

## Morgan examines effect of alternative proteins on beef industry

By Donna Sullivan,  
Editor

In an industry that is constantly adjusting, changing and evolving, a new player is emerging on the meat scene – lab-produced and plant-sourced products – leaving traditional producers wondering if and how it will affect their livelihoods in the future.

Dr. Brad Morgan, senior director of protein at Performance Food Group, spoke at Kansas State University's Cattlemen's Day on March 1, giving insight into the products, dubbed by many as Fake Meat.

The plant-based meat items, which Morgan called a structured plant, fungus-derived food, is made by taking proteins from a plant source, and certain fats, adding the heme molecule that appears like blood and putting them on a structured scale to make something that resembles a meat product. "It's been going on since the 1920s when soy isolates were incorporated into a patty," he said. The early products weren't all that appealing, but the industry has made great strides.

The lab-produced meat is made by extracting stem cells from the animal and placing them in a growth medium where they differentiate into muscle tissue. Originally the promoters of the process wanted to call their product "clean meat," but that moniker is no longer allowed, and it now must be called lab-cultured meat. "It shouldn't be called clean meat, because it gives everyone the perception that real beef is dirty," Morgan said.

Does it really matter what the products are called? Morgan believes it does, and points to the dairy industry and the grocery store shelf space they've given up to soy and nut milks. "We need to make sure that we define what is meat," he said. "Because if we don't, we will have some of the similar things they have gone through."

What has helped the alternative meat movement

gain traction is some of the investors it has attracted. Investments by Richard Branson and Bill Gates might not be all that surprising, but heads turned when Cargill and Tyson invested in Memphis Meats. Morgan said he called and asked why they wanted to be involved, and was told it is because they want a seat at the table. "Obviously they are not relying on this to be one of their huge profit centers, but they do want to know what's going on and not just read about, and I do think that's smart business," he said.

Cell-based companies reported an 80% increase in sales over the previous year. "That's a little misleading," Morgan pointed out. "If you only sold twelve boxes of something last year, it's pretty easy to show an 80% increase. But these companies are pretty legitimate and they are financially sound at this point."

It's not as much the development of the product that concerns Morgan, as the tactics used to market it. "What many of these companies are trying to do is scare you and threaten you, by talking about things like animal behavior, animal welfare, utilization of the land and antibiotic resistance," he said. Groups like the Good Food Institute assert that production agriculture is killing the planet and these alternative proteins can be produced with less waste and reduced greenhouse gases, necessitating greater transparency and diligence in the conventionally produced meat industry. "The point is we have to tell our story and we have to do things right and we have to do it right 365 days a year," he said.

Morgan also challenges the idea that we cannot produce enough food for the projected world population in coming decades. "Here's the problem with that in my opinion," he said. "We already produce enough food for the nine billion people in the world. What we need to do is quit



Brad Morgan, senior director of protein at Performance Food Group, discussed alternative proteins at Cattlemen's Day at Kansas State University on March 1.

Photo by Donna Sullivan

throwing away so much of it." He said that in the United States alone, we throw away about 1400 calories per person per day. "Part of the issue is our food supply is too cheap," he continued. "We're spoiled rotten when it comes to food. We spend 7% of our disposable income on food. European countries spend anywhere from 15-32%. Asian countries, 16-17%."

Food safety and getting the regulatory standards right is also a concern. "These items want to be called meat, but they don't want to be inspected and go through the same rigorous things that we have to go through in order to get it inspected and prove that it is safe to eat," Morgan related, adding that they

would prefer to go through the Food and Drug Administration, which regulates everything except meat, as opposed to USDA-FSIS which is more rigorous. "If you don't look for it, you're not going to find it," Morgan said, referring to things like E.coli. He said that FDA has about 200,000 different domestic and foreign food facilities, of which they do about 6,000 inspections per year in the ones they consider high risk. "Red meat is inspected 100% of the time daily and that's a big difference and why we have concerns about food safety, shelf life and that kind of thing," Morgan explained.

On March 7th it was announced that USDA-FSIS and FDA will jointly over-

see lab-cultured meat. FDA will oversee the initial stages of production, beginning with cell collection and USDA-FSIS will assume oversight during the transition to cell harvesting and continue on to handle regulations on production and labelling of human food products. Livestock groups welcomed the announcement.

With regulatory concerns addressed, consumer acceptance remains a question. Morgan said a couple of 2018 surveys indicated that 65% of consumers were willing to try the plant and cell-based meats. About 1/3 of those said they were willing to eat it regularly. 11% chose the cultured meat over conventional. "That's fine, as

long as you're willing to pay for it," he pointed out. Initially, households with earnings of at least \$75,000 were twice as likely to buy it. Today that number has increased to \$100,000.

Morgan said that progress is being made on the product from a mouth-feel standpoint. It actually looks like a burger and cooks pretty much like one on a flat-top grill. But he doesn't see it taking the place of a steak any time soon. "Everything we've talked about has been a crumble or a strip, not an actual steak," he said. "They will never be able to replicate a ribeye steak as far as mouth-feel and flavor, unless they have a lot of breakthrough in technology."

## Wheat farmers welcome new export opportunity from Trump administration agreement with Brazil

U.S. Wheat Associates (USW) and the National Association of Wheat Growers (NAWG) welcomed the

announcement by President Trump and Brazilian President Jair Bolsonaro that Brazil has agreed to implement a duty-free tariff rate quota (TRQ) for wheat, a longstanding obligation under Brazil's World Trade Organization (WTO) commitments. This agreement opens an annual opportunity for U.S. wheat farmers to compete on a level playing field for 750,000 metric tons (about 28 million bushels) of wheat under the TRQ.

"We are grateful to the Trump administration for championing the interests of U.S. farmers and specifically to Chief Agricultural Negotiator Gregg Doud and USDA under secretary Ted McKinney for prioritizing the issue of Brazil's TRQ commitment," said Chris Kolstad, USW chairman and wheat farmer from Ledger, Mont. "This new opportunity gives us

the chance to apply funding from the Agricultural Trade Program and other programs to build stronger relationships with Brazilian millers and a more consistent market there for U.S. wheat."

Brazil was the largest wheat importer in Latin America and the fourth largest in the world in marketing year 2017/18. Most imports originate duty-free from the Mercosur countries of Argentina, Paraguay and Uruguay. Wheat from all other origins requires payment of a 10 percent duty. Brazil agreed to open the TRQ to all origins, including the United States, in 1995, but then notified the WTO that it wanted to remove the TRQ. Those negotiations were never concluded. Brazil did open the TRQ temporarily in 2008, 2013, and 2014 when there was a shortage of wheat within Mercos-

ur. During those years U.S. wheat made up more than 80 percent of imports from outside Mercosur.

"This is a big win for U.S. wheat farmers, the Trump administration, and members of Congress who have pushed for action on this issue," said Ben Scholz, NAWG president and a wheat farmer from Lavon, Texas. "I'm glad to see Brazil fulfill its commitment and look forward to a stronger trading relationship between us. When countries remain in compliance with the WTO, like we see here, it creates a level playing field for wheat for both countries."

In some years, Brazil has imported as little as 115,000 metric tons of U.S. hard red winter and soft red winter wheat. That is why USW has worked toward implementation of Brazil's wheat TRQ for a decade. USW plans to invest ex-

port market development funding in technical support and trade servicing to

help demonstrate the quality and value of U.S. wheat for millers and bakers.

### Kansas Farm Bureau donates to Nebraska farmers and ranchers affected by flooding

Kansas Farm Bureau's Foundation for Agriculture has donated \$10,000 to assist Nebraska farmers and ranchers recover from record flooding affecting the state. The money will go to Nebraska Farm Bureau's Disaster Relief Fund. The fund will distribute 100 percent of its proceeds to Nebraska farmers, ranchers and rural communities.

"Our hearts go out to the individuals and families affected by the catastrophic flooding in Nebraska," Rich Felts, president of Kansas Farm Bureau says. "Our foundation board voted unanimously to assist our neighbors in their recovery process. We feel privileged to play a small role in restoring the livelihoods of Nebraska's farmers and ranchers."

A two-day "bomb cyclone" dumped snow and rain across frozen ground across the Plains in early March. Some Nebraska communities received nearly 18 inches of snow, while others recorded nearly four inches of rain. That moisture caused runoff that swelled rivers and streams to record levels.

## The Art of Civil Discourse

By Jackie Mundt, Pratt County farmer and rancher

The world today is quick to judge. A lurking mob stands ready to provide a sum judgment of a person's character and worth based on a small sample of actions or choices.

Look at responses to any social media post made by an elected official. Even the most positive statements are used to air a grievance about nonrelated issues.

Opinions, and the arguments they inevitably bring, are divisive and fierce. Whom

you voted for in the last presidential election or where you stand on a water issue will likely earn you enemies without ever meeting them. When we argue, call names and get ugly with each other, what do we gain?

I am not advocating for a shift away from conflict and criticism. When people give me honest feedback it gives me the insight needed to change and grow. Through the processes, I become better and stronger.

My plea is for people

everywhere to learn how to disagree productively and exercise civil discourse, which does not aim to tear down but to build a better, stronger future.

Civil discourse is commonly defined as "an engagement in conversation intended to enhance understanding." The concept is simple, but the effect is game-changing.

Civil discourse starts with a basic but vital assumption of respect. Each person is entitled to an opinion and has the right to share their perspective.

No matter how much you disagree with a person's viewpoint, try not to get emotional. Two people yelling at each other does little more than embarrass other people at the table.

Instead of getting angry, get interested. Why do they feel that way? How did they come to that conclusion? Am I missing something in my knowledge of the subject?

Taking the first step to seek understanding shows an important level of patience. When you seek first to understand others, you show respect for their opinion. Don't worry about getting your point across. Showing respect will build trust; as trust increases, the conversation becomes more robust and opportunities will arise to bring in a different perspective.

This deference to another speaker also subtly acknowledges that your opinion is not the most important. Humility, which is often missing in disagreements, can diffuse

emotional responses. Humility can also help us to overcome very natural emotions. Do you approach an argument or disagreement with any acknowledgement that you might have your mind changed? Some people who answer this question honestly find they fear being wrong or may be disloyal to someone in the process.

If you aren't open to changing your mind, why should anyone be willing to have you change his or her mind? Civil discourse has an implied social contract that both parties will equally work toward the best resolution. Try not to let pride and stubbornness prevent you from being an honest player in the conversation.

Listening to another perspective doesn't make you

disloyal to your ideals; it will give you a deeper understanding of the issue and confidence in your position. Play devil's advocate and try to understand the opposing point of view. Having a truly open mind will make you more likely to ask the tough questions and strive to see the whole picture.

When you reach the end of a civil discourse, you and your fellow conversers may still maintain your original opinions, but you will likely have gained each other's respect and trust.

*Insight is a weekly column published by Kansas Farm Bureau, the state's largest farm organization whose mission is to strengthen agriculture and the lives of Kansans through advocacy, education and service.*

## Former Plainville Livestock Commission owner says cattlemen will be paid in full

By Donna Sullivan, Editor

February 8 was Tim Berland's birthday. The Damar, Kansas farmer and rancher had sold cattle earlier in the week at a local livestock market. Events on the 8th would make it a birthday he will never forget... no matter how hard he tries. That day he learned that his cattle check for more than \$300,000 had not cleared the bank.

An ongoing dispute between Alma State Bank and Plainville Livestock Commission (PLC) has left 41 area cattlemen holding the bag for livestock sold at that February 5 sale, which had a run of over 3,000 head.

The trouble began when Alma State Bank froze both the custodial and general accounts of Plainville Livestock

citing inappropriate movement of \$916,652.29 from the custodial account to the general account as the reason. Custodial accounts are required by federal law to hold proceeds of sales and are not the property of the sale barn, but of the sellers/consignors.

According to a USDA Grain Inspection and Stockyards Administration document, "Markets can only draw from the custodial account to pay the net proceeds due to consignors or any person the market knows is legally entitled to payment; lawful charges from consignors' invoices; and the charges due the market as compensation for its services. Lawful charges against a consignment include charges like trucking, brand and health inspection fees, meat board, etc., which have

been deducted from the sale proceeds and were authorized by law or by the consignor. Markets are prohibited from using the custodial account to pay their own general expenses; make advances on livestock consigned or purchased; finance livestock buyers; or finance their own livestock purchases."

An interpleader case was filed February 12 by Alma State Bank in the District Court of Norton County requesting that the Court make a determination of the rightful owners of the money in the frozen accounts, which would allow for the funds, including the \$916,652.29, to be distributed.

In the meantime, the sellers are left wondering if or when they will be paid.

PLC had been previously

been fined under the Packers and Stockyards Act - \$16,000 in 2014 and \$12,900 in 2012 for failure to properly maintain the custodial account.

On July 12, 2018, PLC and owner Tyler Gillum entered into a consent agreement with the U.S. Attorney's Office for the District of Kansas, agreeing to suspend its market agency activities for two consecutive, regularly conducted commissioned livestock sales on July 24 and July 31, 2018. They also agreed to pay a civil penalty of \$117,750, with \$67,750 held in abeyance for six years, while paying the remaining \$50,000 in installments beginning August 1, 2018.

In mid-February, Lloyd and Judy Schneider announced they had established Heartland Regional Stockyards, Inc. at the location of Plainville Livestock, and Gillum continued to be employed there.

On March 1, Plainville Livestock Commission filed for Chapter 11 bankruptcy protection, listing estimated assets

of \$50,000-\$100,000 and \$10-50 million in estimated unsecured liabilities, including \$8 million to Landmark National Bank in Manhattan. Many of the sellers at the February 5 sale are also listed among the creditors.

For Thelma Berland, the pain goes much deeper than the \$368,000 they are owed by Plainville Livestock Commission.

She and Tim have been married for nearly 45 years and live just half a mile from the farm where she grew up. In their years together they've built their operation, added land and cattle, raised five children, faced cancer threats and survived every weather disaster Mother Nature threw at them, not to mention the lowest crop prices in history. "You name it, we've gone through it," she said. "But nothing prepared us for the loss of what that day was."

More than the money, it's watching what it's done to her husband that tears at her heart the most.

"If you knew my husband, and the pride he puts in his cattle," she said softly. "I used to tease him that he knows his cattle better than he knows me." She added that with the current depressed commodity prices, cattle were the only thing keeping many farmers going. This could represent the final blow to many of them.

The Berlands and most of the other producers affected met recently to discuss their options. "I wish you could have felt the pain in the room that night," she said, recalling a young couple who is expecting a baby, another family representing a three-generation operation, and others whose future is now in jeopardy. "We're old and we'll figure this out," she said. "But these young people are finished." But even "figuring it out" is difficult. "It's changed everything about how we thought we were going to retire and what we were going to leave our kids," she said.

Thelma admits that as she watches footage of the flooding in Nebraska, and entire farms and ranches lost to the raging water, she feels a twinge of guilt for feeling the way she does.

But for the Berlands and their fellow 40 sellers, the devastation is just as real. And while the amounts owed to others might not be as large as theirs, Thelma recognizes the enormity of the loss for each one. "If that was your total calf check for the year, even if it was a smaller amount, that was what you were going to use to make your payments, and buy feed," she pointed out.

The group found some solace in meeting together and outlining future steps. By working together, they hope to accomplish more than if each one took action on their own. They anticipate legal action down the road. The Justice Department has contacted the group about being on a committee for the bankruptcy.

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I have made it no secret that this winter has been one of the hardest I have ever experienced in my lifetime. We have lost more calves and lambs in this winter than the previous three combined. The weather has been as bad as I can remember in a long time and that alone would have made this season difficult. Personally, this difficult weather was combined with a couple of family health issues and at times I have felt like the Lone Ranger.

I remember one particularly difficult Sunday when I came in exhausted and beaten-up. I was done mentally and physically; I could go on no longer. I guess Jennifer sensed this and was ready, as always, to prop me up and get me going again. Let me just add that this winter Jennifer had a much-needed surgical procedure on her heel and was out of commission during this period. My guess is that it was much harder on her to be on the sideline.

In any case, I told her I couldn't keep going, I was done; winter and bad luck had gotten to me. We had a serious discussion and talked about what I could do. One of the solutions was to ask Isaac to come back after classes and help as often as he could. We did and he agreed to; I have to say it was one of the best things I have ever done.

In the past I was probably too much of a micro-manager when it came to the kids helping. It had to be done my way or no way. I didn't realize it at the time but that is not a real good management style. This winter was different, I had to let Isaac do some things his way and I was in for a real surprise. While it may not have gotten done the way I would have done it, it got done and it worked.

I am new to having adult children, so maybe this is how it always happens, but I was amazed at the way he got things done and how well he did them. Recently, Tatum was home from college on spring break as well and she was eager to pitch in and help. Despite my poor parenting (they must take more after their mother) my kids are productive, functioning adults.

I don't know if it was the change in the weather but suddenly, I felt a wave of relief and the realization that I was going to make it set in. My kids had rushed in and saved the day. Well, that

and Jennifer doing more than she should have with crutches and a boot. Without my family's help I am not sure I would have survived this winter.

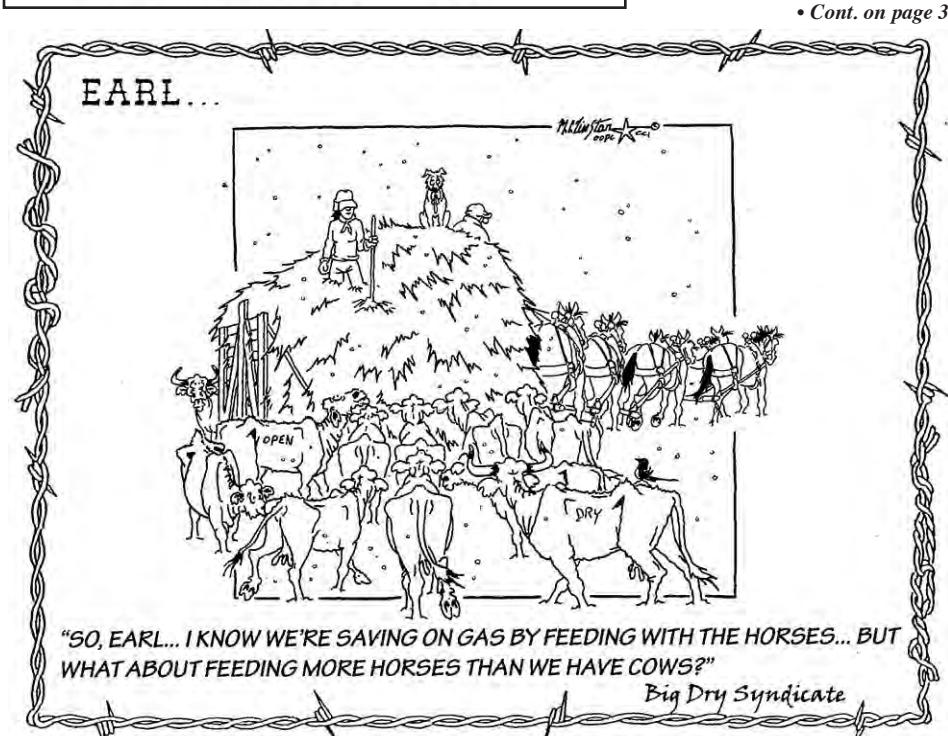
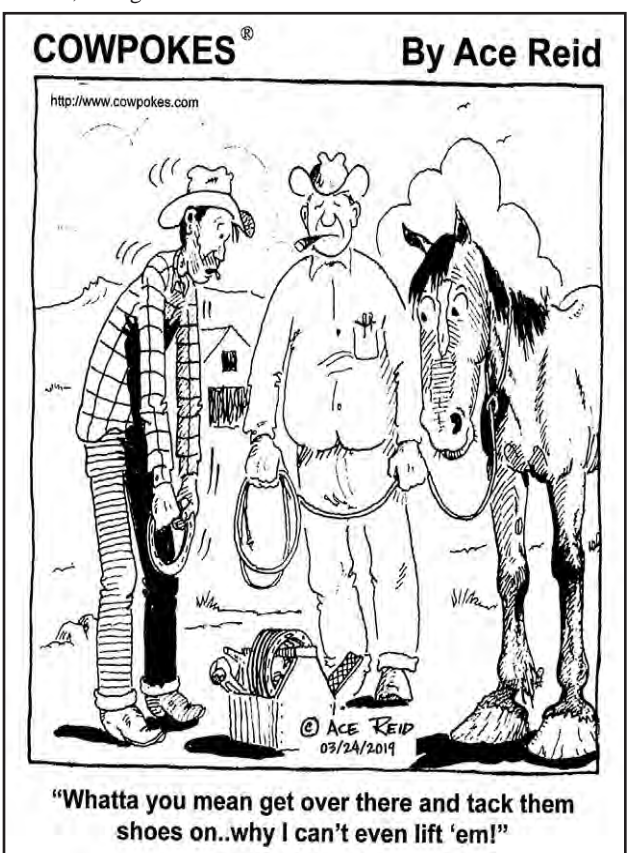
I must admit that I wrote this story with some apprehension. The winter I have been through pales in comparison to the recent weather and destruction my friends, neighbors and the ag community in Nebraska and others affected by the "bomb cyclone" have been through. My tribulations were minor compared to the pain and tragedy they have experienced and my heart breaks for them.

So, what do my story of my family and the tragedy north of me have to do with each other? In agriculture we are all family and that is what makes us so unique as an industry. Even though I have never met most of the farmers and ranchers who are living through all our worst nightmares, my soul aches for them and I can feel their pain. In agriculture we truly are a community and as such we care about each other.

This morning I had a reporter call me to see if I knew of any funds that were set up to help producers. I told him that at this time I did not know of any, but I also promised him that there would be funds set up. He asked my why I knew this. I said because in agriculture we take care of each other. I know without a doubt that if I had experienced the same thing that my neighbors in Nebraska would feel the same way and be here to help at a moment's notice.

I know at the time I am writing this it is still too early to know the full scope and magnitude of what we are dealing with and that makes helping difficult. That means all we can do to help is to pray and keep those affected in our thoughts. Soon it will be time for action, and I know the ag community will jump in with both feet.

The winter of 2019 surely will go down as one of the toughest and it saved the biggest sucker punch of all for the end. I ask that you keep all of those affected in your prayers and please do what you can to help when the time comes. I know in the end those caught up in this horrible storm will come out tougher and stronger but in the meantime they could all use a little help from their extended family. We are all in this together.



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Managing Editor — Donna Sullivan  
gandgeditor@agpress.com

— Advertising Staff —  
Steve Reichert, Kurtis Geisler, Shelby Mall  
steve@agpress.com, kurtis@agpress.com,  
shelby@agpress.com

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# Study aims to keep water safe from phosphorus and sediment

Kansas State University researcher Colby Moorberg has his eyes on several miles of the Big Blue and Little Blue rivers, the two major waterways meandering their way to Tuttle Creek Reservoir in northeast Kansas.

Moorberg, an assistant professor in the K-State Department of Agronomy, is studying the trees and grassways lining the streambanks, trying to figure out just how well they may be keeping dangerous pollutants out of the river.

"Phosphorus and sediment are two of the major concerns that have been outlined in the Kansas Water Plan," Moorberg said.

Moorberg is in the second of a two-year project looking at how well buffer strips essentially soak up phosphorus and sediment before those pollutants can get into waterways.

In addition to the Big Blue and Little Blue, he's also looking at the Republican River that feeds into Milford Lake, near Junction City.

Phosphorus is best known for creating an environment in which toxic algae blooms

can form in water, making it unsafe for recreation and other human and livestock uses. Milford Lake was closed to the public at various times the past two years due to dangerous levels of algae blooms.

Sediment is the soil or other organic material that fills the bottom of a waterway, especially during times when streambanks erode. Sediment prevents reservoirs from storing more water, which is a concern considering that most reservoirs are designed to aid in flood protection for nearby communities.

"The one thing I was curious about is that these buffer strips have been a common practice for 30 years, and they're still being put in, but no one has done a long-term assessment of them, to see if they fully function the way that we expected them to," Moorberg said.

Buffer strips are thought to be a good way to absorb pollutants as they move across the ground. The two most common are grassed buffer strips (called filter strips), and for-

ested (called riparian buffer strips).

Moorberg set up a study in which he is looking at grassed and forested strips that have been installed within various timeframes – two to five years, five to 15 years and more than 20 years. He said one concern is whether older buffer strips have become saturated with pollutants and thus turn into a sink for pollutants to dump into nearby rivers.

"The worst-case scenario is if they are all becoming saturated, and if they erode at all, then they could potentially be a source of phosphorus as opposed to a sink," he said. "That would be a bad thing."

So far, Moorberg said the researchers have a year's worth of data. They are tracking the level of pollutants in the adjacent soils and plan to build 3-D models of the two watersheds.

What he hopes to find out by the end of this year is whether the buffer strips are able to function as a natural ecosystem, even as the forested areas age.

"If they do," he said, "there's no worry because our status quo of getting these areas started and not touching them might be the best way to manage them."

But if the older buffer strips are simply a gathering point for heavy loads of pollutants, Moorberg and his team may have to determine the best strategies to routinely remove phosphorus, either by haying grass or harvesting trees and the phosphorus contained in them.

"Or we may need to do more to prevent streambank erosion," Moorberg said. "That's really the main mechanism by which that phosphorus that's in the soil would be released and head downstream."

K-State's work on this project is being done in coordination with the Kansas Forest Service, with cooperation from landowners, the U.S. Department of Agriculture's Natural Resources and Conservation Service and local conservation districts.

## Former PLC owners says cattlemen will be paid in full

While they may have found solace, there is also a deep sense of betrayal among the group by the people they believed would protect them. "Federal law was supposed to have protected us with that custodial account," Thelma said, adding that the Packers and Stockyards Division, the bank owners and the sale barn also let them down.

"The Packers and Stockyards should have this thing closed down until they get this sorted out," said another of the producers involved, who asked to remain anonymous.

According to an unnamed source, Ty and Camden Gillum are no longer employed by Heartland Regional Stockyards as of Tuesday, March 19.

Gillum said in a phone interview March 20 that he is working to get all of the customers paid, and does expect them to be paid in full. "It's all going to be resolved and we went through the proper channels to do it," he said.

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## Kansas milk production up two percent

Milk production in Kansas during February 2019 totaled 290 million pounds, up 2 percent from February 2018, according to the USDA's National Agricultural Statistics Service. The average number of milk cows was 162,000 head, 6,000 head more than February 2018. Milk production per cow averaged 1,790 pounds.

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\*\*\*\*\* By G&G Area Cooks \*\*\*\*\*

## Amy Feigley, Enterprise, Wins Weekly Grass & Grain Contest & Prize

Winner Amy Feigley, Enterprise: "During a trip to Lindsborg, my husband found some lingonberry bars at a local bakery. He fell in love with them and I knew they would be requested. This recipe makes our Swedish home happy."

### LINGONBERRY OATMEAL BARS

- 1 1/4 cups all-purpose flour
- 1 teaspoon ground cinnamon
- 1/2 teaspoon baking soda
- 1/4 teaspoon salt
- 1 cup light brown sugar
- 1/2 cup (1 stick) unsalted butter, softened
- 1 large egg
- 1 teaspoon vanilla extract
- 1/2 teaspoon almond extract
- 2 cups old-fashioned rolled oats, divided
- 1 cup lingonberry preserves

Preheat oven to 350 degrees. Coat a 9-inch square baking dish with cooking spray. Sift together flour, cinnamon, baking soda and salt in a large bowl. Cream sugar and butter until light and fluffy. Beat in egg and vanilla and almond extracts until smooth. Add flour mixture to butter mixture; mix until combined. Stir in 1 3/4 cups oats. Spread 2/3 of the batter on the bottom of the prepared baking dish. Spread lingonberry preserves over the batter with the back of a spoon. Add the remaining 1/4 cup oats to the remaining batter. Crumble over the top of the preserves. Bake 30 minutes or until golden brown. Cool and then cut into bars.

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## Prize for MARCH 2019!

### "Our Daily Bread" Recipe Contest Prize

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The winner each week is selected from the recipes printed. Send us your favorite recipe. It may be a main dish, leftover, salad, side dish, dessert, or what-have-you.

1. Check your recipe carefully to make certain all ingredients are accurate and instructions are clear. 2. Be sure your name, address and phone number are on the entry. Please include a street address with your recipe entries. A post office box number is not sufficient for prize delivery. Allow 3-4 weeks for delivery.

3. Send it to: Woman's Page Editor, Grass & Grain, Box 1009, Manhattan, KS 66505. OR e-mail at: [auctions@agpress.com](mailto:auctions@agpress.com)



Millie Conger, Tecumseh:

### PINEAPPLE ANGEL FOOD CAKE

1 angel food cake mix  
20-ounce can crushed pineapple, undrained

Mix all together. Bake in angel food cake pan at 350 degrees for 40-45 minutes until deep golden brown. Let cool in pan upside down 2 hours. Put on plate, cut and serve.

\*\*\*\*\*

Rose Edwards, Stillwater, Oklahoma:

### ORANGE GLAZE FOR HAM

1 tablespoon ground mustard  
1 teaspoon ground allspice  
3/4 cup orange marmalade

Combine ingredients. Spread over bone-in ham and finishing baking 30 minutes at 350 degrees.

\*\*\*\*\*

Lydia Miller, Westphalia, shares the final two recipes:

### CASSEROLE IN THE CROCK-POT

16-ounce package frozen broccoli cuts, thawed & drained

3 cups cubed fully cooked ham

10 3/4-ounce can cream of mushroom soup, undiluted

8-ounce jar processed cheese sauce

1 cup milk

1 cup uncooked instant rice

1 celery rib, chopped

1 small onion  
1 cup water (optional as needed)

In a slow-cooker mix broccoli and ham. Mix soup, cheese sauce, rice, milk, celery, onion and optional water. Stir into broccoli mixture. Cover and cook on low 4 to 5 hours or until rice is tender. Yield: 4 servings.

\*\*\*\*\*

### BLUEBERRY MUFFINS

1 3/4 cups flour  
1/4 cup sugar  
2 1/2 teaspoons baking powder

3/4 teaspoon salt  
1 well-beaten egg  
3/4 cup milk  
1/3 cup salad oil  
1 cup blueberries

Sift dry ingredients into a bowl. Make well in center. Mix egg, milk and oil. Add all at once to dry ingredients. Stir quickly just until dry ingredients are moistened. Fold in blueberries. Fill greased muffin pan 2/3 full. Bake at 400 degrees for about 25 minutes. Yield: 7 to 9 muffins.

\*\*\*\*\*

**Send in your Favorite EASTER recipes.**

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## Watching The Process: What Makes Popcorn Pop?



Half the fun of popcorn is watching it turn from a hard, little yellow seed into a white fluffy treat. Few foods take such a dramatic turn as popcorn does while it's cooking. Standing in the kitchen waiting for your popcorn to finish, an awesome spectacle is unfolding before you.

For centuries people have been fascinated by popcorn. Early Native Americans believed a spirit lived inside each kernel of popcorn. When heated, the spirit grew angry, burst out of its home, and fled into the air as a disgruntled puff of steam. A less charming but more scientific explanation exists for why popcorn pops.

Popcorn is a whole grain. It is made up of three components: the germ, endosperm, and pericarp (also known as hull). Of the 4 most common types of corn — sweet, dent, flint, and popcorn — only popcorn differs from other types of corn in that its hull has just the right thickness to allow it to (eventually) burst open.

Each kernel of popcorn contains a small drop of water stored

inside a circle of soft starch. Popcorn needs between 13.5-14% moisture to pop. The soft starch is surrounded by the kernel's hard outer surface.

As the kernel heats up, the water begins to expand. Around 212 degrees the water turns into steam and changes the starch inside each kernel into a superheated gelatinous substance. The kernel continues to heat to about 347 degrees. The pressure inside the grain will reach 135 pounds per square inch before finally bursting the hull open.

As it explodes, steam inside the kernel is released. The soft starch inside the popcorn becomes inflated and spills out, cooling immediately and forming into the odd shape we know and love. A single kernel can swell to 40-50 times its original size! The first bit of starch that emerges forms a "leg" of sorts, which catapults the kernel like a gymnast as the remaining starch spills out. This is why popcorn jumps as it cooks.

From [www.popcorn.org](http://www.popcorn.org)

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## REAL ESTATE AUCTION

SATURDAY, MARCH 30, 2019 — 1:30 PM

DUNLAP, KANSAS (Dunlap is 9 mi. Southeast of Council Grove, KS)

**Neosho River Bottom • MORRIS COUNTY LAND**

**AUCTION LOCATION:** The gymnasium of the old Dunlap school, which is just about across the road from the land being sold.

**LOCATION OF LAND:** 2160 Dunlap Rd. Council Grove, KS. This tract is 9 miles southeast of Council Grove on the Dunlap road, and Northwest of Americus, KS.

**LEGAL DESCRIPTION:** The North Half of the Southeast Quarter of Section Fourteen, Township 17 South, Range 9 East, Morris County, EXCEPT the house and improvements.

There are approx. 73.5 acres being sold. AB Avenue runs along the North side of the property and Dunlap Road is on the East side.

**GENERAL DESCRIPTION:** There are about 57 acres in Neosho River bottom cropland, the balance is river, timber and wildlife habitat. Rock Creek flows into the Neosho at the Northwest corner of the property. There is a paved road to Council Grove.

**INSPECTION:** Any time by calling auctioneer

**TERMS:** \$20,000.00 as earnest money day of auction simultaneous with signing of a purchase agreement. Balance of purchase price to be paid at delivery of merchantable title at closing on or about April 30, 2019. Purchaser will be responsible for 2019 taxes. Possession at closing.

**NOTE: This property has not been offered for sale for generations! Here is an opportunity of a lifetime! See you at the auction!**

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# Simple Ways To Be Heart Smart

Discover recipes chock-full of heart-healthy pecans

(Family Features) — Sometimes making small changes can have a positive impact on your health — including heart health — like drinking more water, taking the stairs instead of the escalator and adding nutritious ingredients to your snacks and meals.

Incorporating nutritious ingredients is an easy way to step up your mealtime — for example, American Pecans can super-charge nearly any recipe by adding flavor and nutrition.

It's always a good time to include heart-healthy ingredients on your shopping list. Certified by the American Heart Association's Heart-Check®, American Pecans and their unique mix of unsaturated fats, plant sterols, fiber and flavonoids add up to help promote a healthy heart. In fact, according to the Food and Drug Administration, research suggests but does not prove that eating 1 1/2 ounces of most nuts, such as pecans, each day as part of a diet low in saturated fat and cholesterol may help reduce your risk of heart disease. One serving of pecans (28 grams) contains 18 grams unsaturated fat and only 2 grams saturated fat.

Boosting the heart-smart punch of your favorite recipes can be easy with pecans. Whether topping a salad, sprinkling into bread batter or using them as the foundation of a portable snack, there are few things America's native nut can't do.

Start the day right with a bowl of Banana Pecan Cherry Oatmeal — a comforting and hearty combination that can keep you full for hours. For a wholesome, on-the-go option perfect for school snacks, desk drawers or an afternoon pick-me-up, try Cherry Pecan Energy Bites. Dried cherries, dates and crunchy pecans combine for an all-natural burst of heart-smart nutrition to help you power through the day.

Discover more ways to create heart-healthy meals with pecans at AmericanPecan.com.



**CHERRY PECAN ENERGY BITES**

Makes: 10-12 energy bites

- 1 cup toasted pecan halves or pieces
- 1 cup dried cherries
- 4 medjool dates, pitted
- 1/4 cup old-fashioned oats
- 1 tablespoon cacao powder, plus additional, for coating (optional)
- 1 teaspoon vanilla extract

## Shape Up Your Snacks

By Cindy Williams, Meadowlark Extension District, Food, Nutrition, Health and Safety

March is National Nutrition Month! What a great time for you and your family to focus on a few healthy eating habits. Here are some tips to help you enjoy some tasty AND healthy snacks and add more vegetables to your diet.

Appeal to their eyes. Veggies will score big with your family when they are enticing and available. Chop vegetables into bite-size pieces for easy eating. Set out two or three colors of vegetables, such as carrots, cauliflower, radishes, celery, tomatoes, cucumbers or broccoli, for a beautiful display. For a special treat, serve with a dip of guacamole of plain fat-free yogurt mixed with low-fat Ranch dressing.

Sneaky snacks. Homemade muffins can be a great way to sneak in some extra vegetables, or fruits, and also get a healthy dose of whole grains. If desired, choose to add grated vegetables, such as carrots or zucchini (or chopped fruit, such as bananas, apples or raisins) for great taste and extra nutrition.

Make it fun. Create "ants on a log" with your child by spreading celery sticks with peanut butter. Top with raisins. Or make "cucumber boats" together. Halve a large cucumber lengthwise. Mix together 1/2 cup plain fat-free yogurt with a pinch of sugar. Spread the mixture into the "boats." Top with two toothpicks speared with 'sails' of cucumber peelings.

Add something unexpected. Homemade kale chips and sweet potato fries are another way to bring great taste to the table. For kale chips, drizzle clean bite-sized leaves with cooking oil, then sprinkle with garlic powder and ground black pepper. Bake on a pan in a single layer at 350 degrees F for 10-15 minutes. For sweet potatoes into strips, toss with cooking oil, garlic powder and ground black pepper. Bake on a pan in a single layer at 450 degrees F for 15 to 20 minutes.

In bowl of food processor, combine toasted pecans, dried cherries, dates, oats, cacao powder and vanilla extract. Pulse until ingredients begin to bind and form loose, dough-like ball. Roll into 1-inch balls. Roll balls in additional cacao powder, if desired, and transfer to airtight container. Refrigerate until ready to serve, up to seven days.

Note: To make gluten-free, substitute 1/4 cup of certified gluten-free old-fashioned oats.

\*Heart-Check certification does not apply to recipes.

Source: American Pecan Council



By Ashleigh Krispense

It seems like there's starting to be a bit of a strawberry theme going on with these recipes! (If you missed the one a couple weeks ago, it was an easy Strawberry Compote.) This is another quick way to use your leftover berries. It's simple to throw together and you'll be amazed at the little tang the ginger adds!

### Quick Strawberry Salsa and Cinnamon Crisps

- Salsa:**
- 2 cups strawberries, washed & diced
- 1 tablespoon sugar
- 1/2 teaspoon ground ginger
- Cinnamon Crisps:**
- Flour tortillas
- Cinnamon sugar
- Cooking Spray



Mix together all of the salsa ingredients in a large bowl and put in the fridge to chill.



Cut the tortillas in wedges (about 6 to 8 from each tortilla) and place on a nonstick (or greased) cookie sheet.



Spray the chips with cooking spray and sprinkle with cinnamon sugar. Bake in a 375 degree oven until turning golden brown and crispy.

Serve warm chips with chilled salsa and enjoy!

Ashleigh is a freelance writer and blogger for her website, Prairie Gal Cookin'



(www.prairiegalcookin.com). She shares everything from step-by-step recipes and easy DIY projects, to local history, stories, and photography from out on the farm in Kansas. Follow PGC online or like it on Facebook for more recipes and ramblings!

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**BANANA PECAN CHERRY OATMEAL**

- 1 cup old-fashioned oats
- 2 cups water
- 1/2 cup pecan milk
- 1 banana, sliced
- 1/4 cup pecan halves
- 1/4 cup dried tart cherries
- 1/4 cup honey

In large, microwave-safe bowl, combine oats and water. Microwave on high 3-4 minutes, or until oats are cooked through. Watch carefully to avoid boiling over. Remove from microwave, stir and divide between two bowls. Pour 1/4 cup pecan milk over each bowl. Divide sliced banana, pecan halves and dried tart cherries between each bowl and drizzle with 2 tablespoons honey. Serve immediately.

\*\*\*

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Every year farmers, ranchers and property owners spend millions of dollars to combat weeds that compete for moisture and soil nutrients on farms and home landscapes alike. For their work and expertise, two Kansas State University professors have been honored by the Weed Science Society of America.

Dallas Peterson and J. Anita Dille were honored at the WSSA annual meeting held in New Orleans recently.

Peterson, a professor and Extension weed specialist, was named a WSSA Fellow for his substantial contributions in the field of weed science. WSSA Fellow awards are presented to no more than 0.3 percent of members in any year. Peterson also serves as the university's agronomy extension state



Dallas Peterson



Anita Dille

leader. In his Extension specialist role, he has developed educational programs and conducted applied research on weed management in field crops. His Extension program has a strong producer and dealer focus, including participation in many public meetings, field

days and demonstrations, delivering approximately 1,500 presentations to more than 70,000 participants during his career. He is the author or co-author of 60 refereed journal articles, 138 Extension publications, 140 research reports, 233 meeting abstracts, and numerous newsletter and press articles.

Peterson is an active member of the WSSA, the North

Central Weed Science Society, the Western Society of Weed Science, and the Council on Agricultural Science and Technology. He has served on numerous committees and in various capacities, including the WSSA and NCWSS boards of directors, CAST board of representatives, and president of both WSSA and NCWSS. He also has served on the Kansas Certified Crop Advisors Board of Directors and works in an advisory role with the Kansas Department of Agriculture and the Kansas Noxious Weed Programs on herbicide registrations and weed management programs.

Peterson has supervised ten graduate students and served on numerous graduate committees, plus helped coach KSU Weeds teams to several high finishes at the summer student contest. He has been recognized with the Outstanding Extension Award

from WSSA, Fellow Award from NCWSS, the Horizon Early-Career and Mid-Career Awards from the Kansas chapter of Epsilon Sigma Phi, and the Excellence in Extension Award from Gamma Sigma Delta at K-State.

J. Anita Dille, professor of weed science and assistant head for teaching, was elected WSSA vice president. Her term begins immediately and will transition in 2020 to president-elect, followed in yearly succession to president and past-president. She has also served as WSSA treasurer.

For the North Central Weed Science Society, Dille has served on the executive committee as the first female vice-president, president-elect, president, and past-president, finishing her term in 2017. In 2018 she received the Outstanding Teacher Award from the WSSA. Dille's teaching responsibilities include three

undergraduate courses as well as a graduate course in weed ecology. She also plays an active role in undergraduate advising and has advised 16 master's and seven Ph.D. graduate students. Her research program at K-State focuses on the biology and ecology of key weed species and evaluating integrated and site-specific weed management programs for Kansas cropping systems.

The WSSA is a non-profit professional society that promotes research, education, and awareness of weeds in managed and natural ecosystems. The society was founded in 1956 and has approximately 2000 members from many different countries. Members of the society include a range of groups including scientists from academia, government, and industry, students, educators, Extension agents, and private producers.

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## Hazardous Occupation Training session planned for 14- and 15-year-old youths

Hazardous Occupation Training (H.O.T.) is required by law for 14 and 15 year-old youth to work with tractors and other farm machinery on a farm other than one owned or operated by their parents. This law does not apply to

youth who work on a farm owned or operated by immediate family members, nor does it apply to youth who are 16 years of age. The K-State Research and Extension-Central Kansas Extension District Office will conduct the only

session this year Tuesday, May 28, 2019 at the Welcome Center at K-State Polytechnic, 2310 Centennial Road, Salina. The training will begin at 8:30 a.m. and conclude at approximately 4:00 p.m. Each student will be required to complete an assignment from course materials prior to the class.

Interested youth can enroll at their respective Extension Office. The Central Kansas

Extension District Offices are located at K-State Polytechnic, 2218 Scanlan Ave., Salina and Courthouse, Minneapolis.

Materials for the course cost \$15 and must be picked up by May 10th. The following information is required at time of enrollment: name of participant, address, birthday, Social Security number (optional), phone number, and the name of the parent or legal guardian.

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**SATURDAY, MARCH 30, 2019 — 10:00 AM**  
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## Kaw Valley Rodeo Association receives Best Footing Award



The Kaw Valley Rodeo Association was awarded the Justin Boots Best Footing Award from the WPRFA for having the best grounds in 2018. They would like to thank KanEquip for sponsoring the tractors to maintain their arena for the rodeo each year. They would also like to thank their barrel racers for nominating them for this award. They are very grateful to have received this award, as it is a difficult one to get. They would also like to thank Larry Feldkamp and crew for the truck to water the arena and for keeping the outside of the arena clean and looking good for each night of the rodeo. They look forward to seeing everyone out this year for the rodeo July 25, 26, & 27, 2019.

## K-State Animal Sciences awarded "Friends of Cats' Cupboard"

The Kansas State University (K-State) Animal Sciences and Industry (ASI) department began a partnership with Cats' Cupboard in September 2018 providing protein options for students in need. Many students who utilize Cats' Cupboard lack the resources to purchase and prepare complete meals. The ASI department provides \$20 vouchers to 80 students per month during the regular semester. Students may use the voucher to purchase ground beef, milk, eggs and hard cheeses at Call Hall Dairy Bar. "We view this as an opportunity to endorse animal proteins as an important part of a healthy diet and to promote these animal proteins as a highly desirable dietary component for students," explains Dr. Evan Titgemeyer, interim department head.

has been selected as this year's cause and donations will benefit the food pantry. Visit [allin.ksufoundation.org](http://allin.ksufoundation.org) on March 27 to make a gift and challenge others to do the same. For more information about All In for K-State, visit [www.ksufoundation.org/AllInforK-State](http://www.ksufoundation.org/AllInforK-State). The mission of Cats' Cupboard is to provide access to nutritious food and support through initiatives that promote health, success and well-being. Its vision is to prevent food insecurity from being a barrier to student success. Cats' Cupboard is located in 009 Fairchild Hall and is open six days a week: 5-7 p.m. Sundays; noon to 7 p.m. Mondays; 9 a.m. to noon and 1-5 p.m. Tuesdays; 1-5 p.m. Wednesdays; 9 a.m. to 5 p.m. Thursdays; and 9 a.m. to noon Fridays.

# One tiny step for a nematode, one big step toward sustainable agriculture in space

**By Sharon Durham**  
An exciting collaboration between the U.S. Department of Agriculture's Agricultural Research Service (ARS) and Pheronym (Alachua, FL), will send nematodes (small round worms) into space to the International Space Station (ISS). The mission represents a look into the future where food crops will be grown in space. The goal is to develop environmentally friendly methods for space travel that are not harmful to humans. This will be the first biological control experiment in space. The nematode's send-off, funded by the ISS U.S. National Laboratory, hopes to launch to the orbiting platform as early as 2019.

ARS research entomologist, David Shapiro-Ilan at the Fruit and Tree Nut Research Station in Byron, Georgia, is co-project director of an experiment that will be conducted on the ISS. The experiment will test the movement and infection behavior of beneficial nematodes (also called entomopathogenic nematodes or EPNs) that control a wide array of insect pests in agriculture. Nematodes are environmentally friendly alternatives to broad spectrum chemical insecticides and are also safe to humans and other nontarget organisms. One fascinating aspect of the EPN biology is that the nematodes kill their insect pest hosts with the aid of symbiotic bacteria that are carried in the nematode gut.

For more than 20 years, Shapiro-Ilan has studied EPNs from a practical standpoint such as improving their application as biological control agents for sustainable pest management. Shapiro-Ilan also conducts related research on basic aspects of EPN behavior, particularly movement and foraging behavior.

Shapiro-Ilan said, "The mission to space will offer a novel perspective and provide new insights into nematode behavior; the unique microgravity environment will allow us to explore fundamental mechanisms in parasitism and pathogenesis." The questions to be addressed regarding the effects of microgravity include: the ability of EPNs to navigate through soil, infect insects and reproduce, and will the nematodes' symbiotic bacteria function normally. They will also ascertain if the impact on insect host physiology is the same compared with what is observed on earth.

address these questions, sealed soil columns containing nematodes and a model target pest (waxworms, *Galleria mellonella*) will be sent into space for 30 days.

Shapiro-Ilan was a partner in designing the experiments that will be conducted on the International Space Station and he will play a key role in assessing results. Results will then be assessed once the nematodes return to earth. Control experiments with the same design will be conducted concurrently on earth for the same duration.

The nematode space mission project director, Fatma Kaplan, is the CEO of the company, Pheronym, an established cooperative research partner with USDA-ARS. Pheronym develops and produces nematode pheromones that can be used to direct EPN behavior (such as dispersal); the goal is to use the pheromones to enhance biocontrol efficacy.

Shapiro-Ilan and Kaplan (and other partners) are funded by USDA's National Institute of Food and Agriculture (NIFA) to explore production and application of nematode pheromones, and from NIFA's Agriculture and Food Research Initiative to investigate basic mechanisms in nematode movement and infection behavior. The ability of nematodes to produce and respond to pheromones under microgravity will also be explored

in the space station experiments. "This project of sending worms into space, which is being funded by the International Space Station U.S.

National Laboratory, is a natural offshoot of the cooperative research between USDA-ARS and Pheronym," said Shapiro-Ilan.

## Quality Beef Day planned for April 13

The 59th Annual Quality Beef Day will be held on Saturday, April 13, at Hedstrom Hall in Marysville. Check-in will begin at 8 a.m., livestock judging at 9 a.m., and the Beef show will begin at 10 a.m. There is no entry fee or pre-entries required. The Quality Beef Day committee would like to thank all the local businesses that sponsor the awards. Rules and entry forms can be found at [www.marshall.ksu.edu/quality-beef-day](http://www.marshall.ksu.edu/quality-beef-day). For more information about Quality Beef Day, contact the Marshall County Extension Office at (785) 562-3531, or E-mail at [anastasia@ksu.edu](mailto:anastasia@ksu.edu).

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To ensure America's dietary guidance reflects the latest science, U.S. Secretary of Agriculture Sonny Perdue and U.S. Health and Human Services (HHS) Secretary Alex

Azar have announced the appointment of 20 nationally-recognized scientists to serve on the 2020 Dietary Guidelines Advisory Committee. The independent advisory committee

will review scientific evidence on topics and questions identified by the departments and will provide a report on their findings to the secretaries. Their review, along with pub-

lic and agency comments, will help inform USDA and HHS' development of the 2020-2025 Dietary Guidelines for Americans (DGAs).

2 diabetes, and cardiovascular disease, which are three of the leading causes of death in the United States."

interest to attend public meetings and to send comments through the Federal Register once the committee begins their work."

The next edition of the Dietary Guidelines for Americans will continue to focus on dietary patterns of what Americans eat and drink as a whole, on average and over time, to help prevent disease and keep people healthy. Additionally, the review process will take a life-stage approach and will, for the first time, include pregnant women and children from birth to 24 months as mandated by the 2014 Farm Bill.

The Dietary Guidelines for Americans are updated every five years and serve as the cornerstone of federal nutrition programs and policies, providing food-based recommendations to help prevent diet-related chronic diseases and promote overall health.

## Nebraska ag losses from flooding estimated close to \$1B

(AP) – The Nebraska Farm Bureau president says farm and ranch losses to the devastating flooding could reach \$1 billion in the state.

President Steve Nelson estimates \$400 million in crop losses because of crops that will be planted late – if at all. He also estimates up to \$500 million in livestock losses as the state struggles with swollen rivers and breached or overtopped levees following heavy rain and snowmelt.

He told the *Omaha World-Herald*, "That gets us close to a billion dollars. I would not be surprised to see the lost agriculture numbers go over a billion dollars."

Agriculture amounts to 20 percent of the state's gross domestic product and provides one of every four jobs.

The Nebraska Emergency Management Agency says the current public impact of flooding in Nebraska is \$205.5 million and the private impact is \$59.7 million.

# 52<sup>nd</sup> Annual Five Star Pig Sale

**Sunday, April 7, 2019**  
**Bid-Off Sale - 3:00 PM**  
**646 2500 Avenue, Abilene, KS**  
**25 Duroc, Chester, Crossbred Barrows & Gilts**

**Directions:**  
**West on I-70 from Abilene, 3 miles to Exit 272, North on Fair Rd. 1.5 miles, West on 2500 Ave. 1/2 mile.**

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# Sustainable Intensification Innovation Lab at K-State establishes SOILS Consortium with global partners

Three global leaders in agricultural research and international development are joining together to improve livelihoods of the world's poorest populations by increasing soil fertility.

The Feed the Future Innovation Lab for Collaborative Research on Sustainable Intensification (SIIL) at Kansas State University, the International Fertilizer Development Center and the United States Agency for International Development jointly committed to the creation and support of a consortium called the Sustainable Opportunities for Increasing Livelihoods with Soils.

The primary goal of the SOILS consortium is improving the soil fertility in the most vulnerable regions of sub-Saharan Africa.

"Healthy soil is key for producing healthy plants and healthy animals, which will ultimately lead to healthy

humans," said Vara Prasad, K-State University Distinguished Professor and director of SIIL. "Fertile and healthy soils are the foundation for nutritious food production and important for resilient and sustainable livelihoods."

The consortium will bring together important national and international partners in developing and implementing soil health and fertility-enhancing innovations across large geographical regions.

"The SOILS consortium will provide a global platform to bring multidisciplinary teams of scholars from biological sciences, social sciences, policymakers and donors to discuss and identify holistic solutions and develop a road map toward enhancing soil fertility and restoring the health of our soils," said Jerry Glover, senior sustainable agricultural systems advisor for USAID.

Through innovative research, coordination, capacity building, networking, data sharing and communication approaches, the SOILS consortium will work to provide sustainable solutions to build resilient households with access to nutritious food.

Zach Stewart, SOILS consortium program manager and research assistant professor with SIIL, believes the consortium model is critical for achieving these goals.

"Though there have been numerous initiatives aiming to improve soil fertility in sub-Saharan Africa, they have often been siloed and limited in duration, and often duplicated due to limited coordination," he said. "The SOILS consortium aims to bring together leading soil health activities across major production zones in sub-Saharan Africa, and through synergies with these key partners, to help develop

unified regional strategies to improve soil health."

Upendra Singh, director of research at IFDC, says nurturing healthy soils is crucial to healthy people, countries and environment. "Increasing efficiency, sustainability and resilience of agricultural systems requires inter- and trans-disciplinary approach that the SOILS Consortium provides through its vision and core partners," Singh said. "People across all walks of life are beginning to realize that healthy and fertile soils are key to political stability, food and nutritional security and environmental stewardship. This further highlights the timeliness of the SOILS Consortium."

By combining the strengths of each of the partners' organizations, the SOILS Consortium will implement a holistic training and support system with measurable impacts for success. In order to provide a sustainable solution to increase the long-term benefits of soil health and household nutrition, the consortium will

use technical training to improve inorganic fertilizer systems and encourage organic material usage to strengthen legume and agroforestry systems and to enable producers to access markets through new technology and practices.

The SOILS Consortium was officially launched March 15 in Washington, D.C., by Albin Hubscher, IFDC president and CEO, and Rob Bertram, chief scientist of USAID's Bureau for Food Security.

"The SOILS consortium brings together IFDC's leadership and global reach with some of the nation's leading research universities, creating a platform to tackle critical soil fertility challenges that are limiting progress in achieving food security and reduction of extreme poverty, especially in sub-Saharan Africa," Bertram said.

At the launch, Hubscher highlighted the IFDC's vision and outlined how it has focused on increasing and sustaining food security and ag-

ricultural productivity in more than 100 developing countries through the development and transfer of effective and environmentally sound crop-nutrient technology and agribusiness expertise.

"The IFDC is excited to support the SOILS consortium and is looking forward to actively engaging with all partners to improve soil fertility," he said.

Initial partners in the SOILS consortium are: United States Department of Agriculture, the University of Colorado; the University of Nebraska, Michigan State University, and Auburn University. The consortium will be expanded based on the need and strengths of the other organizations.

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## Miami County Livestock Show to be held May 4

The Miami County Livestock Association will again be sponsoring the Miami County Livestock Show at the Miami County Fairgrounds on May 4th, 2019. The Miami County Livestock Association has sent out letters for donations to the show so that we can keep the cost reasonable for all exhibitors. If you would like to contribute to this show for 4-H and FFA exhibitors you may send to MCLA, c/o Kyle Dye, 28528 Pressonville Rd, Paola, KS. 66071. All contributors will get their name listed on the arena banner and names will be announced thru out the show.

The following classes will be available, market beef (steers and market heifers), breeding heifer classes will be determined after entries), bucket calf, market lambs, market and breeding goats, and showmanship classes Jr (7-9) Intermediate (10-13) and Senior (14-18).

Beef weigh-in is 7:00 through 8:30 a.m. Bucket calf show will begin at 9:00 and Heifer show will follow the bucket calf class. The beef showmanship will follow the heifer show. Then following the beef showmanship will be the Market Beef show. Lamb weigh-in is from 11:00 to Noon and the show will start 30 minutes after the market beef show. Goats weigh in from noon to 1:00 p.m. and the goat show will follow the conclusion of the lamb show.

Pre-entries are due April 29, 2019 and late entries are accepted. This year's grand and reserve winners will receive belt buckles for the grand and reserve market beef, supreme and reserve supreme heifer, grand and reserve market lambs, grand and reserve market goats. There will be prizes for the class winners and showmanship winners. For more information you can contact Kyle Dye 913-731-3011 or Cathy Webster at 913-594-2276. Check out Miami County Spring Livestock Show's Facebook page for information.

## REAL ESTATE & INVENTORY AUCTION BUSINESS LIQUIDATION SATURDAY, APRIL 6, 2019

Holton Lumber Company • 415 Michigan Street — Holton, Kansas  
**REAL ESTATE AUCTION BEGINS AT 10 A.M. • FOLLOWED BY INVENTORY, VEHICLES & EQUIPMENT**

**DIRECTIONS:** From Jct. 75 & 16 Hwy in Holton, KS, (Stoplight) East on 4th Street, go approx. 10 Blocks east thru stoplight and square to Holton Lumber Company.

**Description of Property:** Approx. 1.64 acres, m/l, perimeter fenced real estate. Main building (1200 sq. ft.) has sales area, 4 private offices, kitchen with appliances, 2 restrooms. Zoned Light Industrial, which offers various opportunities for other businesses or continue as lumber yard. Approx. 728 sq. ft. building located on 4th street (not fenced) is rented, month to month for \$400. Existing tenants desire to remain in said location OR, will be given notice in real estate contract, 90 days to vacate said space from date of closing.

**Sale does NOT include existing businesses. 2018 Taxes:** \$5,474.50  
**TERMS:** Day of sale, the successful bidder will be required to enter into a real estate purchase contract and provide an earnest deposit of 10% of sale price. Balance due in certified funds at closing. Closing and possession will be on or before April 30, 2019 unless additional time is needed to provide marketable title. Sale is not subject to Finance. 2019 Taxes will be prorated to day of settlement based on the 2018 taxes. Seller is responsible for all taxes prior to 2018. Owner's policy of title insurance cost & closing fee, to be split equally between buyer and seller.

Any inspections buyer deems necessary must be completed prior to sale. Sold subject to existing leases, zoning, easements, restrictions, reservations and roads of record. Selling all real estate "as is" and the suitability of this property for any particular purpose is not guaranteed. Neither Seller nor Harris Real Estate, its agents or representatives are making any warranties about the property, either expressed or implied. Harris Real Estate and its agents and representatives are exclusive agents of the seller. Building sizes based on county appraisers' records.

Holton Lumber Company will continue to do business until March 22. After that time, a detailed list of inventory items for auction will be available.

- EQUIPMENT & INVENTORY**  
 10x12/3' Porch Building On Skids; 2 Paint Shakers; Scale; B&D Chop Saw; Copy Machine; Fax Machine; Dewalt Radial Arm Saw; 2 Cash Registers; Diesel Barrel & Stand; Shingle Ladder; Insulation Blowing Machine; Sears Radial Arm Saw.
- VEHICLES & FORKLIFT**  
 • 2003 Ford F350/12' bed/electric over hyd hoist, AT, Triton V10, 145,000 miles  
**Complete List of Inventory Will Be Added After March 22. Please Check Website For Updated Inventory List. Sales Tax Of 8.65% Will Be Charged On All New Inventory Purchases.**  
 Announcements day of sale take precedence over all other material, printed, online or otherwise.
- 1997 Chev. C7500/ 18' bed & hoist, V8 gas, 177,500 miles
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<p>at <b>Hepler Community Building</b>                  105 N Prairie Ave • Hepler, KS</p> <p style="text-align: center;"><b>April 1st</b>                  registration starts 11:00 am</p> <p><b>RSVP by March 28th</b>                  with Kyra O'Brien                  kyra.obrien@merck.com  <b>620-724-2639</b></p>	<p>at <b>Pottorf Hall:</b> Cico Park                  1710 Avery Ave • Manhattan, KS</p> <p style="text-align: center;"><b>April 2nd</b>                  registration starts 11:00 am</p> <p><b>RSVP by March 28th</b>                  with Troy Warnken                  troy.warnken@merck.com  <b>785-259-3888</b></p>
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**Speakers include:**

<p><b>Dr. Tim Parks</b> Merck Animal Health</p> <p><b>Dr. Dan Thomson</b> Kansas State University</p>	<p><b>Dr. AJ Tarpoff</b> Kansas State University</p>
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# AUCTION

**TUESDAY, APRIL 2, 2019 — 3:00 PM**

Auction will be held in Kenwood Hall at the Saline Co. Fairgrounds in SALINA, KS

**ART**  
 Sandzen (1928 Blue River linoleum cut block, Kansas Homestead; Cottonwoods litho, Along Smokey Hill River; Bank pictures "Kansas Pioneer Home, The Chisholm Trail, Summer Landscape, Eisenhower Home, Kansas Farm, Hillside Farm, post-cards); 4 Rogers prints inc: Archway Of Trees, Morning Pond; Herschel Logan "Old Henry House"; Wildlife oil done by 6 people; Diane Lawrence "Sleepy Kittens"; Douglas Fulks "The Ghost II"; Jack Barber "Flight"; Maleta Forsberg "Winter Stroll".

**ANTIQUES, COINS & COLLECTIBLES**  
 Hand carved ducks & birds (Kim Kyrst, Eugene Felarty, Gary Cooper, Jim B); Bruce Taylor fish; Meitler bird; Legacy statue; Montana Lifestyles "Lookin Back"; western statue; Peters & Winchester boxes; deer bookends; duck & bird collection; Franklin Mint Colt 45 gun pictures; Singer Feather weight sewing machine; sterling & plate silverware sets; assortment flatware; tea sets; German silverware; fancy work; spoon collection; kerosene lamps; Aladdin lamps; marbles; mantel & regulator clocks; head vases; flow blue plate; assortment pressed & other glass; perfume bottles; Lennon plates; child's dishes; 50's pitcher & glasses; cake stand; Precious moments; Lenox birds; dolls; assortment costume jewelry; comic book collection; 1/16th tractors & equipment; puzzles; Legos; cast iron bear; toy cannons; key gun; 45 records; guitar; Seiko watch; butter mold; Civil War, gun & Western books; sheet music; Sears catalogs; COINS inc: 1834 1/2 cent gold; 1838 & 1887 large cent; 1851 3 cent silver; 1857 1/2 dime; 1898 Indian head; 1865 3-cent nickel; 1912 Liberty nickel; 1776 Janus Copper 1/2 cent; seated dimes; wheat pennies; buffalo & V nickels; silver dimes, quarters & half dollars; assortment of other coins; yardstick collection; Firestone sign; assortment of other signs; clocks; other collectibles.

**TOOLS**  
 Craftsman 13 drawer stack tool box; Rockwell jig saw; electric tools; large assortment of hand tools mostly Craftsman; 1/4", 1/2" & 3/4" sockets; torque wrenches; combination wrenches; bolt cutters; pliers; screw drivers; hammers; bench grinder; Wen drill press; parts cabinet; yard tools; large assortment of other tools.

**HOUSEHOLD & FURNITURE**  
 Tea cart; child's desk & chair; rocker; standup mirror; hall bench; console radio; wood highchair; child's rocker; sewing rocker; TV stand; wicker chair & mirror; desk & chair; 5' & 6' folding tables; large amount of sewing, material, supplies & buttons; kitchen items; decorative items; brass & copper; books; VHS tapes; assortment of other items.

**Note:** We have combined 2 estates to make a very nice auction. We will sell the art at 6:00 p.m. There are many quality items on this auction. Check our web site for pictures at [www.thummelauction.com](http://www.thummelauction.com).

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