
Madison	37,254	Cowley	28,610
Boone	36,993	Washington	27,131
Hempstead	31,997	Reno	26,107
White	26,303	Pottawatomie	25,982

More with Less

Students learn how today's farmers embrace technology to benefit all

Today's food story is a complex one. The National Cattlemen's Beef Board says it well, "Much has changed since the days of cowboys, cattle drives and the Old West. Today, it's more about drones, apps and computers."

Most of our younger population is in tune with those terms: drones, apps, computers. According to a CNN study, about half of U.S. children ages 10 to 12 own a smart phone. In a society where technology is king, agriculture's application of newer methods is often misunderstood.

It is a priority of Missouri Farmers Care's Agriculture Education on the Move™ (AEOTM) program to highlight the importance of modern practices and how technology allows farm families to do more with fewer resources. AEOTM is a proactive, educational effort that brings passionate, trained educators to the classroom. Students learn about crops, livestock, soil and water conservation, nutrition and careers in agriculture.

During crop, livestock, career and conservation units, students learn about precision agriculture — how technology allows us to apply less inputs, such as pesticides and herbicides. By illustrating the results of efficiency, students can begin to understand how we harness technology to create better outcomes for our land, animals and consumers.

Virtual farm tours allow students to see these practices put into place on modern farms. In livestock units, students learn about advanced medicine, nutrition and feed. Computer systems and equipment utilized in indoor housing operations highlight temperature control, warning systems and comfort level of animals. The career unit sheds light on the careers associated with agriculture technology and shares specifics about jobs that play a role in getting our hamburger and milk to the table.

"We cannot get all the students to a farm, so this is a way to bring the farm to them," said Luella Gregory, AEOTM program director. "Nothing can replace the visual learning around a virtual tour.

"During our beef and dairy videos, students learn about smart phone devices that track a cow's daily step, overall mobility and better equip veterinarians to treat a sick animal. In four to five minutes, students learn how technology plays a positive role on all levels. It also walks students through the then and now, how far we have come in agriculture."

Educators impress upon students that while the agriculture community continues to adapt to new changes, farm family values and love for the land remains the same. Participating classrooms receive 10-weeks of STEM-focused, agriculture science and education. Curriculum meets classroom objectives. A hands-on component provides a fun and interactive way of learning. Students can make bread, corn and soybean plastic, butter, feed rations, soil profiles and more.

Agriculture Education on the Move™ is an educational effort through Missouri Farmers Care, funded partially by Missouri soybean farmers and Missouri beef producers and their checkoffs. Missouri Farmers Care implements activities to promote the continued growth of Missouri agriculture and rural communities through coordinated communication, education and advocacy. Visit www.MoFarmersCare.com for more information.

AEOTM summer intern Jordan Volkmann shares insight on soybean uses and how technology helps turn soybeans into livestock feed and everyday products, like cosmetics, plastic, ink and more.

AEOTM Educator Savannah Hinkle highlights the parts of a combine and how today's equipment and technology allow us to do more with fewer resources.

TRENDING NOW

SMS Heifer Sale: Hot and Cold

Sale average not reflected in sale tone

Consignors to the 40th Missouri, Show-Me-Select fall calving bred heifer sale at Joplin Regional Stockyards on May 17 found two extremes on the results. The overall average price of $1,717 on 240 heifers was about what they expected. However, the average didn't really reflect the tone of the sale from beginning to end.

Recent SMS sales at the Carthage, Missouri, location had found strong bidding on red heifers, especially those with genomic data on them. The May 17 sale apparently did not have many bidders looking for reds, and they really jumped on the black and black-white faced offering. Thus, the hot and cold headline.

The top five consignors had 125 heifers, black and black baldies, average $1,998 per head. The other nine consignors had 115 head, mostly red, red white-faced, whites and yellows average $1,413, a $585 spread.

Besides color, another contrast was the size of the heifers. The top-selling heifer groups averaged between 1,075 and 1,157 pounds. The other groups ranged from 871 to 1,071 pounds. Even though buyers say their cow size is larger than desired, the SMS buyers still bid up the bigger, fleshier heifers. The majority of heifers at this sale were six or better on body condition score. The mature weight on the bigger heifers will end up between 1,300 and 1,400 pounds.

In addition to color, type of breeding, artificial insemination (AI) or natural service played a big part in bid price. The 117 head of AI heifers averaged $1,820. The 123 heifers bred with natural service averaged $1,620. Buyers like the AI-bred heifers because they calve in a narrower window and they conceived on the first AI service. Research shows this to be a pattern during their production life.

The top price for the heifers in the 85 minute sale wasn't achieved until the last lot of five, black baldy, AI-bred heifers, consigned by John Wheeler, Marionville, Missouri, sold for $2,250 on a bid from Joel Butler, Republic, Missouri. Wheeler's 47 head also had the top average price for the evening at $2,126. He has consigned to 30 SMS sales at JRS.

Close behind on the average was Don Hounschell, Stark City, Missouri. He sold eight heifers for an average of $2,118. This was his fifth consignment to the value-added sale. Third-high-seller was Kathy Wheeler, John's wife, at an average of $1,989 on 32 head. Fourth high was Marvin Phipps, Cassville, Missouri with 34 head at an $1,844 average.

The volume buyer was Alan Loehr, Seneca, Missouri, with 39 head bought for an average of $1,994. This was his first time to purchase SMS heifers. Second high volume buyer was Joel Butler with 22 heifers averaging $1,984. A repeat buyer was Louis Ahlemeyer, Sedalia, Missouri. He bought 18 head at a $1,903 average. Of the 27 buyers, 14 were repeat purchasers accounting for 122 head.

The auctioneer was Bailey Moore of JRS. The SMS program is sponsored by Missouri Show-Me-Select Replacement Heifers Inc., the Southwest Missouri Beef Cattle Improvement Association, University of Missouri Extension, Missouri Cattlemen's Association and the Missouri Department of Agriculture. Adding interest to the sale on Friday was the drawing for a Dew Eze cake feeder. Free pie was also an added feature that's become a regular bonus from FCS Financial, Joplin.

TRENDING NOW

Training Tomorrow's Cattlemen, Cattlewomen

MSU's Darr College of Agriculture adds ranch management graduate certificate program

Article and Photo by Macey Hurst for Cattlemen's News

A rapidly growing part of the Southwest Missouri community, Missouri State University's Darr College of Agriculture continues to offer new opportunities for its students. Educational expansions allow students to enter the agriculture workforce with the knowledge and experience to be effective in their fields.

The most recently added curriculum is no different. Dr. Phillip Lancaster, assistant professor and program director, gives insight into the new ranch management graduate certification.

"I think the graduate certificate in ranch management is a unique program that can be beneficial to people already working in the industry that want to gain further knowledge in necessary subject areas or people who already completed a bachelor's in animal science and want to set themselves apart in the job market," Lancaster explained.

With a number of students graduating from the college's animal science department each year, the program offers them the opportunity to continue their education. They will take classes covering forages and feeds, cow-calf and stocker cattle production, nutrition and reproduction, and advanced farm business management, among others. In addition, those accepted into the program must complete an internship with the university's Journagan Ranch or a similar operation where they will work alongside the ranch manager as a manager-in-training.

Lancaster said students will learn to think outside the box regarding livestock management and ranch profitability and ready them for successful careers.

"The most important aspect is the relationship with a manager from a working ranch that will provide the student with real-world perspective," Lancaster said. "This will give them a different kind of educational experience. Hopefully, as the program grows in recognition, having the credentials from MSU will help students garner more ranch management positions and be successful in those positions."

That being said, Lancaster encourages students who are interested in livestock production to look into the program. He said students wanting to work in livestock operations including animal feeds or animal pharmaceuticals could also benefit from the minor in ranch management program.

To enroll in the minor program, a student must be accepted as an undergraduate to MSU. To qualify for the graduate certificate, the student must be accepted into the graduate college at MSU. Both program requirements rely on the student's willingness to develop a relationship with a working ranch manager.

Lancaster said the overall mission of the program is simple. First, they hope to provide better skill sets in all necessary areas to students interested in managing livestock operations. Second, they plan to help these students stand above competitors when applying for positions in the field.

As program director, Lancaster has high hopes.

"I think and hope that this program will help the College of Ag continue to grow in student numbers and ag industry supporters," he said. "I think this program will help the ag industry see that MSU ag is interested in training students to enter production agriculture, and that MSU becomes recognized as the university to attend for those students wanting to continue the family ranching operation or work in production agriculture."

Dirty Water Surprise

Study: No difference in gains between well, pond water

Producers know that quality water is the single most important nutrient for the survival of animals.

However, quantifying the differences in cattle's performance on good- versus poor-quality water is tricky to do, says Eldon Cole, an University of Missouri Extension livestock field specialist.

Back in the mid-90s, a trial at University of Missouri's Southwest Research Center near Mt. Vernon, Missouri, was set up to evaluate the impact of clean and dirty water for grazing beef cattle.

"The presumption was there would be measurable differences in stocker gains, cow-calf performance at weaning and perhaps noticeable disease patterns," said Cole.

Incorporated into the replicated project were high- and low-endophyte fescue pastures. The test, which ran from June 19, 2018, to Oct. 18, 2018, was done with stocker steers.

Since the test pastures were 2.5 acres each of the four years, the water supply for the dirty pond water pastures was hauled daily from nearby farms that had cattle traffic in them. The clean water supply was from a deep well located on the Southwest Center.

"The clean water tanks were scrubbed weekly, and the water usually appeared to be clean enough for human consumption. In contrast, the dirty pond water was just that, dirty, dingy and foul-smelling at times," said Cole.

Every spring and fall of the study, researchers did an analysis of the water quality from each source.

CONTINUED ON NEXT PAGE

MISSOURI BEEF INDUSTRY COUNCIL

DIRECTOR ELECTION LEGAL NOTICE

Notice is hereby given that the Director of Agriculture will be conducting an election to fill three positions on the Missouri Beef Industry Council Board of Directors. One regional council member is to be elected in each of Regions 1, 4 and At-Large. Terms of office are three years.

Any cattle producer within the specified regions of the State of Missouri who is producing cattle for market and the legal owner of one or more head of cattle becomes eligible to vote in the election by registering at his/her respective Farm Service Agency (FSA), or electronically at http://mda.mo.gov/councils/ prior to July 19, 2019. Cattle producers who have voted in any of the previous three (3) elections are not required to register unless their address has changed.

The Missouri Department of Agriculture will mail ballots to registered producers Aug. 16, 2019. Ballots must be postmarked no later than Aug. 31, 2019, to be valid.

Any qualified producer may be nominated and have his/her name placed on the ballot provided the independent nomination is accompanied by petition of not fewer than 100 producers in the nominee's region and written permission of the candidate. Petitions must be delivered to the Director of Agriculture on or before July 19, 2019. Petition forms are available from the Missouri Department of Agriculture by calling 573-526-4620.

Revenge Barn & Stable from Bonide

Revenge Barn & Stable is a great product for today's cattle owners. It comes as a 0.5% permethrin that is ready-to-use in a pump and spray 1.33 gallon container. This container is very sturdy and can handle everyday use. It is built to handle the rough, tough and tumble environment in the back of a truck or trailer.

Revenge Barn & Stable has the companion 13.3% concentrate product so the sprayer can be reused for application. Revenge Barn & Stable products have versatile permethrin formulas for protecting farm animals that could be fogged, misted, used in automatic spray systems, back rubbers, as a spray, or dip or premise. Barn & Stable kills and repels farm and animal insects for up to four weeks. Revenge Barn & Stable products are family-owned and USA-made.

DIRTY WATER SURPRISE FROM PREVIOUS PAGE

The results showed only iron tended to be slightly above the acceptable levels for human consumption in the pond water among the minerals. Sulfate and nitrate levels were well within the acceptable range for both sources of water.

Fecal coliforms were present in the pond water each period. In some cases, the bacterial count was several thousand units above the safe level as defined in the literature.

"After the four-year, replicated study, two years with stocker steers and two years with spring-calving cow-calf pairs, no significant difference in animal performance (rate of gain, weaning weight, cow weight, hair scores, water intake, mineral intake) was found," said Cole.

During the last three years of the study, one pasture was set up to give the cattle a choice between either clean or dirty water. Once again, virtually no difference in the cattle's choice of water was noted when they were offered side-by-side.

According to Cole, this study does not support the conventional wisdom often referenced in news articles that proclaim significant improvements in beef cattle performance. Some reports even claim daily stocker gains of over 0.5 pound per day when good-quality water is provided.

"Perhaps before you write off your ponds as being detrimental to your cattle's performance, you should test your water," Cole said. "Most of the concern in the articles I've seen seems to center around elevated sulfate levels in the western and northern states' pond water supplies. This did not appear to be a problem with the southwest Missouri pond water."

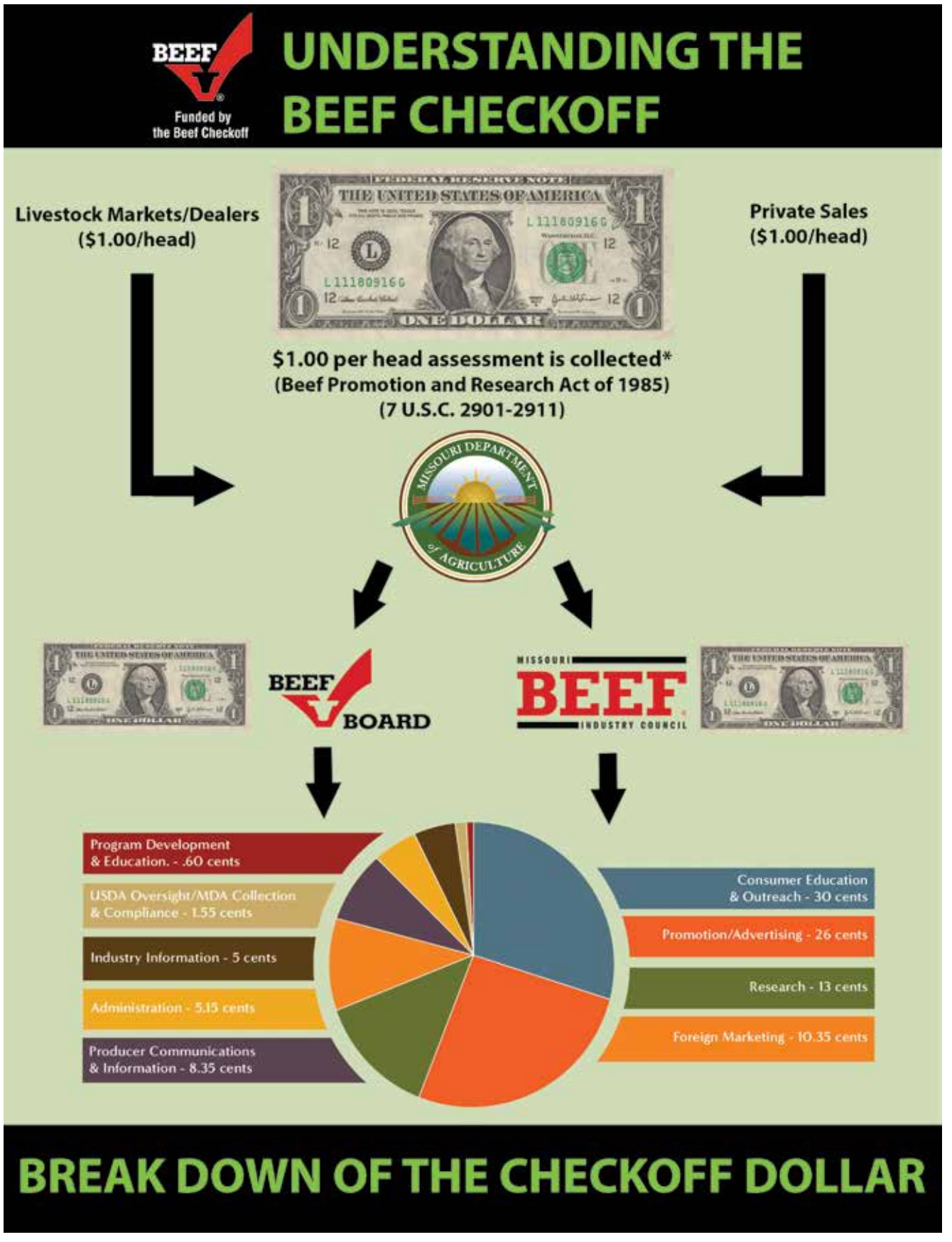
Of course, cattle with access to ponds can cause other issues such as foot rot or loss of fish and wildlife habitat.

"However, if your pastures are giving your cattle fescue toxicosis or heat-stress problems, pond access can be cooling and helpful," said Cole.

Cole also notes that there are degrees of dirty, filthy water and watchful cattlemen should be able to distinguish what is acceptable and what isn't for their farm.

"It's still best to provide the best quality you can and plenty of it, but don't be alarmed by the news articles that are negative to pond water and think you're about to seriously harm your cattle," said Cole.

--Source: MU Extension news release.



Soft Heart in a Hard Business

Some cows are good for your soul

By Erin Hull

Simone. Simone is a cow who has the worst udder you've ever seen, is easily 300 pounds heavier than any of my other cows, refuses to walk through our squeeze chute when we are working the herd, is not very easy on the eyes and doesn't follow the herd. She is truly the bane of my husband's existence. But Simone ... Simone is the bovine love of my life.

Raising cattle is not for the faint of heart, as you all well know. We witness the circle of life every day. We watch calves be born. We watch cows mourn the loss of a calf they've lost. We pour our hearts into producing animals that are well-fleshed and will grade out well. All these things can harden you to the daily ins and outs of raising beef cattle. We work hard to save cows that will ultimately end up on someone's dinner plate. This is always a topic that gets brought up on the tours that happen at our farm. My answer is always the same. Raising cattle is hard. Some days, I cry. Some days, I jump for joy. But ultimately, I'm working hard to produce healthy animals that will create healthy meals. I give these animals a good life and feel good at the end of the day knowing I've done well by them. When their number has been called, I know they lived a good life.

Some days, I cry. Last year was an awful calving season for our farm. I had a cow kill another cow's calf. I skinned the calf and grafted a Holstein calf to the mourning mother with great success. Only to watch the Holstein fall ill a week later and die. As a mother my heart broke for the cow who now lost not only one calf, but two calves. I had bottle babies who scoured, and I worked endlessly to get healthy. I had calves get sick and die seemingly out of the blue. I wanted every day for the calving season to be over and for it all to stop. I was working day in and day out and watching animals die. I'd go to bed in tears, exhausted and sore only to know I may walk into the pastures the next day to find more loss. All the loss was financially draining, but it was also emotionally draining. There were days I just wanted to sell every cow and live a simple life that

didn't include syringes, antibiotics, Banamine and mourning cows.

Simone. Simone was my salvation. I have a pretty tame herd. Flight zones of my cows are about 5-10 feet. I can approach most but not touch them. Except for Simone. Simone sees me enter the pasture and walks up to me and wants to be loved. Some days, I'd be in the pasture crying not knowing what to do next, and seconds later, Simone would be licking me, seemingly telling me it was okay and that next year will be better.

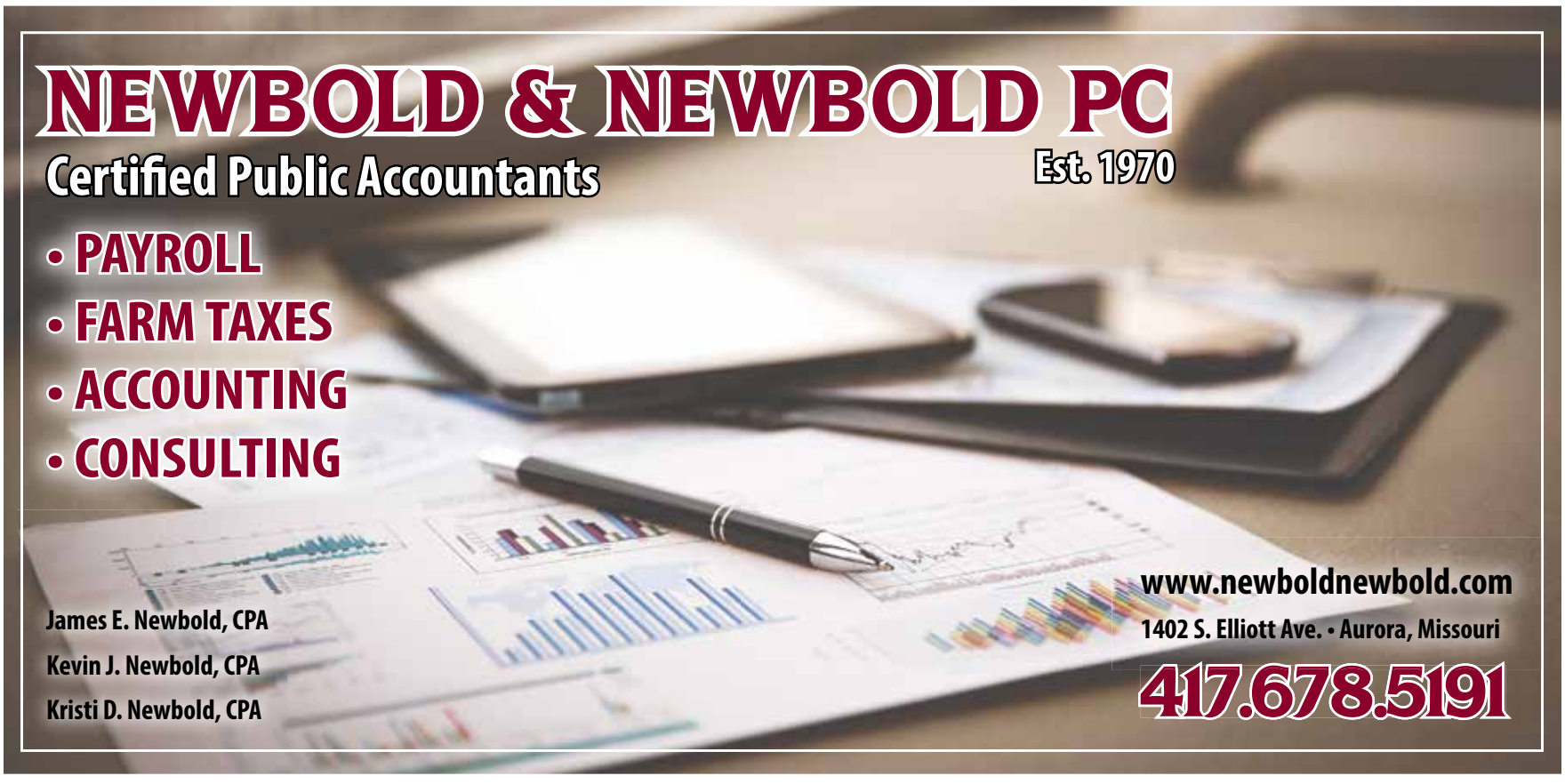
Our rule has always been if a cow doesn't produce a calf, on the trailer she goes. Two years ago, Simone didn't produce a calf. I was heartbroken. But mostly I was scared. There was no way I was shipping Simone. Simone would walk onto a trailer over my dead body. It was then that I realized that we all have room for one special cow.

In the grand scheme of things, Simone is what keeps me from wanting to give up on the bad days. She may eat 1/3 more than my average cow. She may not follow the herd. She certainly won't go through the chute for vaccinations. Yet, her presence on the farm, with or without a calf in tow, outweighs all of those things. Thankfully she did calve this past year. With her awful udder (two working quarters and teats the size of coke cans), I had to hand milk in the pasture to get her calf to latch. She just stood there. She was happy to have me helping her. She knew I was trying to help.

I joke that her calf kept her at the farm for another year, but I know deep down, calf or no calf, she's staying until she drops dead of old age. And I'm happy to report her calf was the biggest of the bunch as yearlings. Even if he only was able to nurse two quarters.

So, sometimes a soft heart in this hard business is what it truly takes to keep us pushing through the hard times.

--Source: Erin Hull raises Red Angus cattle on her Lucky 13 farm in Tully, New York.



TRENDING NOW

Answering the Call

Farmers market provides outlet for sustainable meats

Article and Photos by Kelsey Harmon for Cattlemen's News

Like all industries, the beef sector is evolving due to shifts in consumer demands. Today's consumers want cattle operations to increase sustainability practices and implement beef quality assurance on their farms and ranches. At the Webb City, Missouri, farmers market, two beef producers aim to better align with these customer desires for their meat products. Read on to find out how they've transformed the ins and outs of their operations.

Garrett Family Farm

Garrett Family Farm was founded in 2015 and is located in Carthage, Missouri. It is run by owners Brittany and Josh Garrett, along with their three children that range in age from 2 to 9. The farm sells beef in addition to pork, chicken, eggs and turkey.

According to Brittany Garrett, the inspiration behind the farm was a series of events that opened her family's eyes to flaws in the food system. "We wanted something different that involved eliminating the use of genetically modified organisms (GMOs), hormones and antibiotics as well as something that would be beneficial to the land," she explains. "We discovered a man named Joel Salatin who owns PolyFace Farms, and our farming desires became a reality."

Garrett says their farm started with just seven backyard chickens. This season, they plan to have 1,500 meat birds, 80 turkeys, 600 laying hens, 20 hogs and six honey hives; they also continue to grow their beef enterprise.

One thing that makes their farm unique, Garrett says, is that the operation is built on customer transparency. She notes the customer is able to join in the farm's journey and that sets them apart. The Garrett family lives by the motto, know your farmer, know your food. They have an open-door policy to their farm, allowing people to visit the operation and see for themselves the production methods used.

"We are transparent and are always willing to answer anyone's questions," she explains.

The farm's primary goals are:

- To show their children the value of hard work;
- To take great care of the animals that they raise;
- To give back to the land on which they raise their animals; and
- To give customers a different option in buying power.

"We all take part in the day-to-day chores," Garrett says. "My husband manages other outside duties, and I oversee marketing and markets." She says the family works as a team to keep the farm running and that extended family also that take part in the farm, including Josh's stepdad helping with cattle and Brittany's brother and nephew assisting in beekeeping.

One of the biggest challenges Brittany Garrett and her family face with direct marketing is getting product into the consumer's hands.

Meeting face-to-face with customers through the Webb City Farmers Market helps Greg Rasmussen address questions about about his farm.

Garrett says the beef industry will experience change. "Each industry must change as the generations change," she explains. "The average age of a farmer is 60; there is going to be a time when the younger generation takes over farming, and change is inevitable." She says it's important for beef producers to consider the consumer buying trends for different types of beef such as grass- fed, grain-fed, feedlot, pasture-raised, and with or without hormones and antibiotics.

"One of our biggest challenges is getting product into the consumer's hands as well as getting that consumer in the kitchen," Garrett notes. "We have become such a fast- paced, click-now, pick-up-in-an-hour, fast-food, drone-delivery, dinner-in-a-box society that simple shopping and cooking is becoming more of a rarity."

She adds that the farm is continually looking for ways to get the product in the consumer's hands such as markets, selling retail, supplying restaurants, door to door, or off the farm. "If we don't grow with the times, then we don't grow," Garrett says.

The beef producer says her family is thankful for its customers. "Shoppers at the market want to connect with their farmer, whether it be for produce or meat," Garrett notes. "They enjoy knowing that their dollar really does make a difference in someone's life." Every dollar a customer spends with their farm is a dollar that keeps her home with her children, she says.

Sunny Lane Farm

Sunny Lane Farm was founded in 2004 by Greg and Nancy Rasmussen and is located in Lockwood, Missouri. The couple began farming in their mid-50s, at an age when most farmers are beginning to think about retirement. In their earlier years, they raised four boys, who are now grown men and settled in different areas.

"I had a job in town and would work on the farm evenings and weekends like a lot of peo-

CONTINUED ON NEXT PAGE

ANSWERING THE CALL • FROM PREVIOUS PAGE

ple do," Rasmussen says. "My wife, Nancy, quit her town job to work on the farm."

Today, Nancy manages household jobs in addition to farm-related paperwork, phone calls, yard maintenance, deliveries to retail customers and on-farm sales. Rasmussen cares for the livestock and does related jobs, fills product orders and sells products at farmers markets.

Sunny Lane Farm is a grass farm, raising cattle as well as sheep, hogs and broiler chickens. The livestock the Rasmussens raise are processed, and then direct-marketed in different cuts of meat. Cattle are born on the farm and are raised until processing age.

"Our farm is different from a conventional farm because we use rotational grazing, earth- friendly farming practices and do not use commercial chemicals on our land, nor do we use them in our animals," Rasmussen says. "We interact daily with all of our animals."

Rasmussen adds that Sunny Lane Farm is passionate about raising the best possible meats for their customers. To them, this means avoiding commercial fertilizers or chemical herbicides on their pastures and routine antibiotics or growth hormones in their livestock.

"Our beef are 100% grass-fed," Rasmussen notes. "There's nothing better than to hear a customer say that they haven't been able to eat meat due to a certain medical condition but that they are able to eat ours."

Rasmussen explains that being face-to-face with customers at the farmers markets helps him explain farming practices and answer any questions that they might have. Sunny Lane Farms also hosts tours for individuals, families and even for area school field trips.

In addition, the Rasmussens use a Facebook page to connect with customers and show what is happening on the farm.

"Our customers are seeking what we raise — clean, chemical-free meats," Rasmussen says."They want to be able to know where their food is coming from and how it is raised."

Rasmussen says the top challenges his farm faces are the lack of small local processing plants that are either USDA- or state-inspected facilities and also financially competing with corporations who may disregard environmental impacts and health concerns for the goal of making a profit.

One industry trend that he says is important to beef producers is promoting humane animal treatment.

"This comes naturally to most farmers, but if we don't tell the consumer what we do, then they don't know," Rasmussen says. "All they will hear is the misleading statements from animal rights groups."

Cherie' Luken, a regular customer for both Sunny Lane Farms and Garrett Family Farms, is in the late millennial generation. She has purchased products from both farms for more than two years and visited Garrett Family Farm firsthand.

She says she's confident feeding their products to her family of five. "I feel like I'm getting a good deal on the price of their meat products for the quality we are receiving," Luken says. "Eating local, clean, non-antibiotic meat raised without GMOs is important to my family's lifestyle."

For more information about Garrett Family Farm, visit them in person and on their Facebook page at Garrett Family Farm.

Sunny Lane Farm can be found on the web at sunnylanefarm.grazecart.com or on Facebook page Sunny Lane Farm, or localharvest.com to find local farm products.

TRENDING NOW

10 True Things About How Farm Families Talk

Life has changed in the last 25 years

By Holly Spangler

There are a whole lot of "you ought to's" and "you should's" in most stories about farm family communication.

You ought to meet. You should speak freely. You ought to be considerate. You should never yell.

The fact is, none of the things we're supposed to do are terribly easy to do. It's like when we tell our kids to be kind to each other and get along. It's easier in theory than in practice. Sometimes, when they're really fighting, you throw them out of the house, send them to the barn together and tell them to work it out. You're not entirely sure what transpired out there, but they come back laughing and not trying to kill each other. That's a win.

Maybe we need to let people off the hook for how hard this all is - in farm families as in sibling relationships.

I've talked with farm counselor Ted Matthews at length the past few months, on the phone and in meetings, as we've covered mental health. What I know to be true is this: Ted speaks an abundance of truth. He's spent time with farmers in crisis, and with their families dealing with the aftermath. For someone who's never farmed a day in his life, he's got us all pretty well-pegged, along with the pressures we face as we work together.

He knows farms have changed so significantly in the past 25 years that it's changed how the people who run them function with each other. Today, a vast majority of women work off the farm. That changes how we talk to each other, and how we deal with problems when they occur. A farm couple can't look to how mom and dad did it, because mom and dad didn't do it this way.

Ted says when he asks a man what the most important thing is on the farm that needs to be dealt with, he'll talk about cheaper labor, newer equipment, more ground. When he asks the woman that, she always says they need better communication.

"So, if a woman's No. 1 issue is communication, and it's not even on the list for men, we have a problem," he observes.

What else has Ted picked up? Here's a look:

1 In general, when things get rough on the farm, women talk more and men talk less. Men pull back. Women ask what can be done, what needs to be done, why did we buy new instead of used, why not wait until next year, why did we make this decision instead of that one. More questions require more conversation.

2 You don't have to agree. There's nothing wrong with having an opinion and disagreeing. Learn how to talk about it.

3 People tell you what they heard based on what they think is important. (Editor's note: people read stories that way, too.) Arguments happen when people don't hear what you think is important. Listen for more than what you want to hear.

4 Most marriage counseling happens right after harvest. If that surprises you, you don't know farming.

5 Anger also happens at harvest. Sleep deprivation and stress occur because we somehow magically think our bodies need less sleep during harvest. It doesn't work that way.

6 When you justify your anger, you will explode. It's not a matter of if – it's when. After you explode, you'll promise not to do that again but it's too late. If you keep justifying it, you will explode again.

CONTINUED ON NEXT PAGE

10 TRUE THINGS FROM PREVIOUS PAGE

7 Focus on the good while working through the bad, instead of pretending or wishing it away. Look for the good; it may be buried deep, but it's always there.

8 Everyone has an emotional and sensitivity scale. Some think that if other people think they don't feel deeply, they can't hurt them. That's both true and a hard way to live.

9 Two heads are better than one, which beats the heck out of thinking you have to figure out everything on your own.

10 Work on listening skills and communication skills. Your life will be better. Most days.

Ted's parting thought: the question isn't whether something is important. Lots of things are important. The question is whether it's important enough. Instead of, "What do we want to do?" the question needs to be, "Do we want it enough?"

Whatever your farm – or family – needs this year, this question remains: Do you want it enough? It's a question that goes for a whole lot more than just talking.

—Source: Holly Spangler is senior editor of Prairie Farmer magazine. Reprinted with permission.

Tune in to the JRS Market Report

Station	Frequency	Day	Time
KKOW	860 AM	M/W	12:50 p.m. & 4:45 p.m.
KRMO	990 AM	M-F	9:55-10:05 a.m.
KRMO	990 AM	M/W/F	Noon Hour
KRMO	990 AM	T/Th	Noon Hour
Outlaw	106.5 FM	M/W	11:45 a.m.
The Z	102.9 FM	M/W	12:40 p.m.
KTTS	94.7 FM	M/W	11:30 a.m. & 12:30 p.m.
KGGF	690 AM	M/W	11:30 a.m. & 12:30 p.m
KWOZ	103.3	M/W	11:30 a.m.
KHOZ	900 AM	M/W	12:15 p.m.

TRENDING NOW

Beyond Cornfields and Pastures

Farming and gardening to enrich communities

By Kelsey Harmon for Cattlemen's News

Urban agriculture is a wide-ranging movement that is taking place across cities, neighborhoods and towns. The main focus of the movement is to create local, innovative and self-sustainable food systems that provide for communities and to educate those communities about the importance of where their food comes from.

Urban agriculture can range from gardens that use small spaces such as a backyard, rooftop, vertical and community-garden types, to complex food systems. Two of these advanced agricultural systems termed aquaponics and hydroponics leverage technology and aim for efficiency. Aquaponics is a system of growing plants in water that has been used to cultivate aquatic organisms such as snails, fish, crayfish or prawns. Hydroponics is defined as the growing of plants in nutrient solutions with or without an inert medium such as soil to provide mechanical support.

Urban agriculture also includes beekeeping and animal husbandry depending on zoning and city regulations. Many urban farmers and gardeners are aware of environmental challenges facing farming today and view organic and low-input production as beneficial to the environment and to consumers. According to an academic journal published in 2018, urban farming has grown by more than 30% in the United States in the past 30 years.

Locally, urban agriculture might take the form of community participation in local community gardens or school districts adopting horticultural curriculum and adding greenhouses to their campuses. Another example could be a local family within city limits deciding to raise their own backyard poultry or starting a small garden to grow and preserve their own food.

Robert Balek, field specialist in horticulture with University of Missouri Extension in Jasper County, says urban horticulture such as farming and gardening can provide economic, social and environmental benefits to communities. Balek manages the Missouri Master Gardener Extension Program, which provides in-depth horticultural training to individuals throughout Missouri who then volunteer their time applying what has been learned to help others in their communities to learn about gardening and environmental education.

Balek explains that urban farming helps keep local dollars in the community. "These farms often support farmers markets, restaurants and schools," he says. "Socially, urban farming and gardening provide opportunities for communities to come together, such as through community gardens and agritourism." He adds that environmentally, urban farms and gardens often provide an oasis of green and that community gardens especially provide opportunities for outdoor recreation and healthy activity.

Essentially, urban agriculture is a movement for people to be more connected to agriculture regardless of where they live.

Robert Balek

"The urban impetus for horticulture is to provide locally grown food, in an environmentally responsible way, and provide for the specific needs of the local community," Balek says.

The crops that urban gardeners produce are often sold locally at farmers markets, and through community-supported agriculture, which is a system that connects local producers and consumers.

"Due to limited space and elevated production costs in urban areas, most farms tend to grow specialty crops of high value," Balek says. "However, some value-added activity also occurs." He notes that essential oils and dried foods are increasing in popularity.

According to Balek, "Newer crops, sometimes of ethnic origin, accompany traditional vegetable crops. One example is bitter melon, used in Asian foods. Other non-traditional crops include ginger and turmeric." He also says that some traditional crops are being sold in new ways, such as garlic scapes and melon vine tips used in exotic recipes.

As farmers, the consumer disconnect between what it takes to produce the food that they consume can be a pain point. Urban agriculture may help narrow that gap through education.

"Often, we hear the myth that urban people are not aware of the source of their food," Balek says. "On the contrary, urban consumers drive the local food production market due to economic concerns." Urban consumers know locally produced fruits and vegetables help keep their food dollars in their own communities, he says.

The urban farming and gardening movement validates that agriculture is an integral part of society no matter where people are located. Although technology and society continue to evolve, urbanized individuals, families and communities are making an effort to better understand the benefits of agriculture and the significance of being connected to the earth. They are seeking to better understand farming as a lifestyle and enrich their lives with the many benefits it offers.

For more information on gardening, visit the University of Missouri Extension website extension2.missouri.edu.

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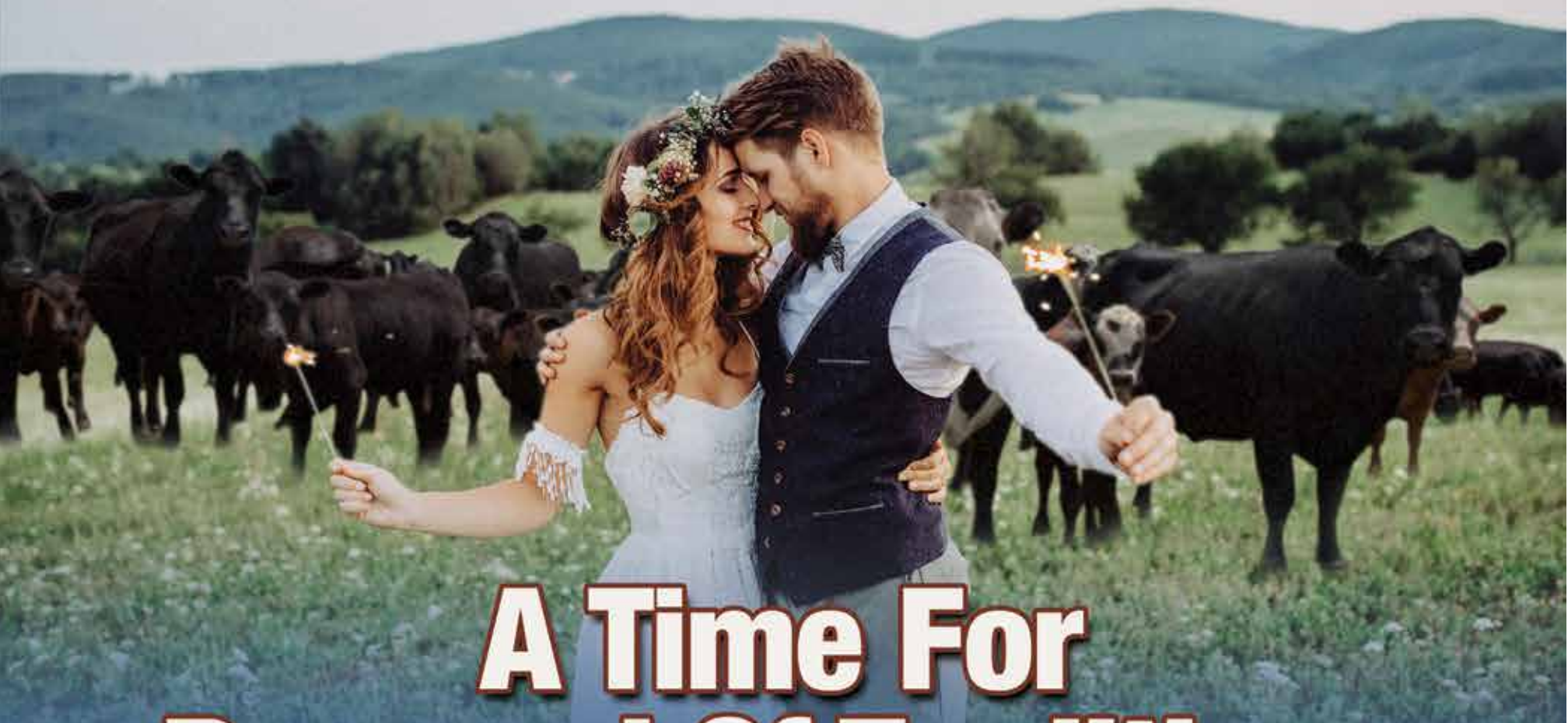

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MARKET WATCH

Beef Demand and Cattle Prices

The U.S. beef market is complex

By Derrell S. Peel

Cattle prices are derived from the total value that consumers place on beef products. Final consumer demand for beef determines beef carcass values then fed cattle prices, feeder cattle prices and finally, calf prices.

Supply works in the opposite direction as cow-calf producers act on the derived demand signals incorporated in calf prices to produce a supply of calves, which leads to feeder cattle supplies, feedlot production, cattle slaughter and total beef production. Complicated and intricate dynamics of time and space exist in these multi-sector vertical market relationships. These all contribute to making the cattle and beef industry a very complex set of markets.

The complexity increases when one realizes that beef demand is not a single market but is the net effect of the disassembly of beef carcasses into many products entering different, but often related, markets. The total carcass value that drives beef and cattle markets is the net effect of several hundreds of products that result from slaughter and fabrication. These ultimately become thousands of different products in retail grocery; hotel, restaurant and institutional (HRI) markets and exports, along with markets for edible offals and other by-products of cattle slaughter.

It is common in academic and industry discussions to refer to beef demand in the aggregate, often in the context of competing proteins, primarily pork and poultry. In reality, final beef markets consist of an immense array of companies and activities at the wholesale and further processing levels that link consumers with beef markets.

Recent research at Oklahoma State University highlights this diverse set of markets and the challenges of understanding beef demand when it is disaggregated into the myriad of individual beef product markets. The research drew heavily on interviews across the multitude of beef market sectors including packers, wholesale food distribution companies, further processors, retail grocery companies, restaurant companies and beef export specialists.

In total, 30 or so interviews were conducted across the country with companies representing a cross-section of the beef product industry including multiple firms at all beef market levels. These interviews provide a representative view of several stakeholders:

- National and regional packing companies
- Further processing firms, including steak cutters providing portion-control products as well as other processed product providers along with grinding companies providing hamburger for fast food restaurants.
- National and regional food distribution companies.
- Beef exports.
- Representatives of the 40,000 retail grocery stores and the 600,000 restaurants in the country.

Numerous issues and trends were identified in the research, which highlights the dynamic and evolving nature of beef markets. Important beef market factors:

- Changes in beef demand following the 2008-2010 recession.
- Impacts of record high prices in 2014-2015.
- Increasing exports and impacts in specific beef markets.
- Increasing demand for additional fabrication of beef products.
- Impact of increasing carcass size.
- Demand for bone-in versus boneless beef products.
- Fresh versus frozen products and the use of deep chill technology.
- Increased demand for value-added products including more beef products resulting from additional fabrication as well as added-ingredient products.
- The role and increased marketing of cow beef.
- Labor and trucking constraints.
- The blending of beef marketing channels with growing popularity of home food delivery resulting from increased demand for restaurant take-out along with meal kits for home delivery or in-store purchase.

Beef markets are becoming more and more complex. That trend is likely to continue, if not accelerate. When the vast array of horizontal beef product markets is considered along with the complex set of vertical cattle and beef production sectors, all of which operate in complicated dimensions of time and space, there can be little doubt that the U.S. cattle and beef industry is one of, if not the most complex set of markets on the planet.

—Source: Derrell S. Peel is a Oklahoma State University Extension livestock marketing specialist.

EVENT ROUNDUP

June

4 Management-Intensive Grazing School
Neosho, Missouri
FMI: 417-451-1007, ext. 3

6 Prime Time Livestock Video Sale
Joplin Regional Stockyards, Carthage, Missouri
FMI: JRS office 417-548-2333 or
Colby Flatt, video manager, 620-870-9100

11 Management-Intensive Grazing School
Ozark, Missouri
FMI: 417-581-2719

19 2 p.m. Special Replacement Cow & Bull Sale
Joplin Regional Stockyards, Carthage, Missouri
FMI: JRS office 417-548-2333

24 Yearling Highlight Sale
Joplin Regional Stockyards, Carthage, Missouri
FMI: JRS office 417-548-2333

27 Value-Added Feeder Cattle Sale
Joplin Regional Stockyards, Carthage, Missouri
FMI: JRS office 417-548-2333

July

2 The "BIG BANG" Prime Time Livestock Video Sale
Downstream Casino, Quapaw, Oklahoma
FMI: JRS office 417-548-2333 or
Colby Flatt, video manager, 620-870-9100

25-8/3 Ozark Empire Fair
Springfield, Missouri
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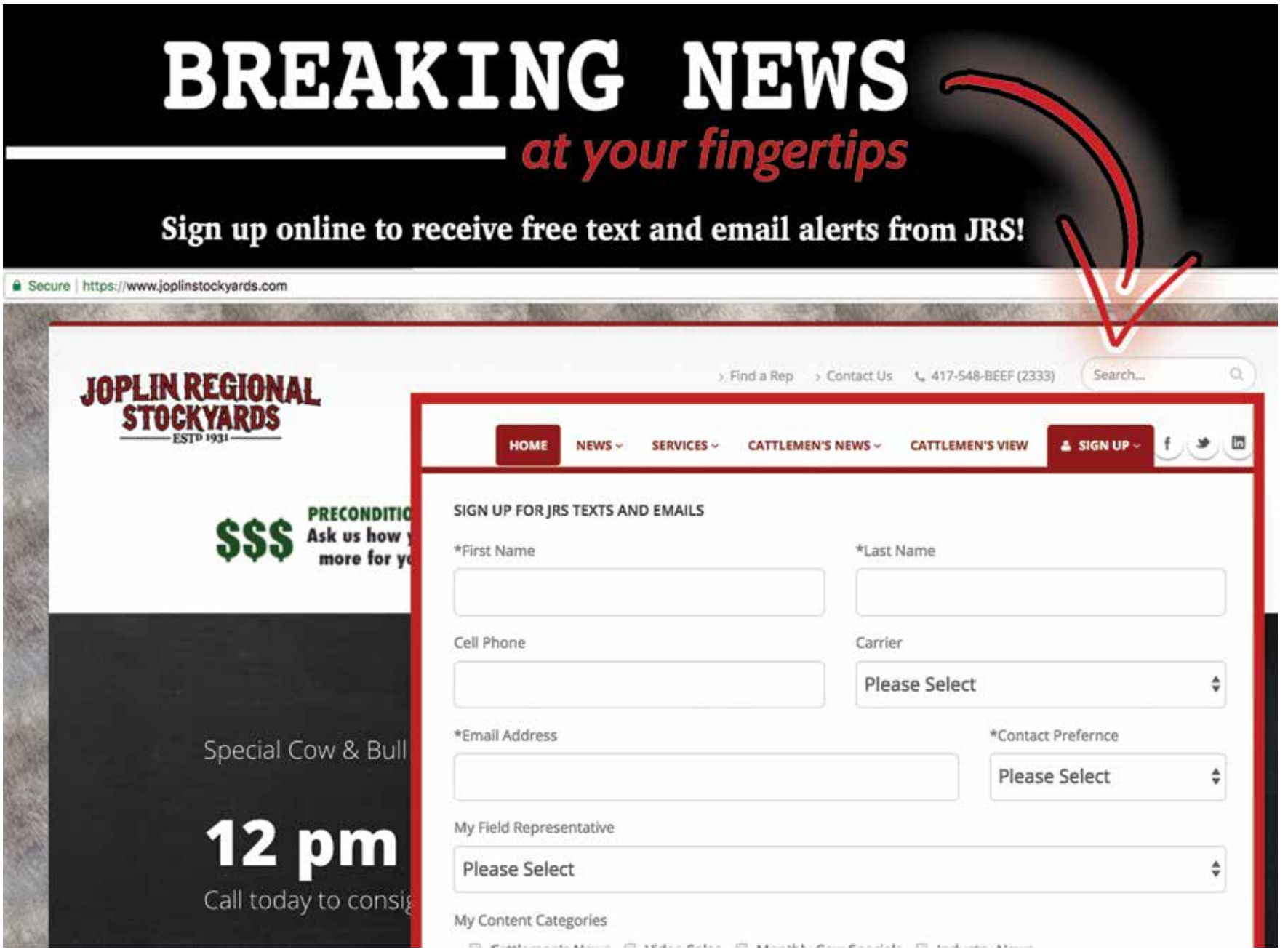

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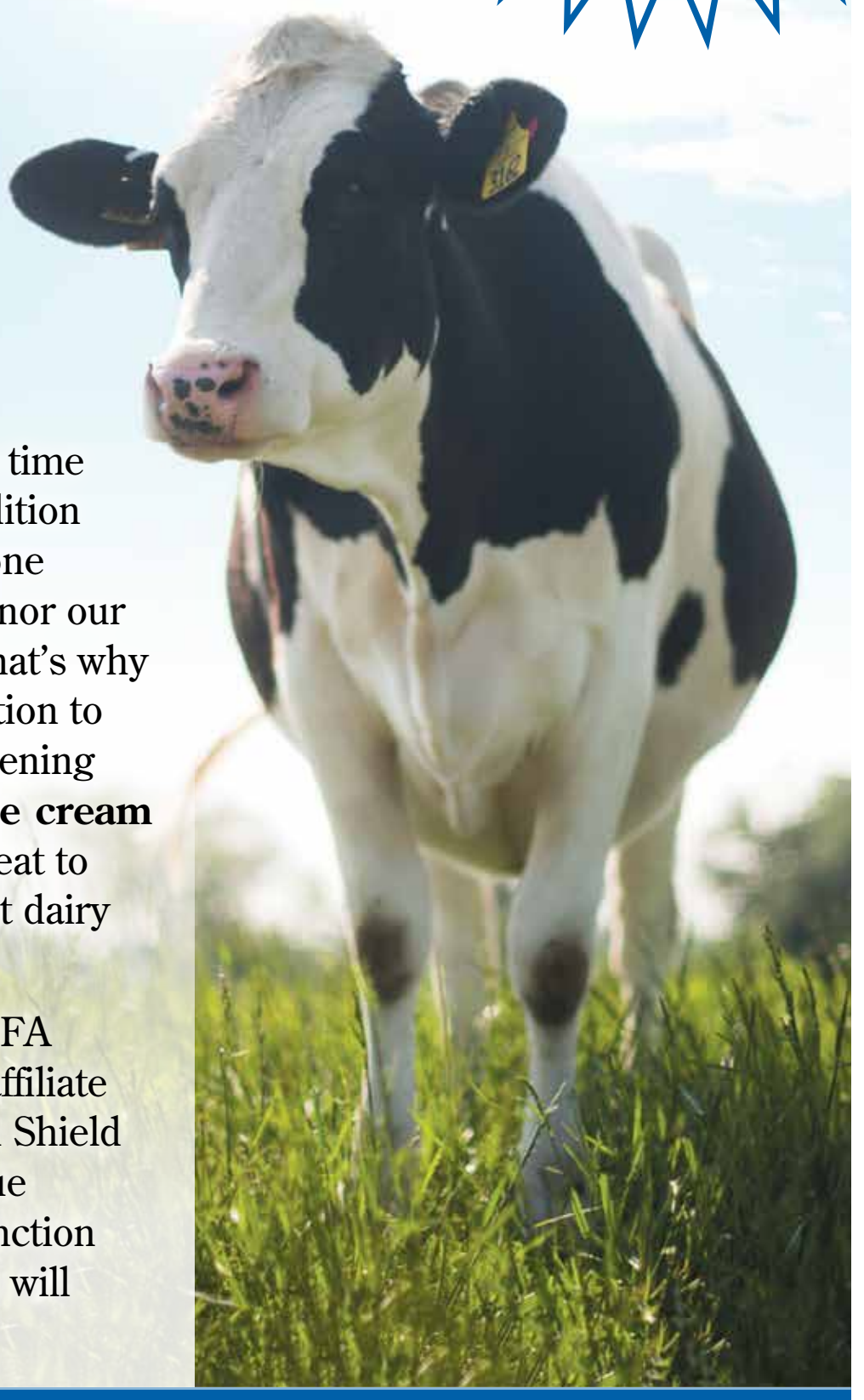

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