



Kansas State University partners with new Feed the Future Innovation Lab for Crop Improvement

Kansas State University is a partner on an international team that includes U.S. universities and national institutes in a new global crop improvement research program to advance plant breeding tools, technologies and methods aimed at delivering crops that can increase yields, enhance nutrition and have greater resistance to pests and diseases. The work will be through the new Feed the Future Innovation Lab for Crop Improvement.

The innovation lab will create an integrated research and delivery program with multidisciplinary expertise in advanced agricultural development, from plant breeding and machine learning to quantitative genetics and gender inclusion. The project will support and empower national breeding programs in East and West Africa, South Asia and Latin America and serve as a model for introducing advanced agricultural technologies at scale to countries around the world. The five-year, \$25 million grant from the U.S. Agency for International Development, as part of the U.S. government's Feed the Future initiative, was announced Oct. 16 at the World Food Prize in Des Moines.

Experts from Cornell University, Clemson University and Kansas State University, along with scientists at the U.S. Department of Agriculture, Makerere University in Uganda, Cultural Practice and RTI International, will initially collaborate with national agricultural institutions in

Ghana, Haiti, Nepal, Senegal and Uganda to accelerate the breeding of locally and regionally adapted crop varieties targeted to smallholder farmers. The Innovation Lab for Crop Improvement will be a catalyst for delivering improved tools, technologies and methods for breeding crops such as legumes, roots, sorghum and millet, with the potential to expand to a variety of staple crops in other countries.

The Innovation Lab for Crop Improvement is under the direction of Stephen Kresovich, professor of plant and environmental sciences at Clemson University. Kansas State University's Jesse Poland, associate professor of plant pathology, will serve as one of the new lab's phenomics program leads, and Geoff Morris, associate professor of agronomy, will serve as the lab's trait discovery program lead.

"We are in a critical point in history where booming population growth, climate change and other environmental factors are exposing threats of global food insecurity at an unprecedented scale," Kresovich said. "Improved varieties of key food crops are one of the surest avenues to reducing risks from economic, environmental and climatic shocks for millions of people in vulnerable and resource-poor populations."

"The improvement of crop varieties is happening at a rate of about 1% per year around the world. This is good progress, but we need to see a rate of gain



Jesse Poland, associate professor of plant pathology at Kansas State University, will serve as one of the phenomics program leads for the Innovation Lab for Crop Improvement.

above 2% per year to keep pace with increasing global population demand," Poland said. "Here at K-State, we will be partnering with national programs to help implement rigorous scientific inquiry to address the constraints of crop productivity."

Currently, plant breeders at national agricultural research institutions develop locally adopted crops using breeding lines first created by scientists in that country and in coordination with the international coalition of food security research programs known as Consultative Group for International Agricultural

Research centers. National institutions are positioned to address product profiles, market demand and environmental factors through the development of new varieties, but these programs are often underfunded and

lack access to critical tools, technologies and methods needed to increase useful genetic diversity in crops and introduce varieties that advance economic growth, climate resilience and nutritional development goals.

"One of the biggest challenges is that many imported technologies seem promising but never make it to farmers' fields," Morris said. "The Innovation Lab for Crop Improvement philosophy starts by learning from smallholders and national scientists — then working together to develop and test new technologies. The true innovations will be driven by national scientists and their farmer cooperators."

The Innovation Lab for Crop Improvement will work with national agricultural research institutions to gain access to advanced tools, technologies and methods with the potential to accelerate development of crop varieties. Genomic resources allowing for the rapid discovery of novel plant traits will be combined with data-based simulations and optimization techniques to increase the efficiency of plant trait selection, breeding and va-

rietal release. By building capacity and commitment through targeted investments in national programs and collaboration with scientists at top U.S. land-grant universities, the Innovation Lab for Crop Improvement anticipates quick gains in productivity, quality and climate resiliency and reductions in poverty, gender inequality and undernutrition. Competitive research grants provided by the lab will encourage innovation and unlock opportunities for in-country scientists. The ambitious project has the potential to improve staple crops consumed by millions while also addressing vexing challenges like youth involvement, nutrition and food safety in developing countries.

Along with its partnership in the Innovation Lab for Crop Improvement, Kansas State University is home to four Feed the Future Innovation Labs: Innovation Lab for Applied Wheat Genomics, Innovation Lab for Collaborative Research on Sorghum and Millet, Innovation Lab for Reduction of Post-Harvest Loss and Innovation Lab for Sustainable Intensification.



NASCAR driver Clint Bowyer, center, completed 267 laps at the October 20 NASCAR race to fund an FFA scholarship.

DeKalb[®] brand, FFA and NASCAR driver Clint Bowyer present scholarship

NASCAR driver Clint Bowyer, the National FFA Organization and DeKalb[®] brand corn teamed up to help students cross their "finish line" with the new Left Turns for Learning agricultural scholarship. Driver Clint Bowyer completed 267 laps during the Kansas

Speedway NASCAR race on October 20 to fund a \$10,138 FFA scholarship.

Local FFA students from Bowyer's hometown area were invited to an exclusive experience at the race. Students were able to participate in the DeKalb Champions of Yield festivities, including a trivia game with driver Clint Bowyer.

"With the cost of education, the Left Turns for Learning scholarship provides kids additional opportunities they normally wouldn't have," said Southern Lyon County FFA advisor Staci Garriott. "Clint is a local in the area, and he does phenomenal work supporting his hometown community. It's exciting for the kids to meet and interact with him at the race. He continues to do great things for the kids, and this is evident with his involvement in this scholarship program."

"There's nothing better than taking the No. 14 DeKalb Ford Mustang to

the track to directly benefit ag students," said Bowyer. "DeKalb is a consistently high-performing brand, so it's an honor to work with category leaders dedicated to performance, technology and helping current and future farmers succeed."

The Left Turns for Learning Scholarship was created by DEKALB and Asgrow to help students achieve their goals and advance the agriculture industry by focusing on performance. The scholarship amount was determined by the number of laps Bowyer completed with the No. 14 DeKalb Ford Mustang.

"We're really excited to partner with the National FFA and Clint to invest in the future of ag," said Pete Uitenbroek, DeKalb Asgrow Brand Marketing Lead. "For one selected student, this scholarship not only helps them reach their 'finish line,' but also illustrates how superior performance is driven by innova-

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K-State Collegiate Crops Team at the Australian Universities Crops Competition included, from left: Wes Jennings, Nate Dick, Jayden Meyer, Madison Tunnell, Luke Ryan, Blake Kirchoff, Dr. Kevin Donnelly, coach.

K-State student wins top honors, team takes second place in Australia crops competition

A Kansas State University student took top honors and the K-State Crops Team placed second in the Australian University Crops Competition recently. The event was hosted by the Australian Grain Growers organization and was held at the University of Adelaide in South Australia.

Luke Ryan, junior in agronomy from Solomon, won top individual honors overall.

The University of Sydney placed first in the team competition, K-State placed second, and Charles Sturt University from Wagga Wagga, Australia, was third.

Three students from South Dakota State University traveled with the K-State team and participated in the competition. The teams competed against agricultural universities from across Australia.

K-State Crops Team members making the trip included top winner Luke Ryan, plus Jayden Meyer, Smith Center, junior in agricultural economics; Wes Jennings, Abilene, senior in agronomy; Nate Dick, Inman, senior in agronomy; Madison Tunnell, Olathe, junior in agronomy and Blake Kirchoff, Hardy, Nebraska, junior in agronomy. The team was accompanied by coach Kevin Donnelly, professor of agronomy. This was the fifth trip for the K-State team since 2012 to participate in the Australian competition.

Ryan, Meyer and Jennings were awarded a stipend from the American Society of Agronomy to cover part of their travel expenses as a result of previously placing in the top three at the U.S. Collegiate Crops Contests in Kansas City and Chicago last November. Additional sponsors of the K-State team were Kansas Grain Sorghum, Kansas Corn, Syngenta, and the K-State Department of Agronomy. The College of Agriculture also provided an international travel scholarship to the K-State students.

The trip was a combination of work, learning and sightseeing, which also proved educational for the students.

The competition portion spanned three days at the University of Adelaide's Roseworthy Campus. The contest included a seed identification section, three exams over production of selected Australian crops, a business management problem, field yield estimates and management recommendations, and a live crop, weed and disease evaluation component.

Before the competition, the group spent a day touring tropical agriculture in Queensland, learning about bananas, coffee, avocados, and sugar cane, and visited a large grain farm in South Australia featuring mixed cropping of wheat, canola and pulses. After the contest, they visited a sheep farm, a cherry orchard, a vineyard, and an apple orchard and processing facility in the Adelaide Hills area. They also travelled to Kangaroo Island, visiting grain farms and KI Pure Grain, the island's major cooperative grain handling and export business. Learning about canola and Australian white wheat production, ryegrass herbicide resistance problems, and the use of pulse crops such as lentils and fava beans in crop rotations were highlights for the U.S. teams.

The students also took a snorkeling trip to the Great Barrier Reef at Cairns, with a visit to Sydney Harbor and the Sydney Opera House on the trip to Adelaide. After the contest, they spent two days touring Kangaroo Island. Highlights were observing the majestic coastal rock formations, beaches with seals and dolphins, and kangaroos and koala bears in the wild.



Meet Me in Manhattan

By Glenn Brunkow, Pottawatomie County farmer and rancher

What are your plans for Dec. 1-3? Don't tell me it is too early to plan that far out. Hobby Lobby has its Christmas decorations on sale, and pumpkin spice is everywhere. Let's be honest. That isn't very far away given that we are in the middle of harvest and mov-

ing cows home for the winter. I am sure the next four or five weeks will slip by fast.

So why are the first three days in December so important? It is the Kansas Farm Bureau Annual Meeting in Manhattan, and we will be celebrating more than 100 years of Kansas Farm Bureau. More importantly we will be looking at the next 100 years. Annu-

al meetings are always a big event, but this year's promises to be one of the biggest and best. You are not going to want to miss it, and that's why we are making plans six weeks out.

If you have never attended a KFB Annual Meeting you really need to. If it has been even a couple of years since you last attended, you have missed out. Full days are planned with awards and recognition for the good work all our counties do on behalf of agriculture. You will be briefed on the latest from Topeka and Washington.

Sunday, we kick off with a town hall meeting featuring

our elected officials and a banquet where we are recognizing some of our best farm families. On Monday, workshops will be offered that will appeal to all interests - I promise. General sessions will include timely topics and outstanding speakers. Tuesday is the business meeting where members finalize the policy book to guide the organization for the upcoming year. It is probably the most important day of the year in our organization. Kansas Farm Bureau packs a lot into three days.

I must be honest; the best part of annual meetings is outside of the meeting rooms and banquet halls. It's a time

for networking and seeing old friends. Often in agriculture we work long days where we don't have much time to talk to anyone outside of family members, the guys at the parts counter or the vet. Annual meeting gives us a chance to talk to fellow farmers and ranchers from every corner of the state. It is a time to remember that we aren't in this alone. It's a chance to share ideas and more importantly stories with others who understand our rural lifestyle.

I hope you will take the time to make plans to attend the annual meeting. I promise you won't be disappointed. Take a minute, flip the calendar

up to December and pencil in those three days. They will be here before you can say "pumpkin spice latte." It is our time to take an active role in the life of our organization; one that has been the bedrock of agriculture for the past century and an organization poised to be the leader for the next 100 years.

"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.

Gove County district court finds GMD 4 LEMA constitutional

A district court in western Kansas has ruled that the chief engineer of the Kansas Department of Agriculture Division of Water Resources acted properly in approving a water management tool proposed by the Northwest Kansas Groundwater Management District No. 4 (GMD 4) to aid in local conservation efforts to extend the life of the Ogallala Aquifer. On October 15, 2019, the Gove County District Court upheld the adoption of a Local Enhanced Management Area (LEMA) in much of the district.

The case, Friesen v. Barfield, was filed under the Kansas Judicial Review Act after two public hearings were held by Chief Engineer David Barfield who then approved adoption of the LEMA. The case was brought by multiple petitioners who are required under the LEMA plan to reduce the amount of groundwater withdrawn over the next five years. Petitioners challenged whether the reductions in water use can be made without those

cuts being based on priority (date the water right was approved) and generally challenged the lawfulness of any cuts or use of a LEMA.

In 2012, Groundwater Management Districts were granted the authority to recommend the adoption of a LEMA in order to implement local water conservation goals through the adoption of control measures recommended in their plan when conditions demonstrate a threat to groundwater levels, rate of withdrawal, or water quality. The LEMA process involves meeting specific statutory requirements and holding public hearings before approval by the chief engineer. A LEMA management plan typically requires reductions in water use to achieve the water conservation goal, aimed at extending the life of the local aquifer.

In the case of Friesen v. Barfield, plaintiffs challenged both the specifics of this management plan and the constitutionality of the LEMA statute in general. The court ruling this week found

that the "GMD 4 District Wide LEMA should be upheld. The LEMA Plan restrictions do not appear to be unconstitutional on their face or as applied. There is substantial evidence backing the agency's decision and therefore it is not arbitrary or capricious."

The first LEMA in Kansas, known as the Sheridan 6 LEMA, was approved in 2012 in the Sheridan County area. It was extended in 2017 for the years 2018-2022 after data from the Sheridan 6 LEMA strongly indicated that the water use goals in the area were met, and that significant indicators showed the conservation efforts had slowed the decline of the water table in the region. "The LEMA has been a very successful tool for our district and we plan to utilize them to extend the life of the aquifer," said Shannon Kenyon, GMD 4 district manager.

For more information about LEMAs in Kansas, including more detail about the GMD 4 LEMA, visit agriculture.ks.gov/LEMA or call KDA-DWR at 785-564-6640.

Protein plays an essential role in global nutrition

By 2050, the world population will reach an estimated nine billion people, creating demand for protein that is much higher than it is today. To nourish society as a whole, U.S. Soy, in concert with animal agriculture, plays an important role in global food security by offering a reliable supply of high-quality protein. Together, it's a powerful source of nutrition to fuel our population and economic

growth. Recently at the Borlaug Dialogue International Symposium, as part of the World Food Prize, the United Soybean Board joins the American Soybean Association, Iowa Soybean Association and World Initiative for Soy in Human Health (WISHH) to discuss U.S. Soy's commitment to global food security. A major part of nourishing our global society is priori-

tizing protein on everybody's plate. Whether it's animal or plant protein, high-quality and nutrient-dense protein works better collaboratively than it does separately.

"In the grand scheme of things, when all proteins are part of a balanced diet and work collaboratively to nourish the world, everyone wins," says Polly Ruhland, CEO of the United Soybean Board. "Collaboration between ani-

mal- and plant-based proteins bolsters our ability to serve our shared global protein market. Together we can answer the many critical challenges facing our world: nourished versus malnourished, environmental improvement versus degradation, confident customers versus doubtful ones."

In addition to animal protein, U.S. soy will be pivotal to these efforts. Soy as a complete plant protein, containing

an adequate proportion of each of the nine essential amino acids necessary in the human diet, serves not only as a primary source for high-quality animal feed, but also a growing direct source of protein for people.

"Thanks to the visionary soybean farmers who founded WISHH 20 years ago, U.S. soybean growers have real-world experience in connecting trade and development

in Africa, Asia and Central America," says Liz Hare, WISHH executive director. "Together with our strategic partners, we ensure that more protein reaches these growing populations through nutritious and delicious foods ranging from soy inside tortillas and bread to feed for fish, poultry and livestock."

U.S. soybean farmers play a critical role in providing a sustainable protein with the growing population. As a pledge of stewardship to the air, water and soil, farmers representing the United Soybean Board, American Soybean Association and U.S. Soybean Export Council committed to goals for improvements on four key metrics between 2000 and 2025. These goals include a reduction in soil erosion by 25%, as noted in the Soybean Sustainability Assurance Protocol, in addition to improvements related to greenhouse gas emissions, land use and energy use.

"Our commitment to feed the world in a nutritious and sustainable manner is taken very seriously and is of intrinsic importance to all U.S. soybean farmers," says John Heisdorffer, ASA chairman and Iowa farmer. "Soy is part of the larger solution to nourish our population."



We bought the old Ford pickup in 1998. I guess back then it wasn't the old Ford pickup, it was only a couple of years old and had less than thirty thousand miles on it. We were lucky to get a good deal on it. It was the year the body styles changed on Ford heavy duty pickups and the previous owner just had to have the newest one out there. Then a hailstorm came through and we didn't mind a few dents, so the black and gray pickup came home to live with us.

It was the first major purchase we made as a married couple. I had bought a new pickup the year we started dating and while it had been a good truck, we needed something that was going to be a farm pickup and family roadster. After extensive research we knew what we wanted and just how much we could pay, and the black and gray Ford fit the bill.

We were awfully proud of the truck, and we should have been. In its day it was a striking pickup that took nearly two parking spots and needed half a block to turn around. We had Isaac at the time and the car seat fit in the backseat, even though it took a little bit of acrobatics to get it in there. The truck was somewhat pampered the first couple of years; sure, it pulled the trailer and occasionally took hay out to the cows, but for the most part we kept it spotless and polished up.

When Tatum came along the need for something with four doors became painfully obvious and along came our first car. That was when the old Ford turned the corner and officially became a farm truck. It wasn't like Dad's old beat up feed pickup, it was still shiny and relatively new, but it did start to see more muddy days with dust on its dash.

That was about the time we put the bale bed on the old Ford. At first, we admired how practical and tough the bed made the Ford look. It could handle two bales at a time like it had nothing back there. While it wasn't our family vehicle, it still made many trips to town and our whole family could fit in it. Well, they kind of fit in it; the old Ford was just an extended cab with no third or fourth door and limited leg room.

The limited leg room was not a big deal at all when the kids were young but soon the backseat seemed to shrink

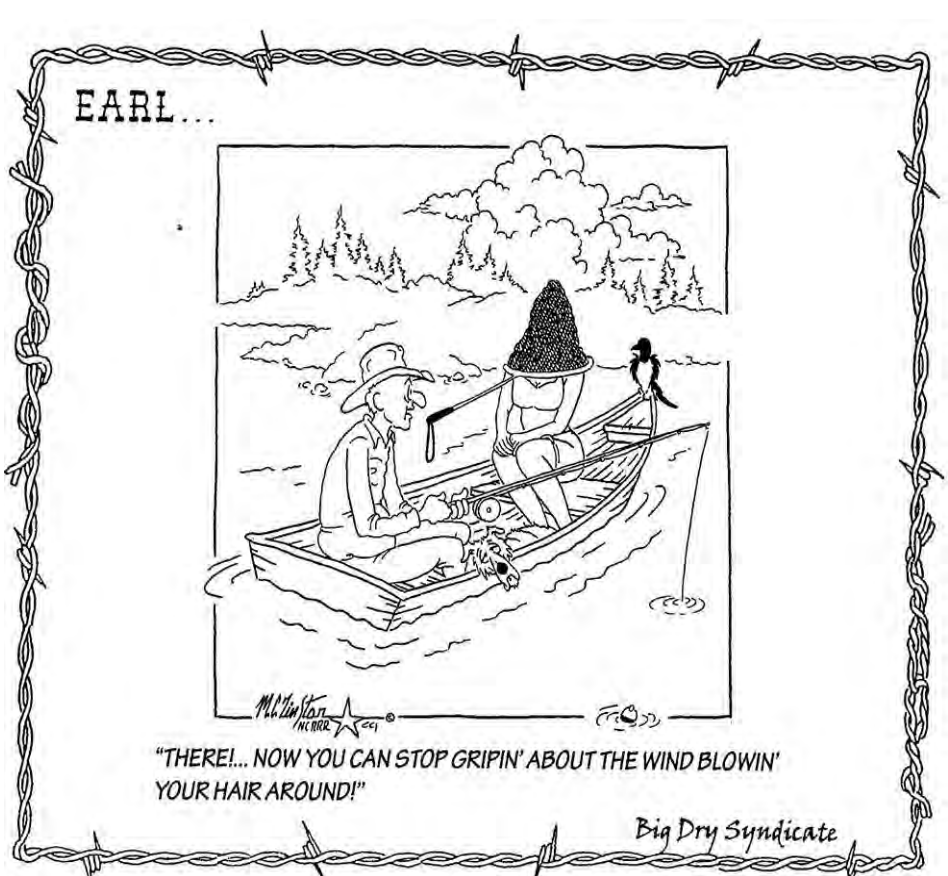
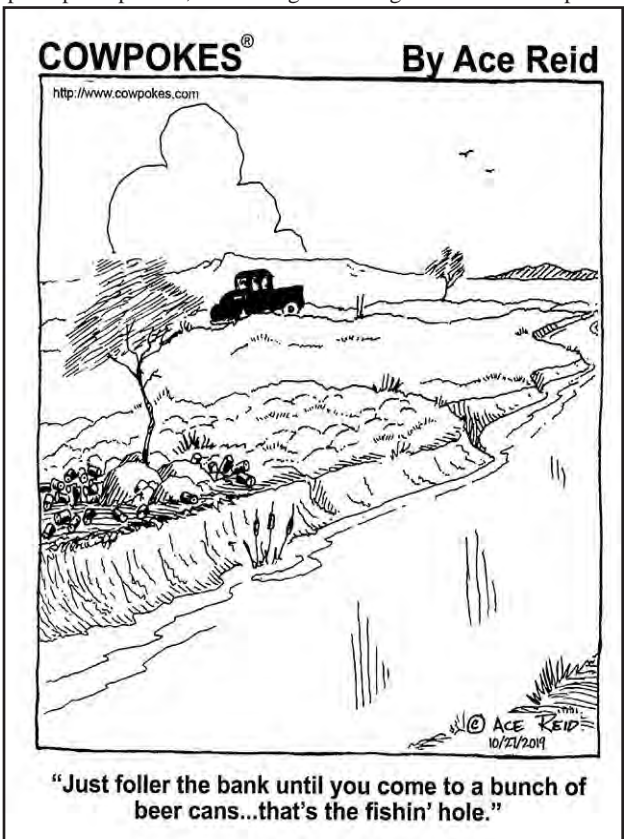
and knees in the back became more and more of a reality for Jennifer and I. The miles were also taking a toll on the truck although probably not as much of a toll as the chores took on it. A clean truck is nearly impossible when you use it to feed cows. Dings and dents started to show, and one old cow was responsible for taking out both headlights in separate incidents.

Soon it became obvious that the old Ford was not reliable enough to tow a trailer and if we were going to go anywhere as a family, we needed another truck. While it was somewhat beat-up and battered the old Ford still was not as bad as Dad's feed truck; at least there was no hole in the floorboard and the doors still closed. But it was painfully obvious that the bales, cows and miles were taking their toll and rust started to creep up the quarter panels.

Still, the old truck did its job, and only once did it ever get stuck and that one was my fault. It seems someone had unlocked the hubs and did not tell me. It was much easier to leave them locked in all the time and only unlock them on the rare occasion that the truck had to go to town. In any case, the truck almost never let me down and only left me stranded a couple of times.

That was about the time the doors stopped working right. In retrospect, the door issue was probably the fatal blow to the pickup. Well it might have been the weak transmission, the tendency to overheat or the broken-down seats but the doors were the most common complaint and excuse not to drive it. Very quickly it went from no one wanting to drive it to no one wanting to even ride with me in it. That was the sad day I realized my once-proud truck had become Dad's feed truck.

That was why it was so hard for me to finally decide to get rid of it, you don't just throw away twenty-one years of loyalty. I spent the better part of two decades in the old truck and it raised both kids. But all things must eventually come to an end and the old Ford will soon take that last ride to the scrap heap on a wrecker. While the rest of my family will be jumping for joy, I will probably have a tear in my eye. Goodbye old Ford, they just don't make them like you any more.



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Farm Bureau: Seeding Rural Resilience Act will help farmers and ranchers

The American Farm Bureau Federation supports the Seeding Rural Resilience Act sponsored by Senators Jon Tester (D-Mont.) and Chuck Grassley (R-Iowa), which is designed to help farmers respond to stress and decrease the stigma associated with mental health care in rural communities.

"Farmers and ranchers are some of the most resilient people you will ever meet," said AFBF president Zippy

Duvall. "But times are tough on the farm, and with challenges from weather, trade and low commodity prices, it can definitely wear down the resiliency of farmers. AFBF commends senators Tester and Grassley for introducing the Seeding Rural Resilience Act, which will be instrumental in bringing mental health resources and awareness to rural communities."

AFBF is committed to raising awareness about the momentum of 2017's Ethanol Summit of the Americas and 2018's Ethanol Summit of the Asia Pacific events, the Global Ethanol Summit capitalized on potential markets around the world as demand increases for higher-level biofuels policies - including decreasing greenhouse gas (GHG) emissions and improving clean air quality. The Council and its partners are working in all of these countries to highlight ethanol's benefits and address constraints to expanding ethanol's use.

"The Summit highlights policy conversations going on in governments around the world, scientific rationale for

benefits of seeking support and how to recognize the signs that someone needs help.

According to a Morning Consult research poll commissioned by AFBF in April 2019, a strong majority of farmers and farmworkers say financial issues (91%), farm or business problems (88%) and fear of losing the farm (87%) impact the mental health of farmers and ranchers, and nearly half of rural adults (48%) say they are personally experiencing more mental health challenges than they were a year ago.

Background on the bill: The Seeding Rural Resilience Act creates three initiatives aimed at promoting mental health awareness in rural America: Implementing a farmer-facing employee training program that requires the Agriculture Department to provide voluntary stress management training to Farm Service

Agency, Risk Management Agency and Natural Resources Conservation Service employees;

Forming a partnership between the Department of Health and Human Services and USDA to create a \$3 million PSA to increase public awareness of farm and ranch stress and destigmatize mental health care in rural communities; and

Directing the Secretary of Agriculture to work with state, local and nongovernmental stakeholders to collaborate and determine best practices for responding to farm and ranch mental stress.

Anyone who is experiencing a mental health crisis can call the National Suicide Prevention Lifeline 24/7 at 1-800-273-TALK, or 1-800-273-8255.

PRECISION AERIAL APPLICATION: Pasture \ Crop \ Government



Participants from 60 countries gather for first Global Ethanol Summit

The Global Ethanol Summit allowed senior-level officials from agriculture, environmental and energy ministries from around the world to discuss ecological, human health and economic benefits of ethanol use with U.S. industry leaders, while fostering collaboration and trade.

Ryan LeGrand, USGC president and CEO, delivered a keynote address on the shared goal of finding transport energy solutions to make environmental and human health commitments a reality while also making economic sense.

Industry and government officials from 60 countries met with U.S. officials in the nation's capital recently at the Global Ethanol Summit to learn about changing biofuels policies in countries around the world and prospects for expanded global ethanol use.

"The number of countries with ethanol policies on the books has grown exponentially in the last 18 months, and ethanol trade around the world remains strong, showing the level of commitment these countries have to reaping the benefits of this biofuel," said Ryan LeGrand, U.S. Grains Council (USGC) president and CEO. "The Council is proud to bring this group together in Washington, D.C."

The Summit, sponsored by the Council, Growth Energy and the Renewable Fuels Association (RFA), featured high-level government and industry officials from Algeria to Vietnam, who are working together to expand the global use of ethanol by developing policies with a role for trade.

Bowyer funds FFA scholarship

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tion, perseverance and the team supporting you." Eligible FFA high school seniors and college freshmen, sophomores or juniors pursuing an ag-related degree can apply for the scholarship November 1, 2019 through January 15, 2020 by visiting the National FFA website at FFA.org/scholarships. The scholarship winner will be notified by FFA in April 2020.

Visit DeKalbAsgrow.com/LeftTurns for more info and follow the conversation with #LeftTurns-4Learning #GoClintGo.

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Dozers, Scraper & Graders Dresser Grader 850, 14' blade, 5309 Hrs; Dressta TD15M, 3109 hrs, 13' blade and rear ripper; Fiat Allis Scraper 261-B, 4732 hrs; Dresser dozer 1516 w/TD150 ripper; Dresser Loader w/Tracks; IH Loadster 1700 4x4 dump truck, 345 motor; Low Boy Trailer, GVWR, 50k, 27'x8'; 1990 IH 9400 semi tractor.

LIVESTOCK EQUIPMENT, PICKUPS, TRAILERS, SKID LOADER & ATTACHMENTS
Donahue GN Stock trailer 20' steel, new floor; 1999 Ford F250 4x4, V10, 97k w/Deweze bale bed; 2005 Ford F350 XL, 6.0 Diesel, Super Duty, 128K w/Service Bed including RKI 3200 Crane and 100 gallon fuel tank; 2012 New Holland L230 Skid Steer w/AC and Heat, 951 Hrs; portable Werkmeister hay feeder trailer; truck mount 200 gallon sprayer; Kaufman 24' GN flatbed equipment trailer w/rear tilt; 1964 Chevy C60, 56k; IH C110 pickup; 1976 Ford F250, 4x4, 390 V8, 64k w/bale carrier; 1971 Ford F250, 2WD, 360 V8 flatbed; 1978 Ford F150, 460 V8; Pickup Cake/Cube feeder; Grain-O-Vator 30 Series wagon; pickup bed BP trailer; Carry-On 5x10' BP trailer w/lift gate; Vintage hay grapple; Vail Tree saw -Model 3020 F-G X-Series, 425 gal. Poly Tank; CM Truck Flatbed w/4 tool compartments; 3 Hayrack trailers w/dump; Triple C hydraulic Post Hole auger 12" bit; 3 pt. tree saw.

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GRASS & GRAIN Our Daily Bread

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

Rosalee Tibbits, Minneapolis, Shares Winning Recipe In G&G This Week

Winner Rosalee Tibbits, Minneapolis: "I found this recipe for Hot Water Pastry in a 1937 copy-right 'Household Searchlight Recipe Book,' handed down from my husband's grandmother. I'm never afraid to try something different, so I did. I actually beat this with my electric mixer! It is very moist and soft, even after being chilled. I used lots of flour as I rolled it out. It is not tough at all. I really liked it, despite being a bit difficult to handle. I used half white whole wheat flour along with AP flour, the first time I made it. I definitely will use it again with 100% white whole wheat which gives so much more flavor; as well, I will put in a few tablespoons of brown sugar, as I usually do."

HOT WATER PASTRY

1 1/2 cups flour
1/2 teaspoon salt
1/4 teaspoon baking powder
1/4 cup boiling water
7 tablespoons shortening

Sift, or whisk, together flour, salt and baking powder. In another bowl, pour boiling water over the shortening. Beat until smooth. Sift, stir in, the dry ingredients. Beat until the mixture forms a smooth ball. Chill thoroughly. Roll out as for plain pastry, using plenty of flour.

Rose Edwards, Stillwater, Oklahoma:
POTATO GRATIN
1 garlic clove, halved

Cooking spray
2 cups heavy cream
1/2 cup Miracle Whip
1 teaspoon salt

DICKINSON - SALINE - OTTAWA COUNTIES FARMLAND AUCTION REMINDER
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ESTATE AUCTION
SUNDAY, NOVEMBER 10, 2019 — 9:30 AM
2110 Harper Bldg. 21 Dg. Fairgrounds — LAWRENCE, KS

COLLECTIBLES, VINTAGE LAMPS & MISC.
5-Stackable Lawyer's Bookcases; 5 drawer spool cabinet; ornate marble top end tables; Victorian chairs; curio/china cabinet; several styles of chairs; matching Aladdin table lamps; Victorian/Tiffany style lamps; 3-sided display CAMEL Cigarettes Tin Sign; Van's Boot Savor small display; advertising of all sorts!; Pluto wind-up toy; Ringling's Circus Wagon w/ Box; Structo Fire Ladder Truck; '60s-'70s Lunch boxes w/thermoses; 3 ft. Wooden Carousel Horse; marbles; Kirker & Grattan Co. bottles; Griswold #9 skillet w/lid; Ancient Antiquities

Date Back 5000 B.C.; 2-Ford V8 30 year medallions; political buttons (Wilson); Officer & Firefighter badges; pocket knives(1933 World's Fair/ Coke 5 cent/Jenny Wren/Elvis); Camel Lighter w/box; large jardiniere's, vases; turquoise pendant on copper necklace; vintage pocket watches; Vintage unusual beaded necklace; area rugs; Vintage post cards; war ration books; razors; Fire Chief & Yellow Cab whistles; very large selection of Vintage Pictures & Frames of all sizes!; 1988 Jayhawk Basketball NIKE cards; primitive tools; box lot items; numerous items too many to mention!

Auction Note: This is the 1st of Several Auctions that we will conduct as Forrest & his Late Wife Joy Lou are the ICON Antique Couple of Lawrence with owning & operating Joy Lou Antiques for over 30 years! They also Collected & Always had the HIGH END Items! It is a Privilege to conduct this ONCE in a Life Time Collection! DO NOT MISS THIS AUCTION! 100's of UNLISTED ITEMS! We have Just Begun Uncovering Items!

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

1/2 teaspoon pepper
1/2 cup finely shredded sharp Cheddar cheese
3 pounds Russet potatoes, peeled & cut into 1/8-inch slices
1/3 cup grated Parmesan cheese

Set oven 350 degrees. Rub the bottom and sides of 9-by-13-inch glass baking dish with cut sides of garlic clove and coat with cooking spray. Whip Miracle Whip, cream, salt and pepper in a medium bowl. Stir in Cheddar cheese. Arrange half of potatoes in dish and pour over half of cream sauce. Arrange remaining half of slices in dish and pour remaining sauce over top. Cover tightly with foil, bake for 1 hour or until potatoes are almost tender. Uncover. Sprinkle evenly with Parmesan cheese and bake until potatoes are tender, about 15 minutes. Broil for 2 minutes or until top is lightly browned. Let stand 10 minutes before serving.

Millie Conger, Tecumseh:
APRICOT GLAZED CARROTS
5 cups julienned cut carrots
1/4 teaspoon salt
1/4 cup apricot preserves

In a saucepan combine carrots and 1/4 cup water; bring to a boil. Reduce heat to low, cover and simmer until carrots are tender. Drain. Add salt and apricot preserves and stir to coat. Cook over low heat for 1-2 minutes or until thoroughly heated.

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G&G Announces Its Annual Holiday Recipe Contest

Nov. 26 through Dec. 17

In observance of the holiday season, Grass & Grain will award the weekly winners \$40 in addition to the prize gift. Recipes received **NOVEMBER 14** through **DECEMBER 11** will be entered in the holiday contest. Enter as often as you like during this period.

BONUS DRAWING
Second chance to win! The names of all contestants will be entered in a drawing from which four names will be chosen. Each of these four contestants will receive \$40. **Winners will be announced Dec. 17.**

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.

- Check your recipe carefully to make certain all ingredients are accurate and instructions are clear.
- Be sure your name, address & phone number are on the entry. Please include a street address with your recipe entries. A PO Box number is not sufficient for prize delivery. Allow 3-4 weeks for delivery.
- Send it to: Woman's Page Editor, Grass & Grain, Box 1009, Manhattan, KS 66505. OR e-mail at: auctions@agpress.com

Kansas Profile — Now That's Rural: Farmer Bob Ralph, Princeton Popcorn

By Ron Wilson, Director of the Huck Boyd National Institute for Rural Development at Kansas State University

100 to 1 return. Wow, that sounds like a remarkable return on investment. In this case, it doesn't refer to a financial investment as much as it describes the process of growing a crop and multiplying the grain. Today we'll learn about an innovative first-generation farmer who is finding his reward in multiplying his crop of popcorn. Thanks to Marlin Bates of K-State Research and Extension — Douglas County for this story idea.



to store," he said. Farmer Bob is working with Balls Food Stores and others to get his popcorn on the market. In 2020, he anticipates that Princeton Popcorn will be on sale in 90 stores in the Kansas City area. Bob was also contacted by a couple of movie theater owners in Germany. They were looking for top quality popcorn to sell, and they found Farmer Bob. In 2020, Bob will be shipping Princeton Popcorn to their movie theaters in Germany.

It's remarkable to see popcorn going direct to Germany from a rural community such as Princeton, population 277 people. Now, that's rural.

For more information, see www.princetonpopcorn.com.

Can a first-generation farmer succeed? "This is America," Bob said. "I would like to encourage kids to open up their minds. You need confidence, determination, and a willingness to fail, but you can try again. This is a land of opportunity."

100 to 1. That's not a financial return as much as it expresses the remarkable growth of a crop, from a single seed to thousands. We commend Farmer Bob Ralph for making a difference with innovation, entrepreneurship, and growth — a hundred-fold.

Audio and text files of Kansas Profiles are available at <http://www.kansasprofile.com>. For more information about the Huck Boyd Institute, interested persons can visit <http://www.huckboydinstitute.org>

Robert Ralph, also known as Farmer Bob, is the founder of Princeton Popcorn. Bob grew up in Overland Park when farm ground was still intermingled with the suburbs. "I was three or four years old and I remember petting cows through a barbed wire fence," Bob said. That experience encouraged a lifelong interest in agriculture. He bought a small herd of cows and kept them with a friend outside of town.

After a few years, Bob bought some farmland of his own near Princeton, Kansas in Franklin County. The acreage had some timber, but no fences. "A friend of mine bulldozed a 30-foot path through the trees so I could build fence," Bob said. "When I burned the brush pile and spread the ashes, I found that it enriched the soil."

The concept of growing crops became exciting for him. He looked into the cost

of seed and equipment and did a budget analysis. As a beginning farmer, with crop prices so low, he recognized that traditional row crops would not pay. Instead, he thought about alternative crops.

Bob bought a three-pound bag of popcorn off the shelf, fenced off a corner of his acreage, and planted it by hand. "A couple weeks later, I dug down and found a seed with a little root emerging from it," Bob said. "It was like I found a million dollars. By the time that plant grew to 10 feet tall, I was really hooked."

When he harvested the popcorn and tried popping it, it was initially too wet. When it dried and he popped it a couple of weeks later, it worked great. "I was elated," Bob said. He gave away the popcorn for family and friends to try.

Since that time, he has expanded his popcorn acreage, purchased improved farm equipment, and experimented with various cooking oils and flavors. He remains fascinated with the concept of multiplying a crop. "You put one seed in the ground and get hundreds back. That's better than Vegas," he said with a smile.

Bob bought popcorn seed from Zangger Popcorn Hybrids in Nebraska. "I couldn't have gotten luckier," he said. "Josh Zangger came down and gave me lots of great advice."

"I've learned so much, I got to thinking that I should document this," Bob said. His videos as Farmer Bob on Facebook have generated hundreds of views. Using the community name, he named his company Princeton Popcorn. "It's a vertically integrated business, from seed

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SATURDAY, NOVEMBER 2, 2019 — 9:30 AM
1171 East 550 Rd. — LAWRENCE, KS (Clinton)

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Keep Your Spice Rack OnTrack For Fall Flavors!

By Barbara Ames, Family and Consumer Sciences Agent, Wildcat Extension District

Have the cooler temperatures and turning leaves got you thinking of flavors like pumpkin spice or apple cinnamon?

For many, fall means comfort foods and incorporating spicy autumn flavors into homemade chili and stews, warming ciders, and holiday baking. If you are like me, you totally enjoy using spices to create fragrant and flavorful foods to enjoy on crisp fall evenings or for your holiday table. Herbs and spices not only add wonderful flavors, but they also add the healthy benefit of allowing cooks to use less added fats, sugar and salt when creating meals. The fresher the spice, the more great flavor.

So, when was the last time you looked at your spices? Do they still have a bright color, or a strong fragrance? Are they expired?

The USDA defines spices and other foods that can be stored at room temperature as a "Shelf Stable" product that will truly never expire, however, over time the flavor and potency of the spices will diminish. Flavoring extracts can evaporate overtime.

Here are some guidelines to help you determine when it's time to toss your spices and herbs.

- As general rule, keep: herbs or ground spices for 1 year and whole spices for 2 years.
- Buy a smaller container until you determine how fast you'll use a particular spice or herb.
- If a spice or herb

smells strong and flavorful, it's probably still potent.

- Check an herb or a ground spice by rubbing a small amount in your hand. If the aroma is fresh, rich and immediate, it can still flavor foods.
- Check a whole spice — such as a clove or cinnamon stick — by breaking, crushing or scraping it before smelling it.
- Avoid smelling pepper or chili powder as they can irritate your nose.
- Initial quality will influence shelf life.
- Label your date of purchase on the container with a permanent marking.

Use the following guidelines for storing your spices and herbs to maintain maximum quality.

- To prevent flavor and color loss, avoid moisture, light, heat and air.
- Store in tightly covered containers.
- Store in a dark place away from sunlight, such as inside a cupboard or drawer.
- Avoid storage above the dishwasher, microwave, stove or refrigerator, or near a sink or heating vent.
- If storing in an open spice rack, store in a site away from heat, light and moisture.
- Avoid sprinkling dried spices and herbs directly from container into a steaming pot to prevent moisture from entering the container.
- Use a dry spoon to measure spices and herbs from a container.
- Refrigerate paprika, chili powder and red pepper for best color retention.

tion, especially in summer or hotter climates.

Is it time to give your spice rack a once-over so you will be prepared for creating the amazing flavors of fall?

More about spices and herbs can be found at: "Add a Little Spice (and Herbs) to Your Life," <https://wia.unl.edu/documents/4113987/5464567/spiceherbshandout-color-spiceherbshandout-color.pdf>.

Find more information about this topic and others, by contacting the Wildcat Extension District offices at: Crawford County, 620-724-8233; Labette County, 620-784-5337; Montgomery County, 620-331-2690; Wilson County, 620-378-2167; Pittsburg Office, Expanded Food and Nutrition Education (EFNEP), 620-232-1930. Wildcat District Extension is on the Web at <http://www.wildcatdistrict.ksu.edu>. Or, like our Facebook page at www.facebook.com/wildcat.extension.district.

For more information, contact Barbara Ames, Family and Consumer Sciences Agent, bames@ksu.edu, (620)331-2690.



Home and Away

No Dream Too Small

By Lou Ann Thomas

Two weeks ago I challenged us all to identify a dream or idea we had and to take the first steps toward fulfilling it. I used Angela Maxwell's walk around the world to illustrate a dream being pursued against all odds.

Since then I've heard from a number of people who have shared dreams they would like to pursue. But several have commented that, when they compare their dream to Angela's, they feel their dreams aren't as big and grand or worthy of fulfilling. They see their dreams as smaller and even being insignificant in comparison. And I get that. I've felt that way too.

But, honestly, I don't really want to walk around the world. That's not my dream. I think it is an extraordinary thing to do, but it's not for me. I'm built for comfort and there is way

too little of that on a walk of that duration and scope. Besides we're not all meant to walk around the world, and that's a good thing. Can you imagine if we all decided to get nifty carts and start walking? It would be total chaos!

We need dreamers of all preferences, skill levels, strengths and weaknesses and size of dreams. Whatever you dream for you is valid and worth pursuing. Yet there is still that human tendency to compare ourselves to each other. As I thought about what my big idea is and how might I more actively pursue it, I too felt the urge to compare it to what Angela is doing. And there was not one idea I had that could

match up in largesse. But we all have our dreams, and who is to say a small dream passionately pursued is of less value to the world than climbing Everest or walking across four continents. And who gets to determine if learning to paint or trying something new that scares you, or navigating your way through cancer or other challenges aren't of equal value. In this sense, I believe it matters not how big your dream is, but rather that you dream at all and whether you choose to move toward it or not.

No one else gets to decide the value of your dreams or the size category in which they fit. They're your dreams so the only person who gets to call them small or large, worthwhile or worthless is you. We may still compare ourselves to others, but we can use that comparison to either hinder our forward momentum or act as motivation to spur us onward.

We can either feel insignificant or inspired. The choice is ours.



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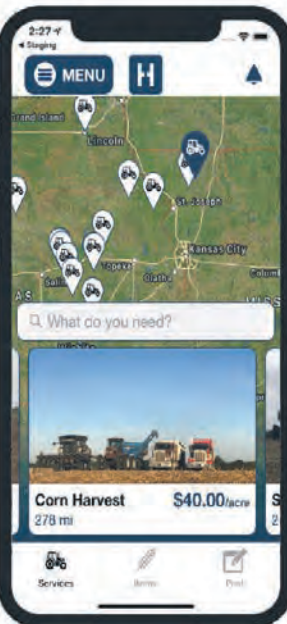
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When I was six years old, Mama bought me a rubber Snuffy Smith mask to wear for Halloween. Most kids now have no idea who Snuffy Smith was; but in our Blue

Ridge Mountain home, he was a pretty popular cartoon in the newspaper. Short, funny hill-billy with a big nose – I guess Mama thought it suited me.

We loaded in the car and went to Mount Airy (Mayberry) and walked the neighborhood with our friends. They were older and I'm sure they were thrilled to have a pint-sized Snuffy Smith tagging along. I thought it was the most wonderful Halloween ever. I was a country kid. If we went trick-or-treating it

was with someone driving us around. To have the opportunity to walk around with dozens of other kids on the street was like being a part of the life I had seen on *Leave it to Beaver* or the *Donna Reed Show*. I envied those kids who had sidewalks and just walked to the neighbors' house next door. There were always kids, always adventure.

I had lots of adventures, mostly solo. Since I was the oldest grandchild, sometimes I was herding younger ones, but mostly I was on my own, spending my days with my Granny.

What I did have was freedom. I explored creeks and fields and woods and made up stories. I turned the old chicken house into my playhouse. I looked up at the tops of the poplars and imagined the

squirrels' nests had been those of pterodactyls (Like many kids, my sense of the past was a little skewed). I sat on top of the hill and yelled, "hello," over and over again, marveling as my echo bounced off the Blue Ridge Mountains back to me.

On special days, Granny put on a clean apron and we walked through the woods, on paths she had walked for decades, and visited great aunts and uncles. I asked her the names of the trees and she told me stories of her childhood in these woods.

Daddy was a preacher and we often spent weekends out of town, spending the night with folks we might have never met. In Princeton, West Virginia, we stayed with a preacher and his wife who had a wonderful two-story house with at least six bedrooms. My

sister and I slept in a four-poster bed under a Dutch-girl quilt. We would often stay with friends near Lexington, North Carolina, and sleep under crocheted spreads. I would go back home and describe these things to Granny, what the houses looked like, the food we ate.

Maybe not having sidewalks and next-door neighbors was not so terrible. Maybe one night in a rubber Snuffy Smith mask wasn't that bad. I had paths through the woods and I had my Granny.

Deb Goodrich is the host of the Around Kansas TV show and the Garvey Historian in Residence at the Fort Wallace Museum. She chairs the Santa Fe Trail 200 in 2021. Contact her at author.debgoodrich@gmail.com.

AUCTION

SATURDAY, NOVEMBER 16, 2019 — 10:30 AM
1927 Vermont Street — MANHATTAN, KANSAS

REAL ESTATE
(SELLS APPROXIMATELY 11:30 AM)

Very nice Vintage home that was architecturally designed by the late Mr. Weisenburger in the State Street Neighborhood. This home has 4 bedrooms, formal dining room, family room, living room, kitchen & 2 baths. The full walk-out basement is partially finished. There is an attached 2-car garage, outbuildings and decks. Unique floor plan with a loft area in 3 of the bedrooms, tile & parquet floors, nice entry foyer & many other features. Built in 1976 this home is very unique, a truly must see home!

Buyer to pay 10% down day of Auction with balance due on or before December 16, 2019. Cost of Title insurance divided equally between Buyer & Seller. All inspections to be completed prior to Auction at Buyer's expense if requested. **STATEMENTS MADE DAY OF AUCTION TAKES PRECEDENCE OVER ANY OTHER INFORMATION.**

OPEN HOUSE, Tuesday, October 29, 2019, 4-5:30 PM or by contacting Vern Gannon Broker/Auctioneer or Gannon Real Estate and Auctions 785-539-2316.

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AUCTION

WEDNESDAY, NOVEMBER 6, 2019 — 4:30 PM

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20's walnut dining table w/6 chairs, unusual china, server & buffet very nice; buffet mirror; 3 section lawyers bookcase; 12 oak Lodge arm chairs; oak 2 door wardrobe; 40's round top refrigerator; Edison upright phonograph; Edison table top phonograph w/base; wicker wheel chair; folding rocker; pr. ladder back chairs; camel back trunk; treadle sewing machine; white porcelain top kitchen table & chairs; 8' pine work table; pr. wing back chairs; leather recliner; 5pc. pine bedroom set queen size; 4 pc. walnut bedroom set; book shelf; **Crocks** (Red Wing 3,8,

10, 15; RW 3 gal jug; 5 gal Western; 4 gal Pittsburg; 3 gal Macomb churn); assortment of pictures, 4 Western paintings; pencil drawing; cuckoo clock; Life magazines; quilts; linen table cloths; afghans; new bed ensemble; Dryden pieces; Diamond Point dishes; blue hobnail dishes; set Royal Embassy china Scarsdale pattern; flatware; creamer & sugars; salt & peppers; stemware; 24 John Wayne plates; kerosene lamps; Lodge sign; 4 Wisconsin cream cans; James Hake wooden toys; spittoon; Fietelli sewing machine; Dressel railroad lantern; 6 pane windows; car tags; scythe; 2 man saw; Dandy electric churn; reel

mower; ladies & mens bikes; area rugs; typewriters; speakers; luggage; copper decorator items; assortment household; toys; Tupperware; Christmas items; 3 wicker chairs; table lamps; microwave stand; Frigidaire 20 cu upright freezer like new; Haier mini fridge; air purifier; baby bed; Shark steamer; assortment kitchen items; Pyrex; pots & pans; assortment tools inc: drills; push lawn mower; extension ladder; 8' step ladder; vice; wheel barrow; metal yard roller; Toro 421 snow blower; Giant leaf vacuum; floor jack; shop vac; rain train; yard tools; assortment of other items.

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CattleTrace to host first-ever Industry Symposium

After nearly two years of planning, development and implementation of a cattle disease traceability infrastructure, CattleTrace is inviting all beef industry stakeholders to attend the first-ever CattleTrace Industry Symposium on November 22, 2019, in Manhattan, at

the Kansas State University Student Union. Participants at the symposium will get a firsthand view of a mock trace demonstration, and a unique perspective of traceability in the UK, including Scotland's experience using UHF technology, in remarks provided

by Dr. Andrew Moxey, ScotEID. There will also be a discussion of the economics of traceability and interactive breakout sessions designed to allow attendees to provide guidance and feedback about the future of disease traceability in the beef industry.

The symposium is free, and the registration deadline is November 7, 2019. The registration link and a more detailed agenda are available on the website at www.CattleTrace.org.

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Benefits of Free Trade and the Economy will be the topic of this fall's Saline County Women in Ag meeting scheduled for Thursday, November 7. Trade has been a hot topic in the news recently with a direct effect on farmers. Mark Nelson will present Benefits of Free Trade and the Economy. Mark has been a farm and

commodity sector analyst for over 30 years and currently serves as Director of Commodities with Kansas Farm Bureau.

The program will review the economic concepts, and illustrate the benefits of free trade and why trade agreements are, and have been, great for agriculture and the state of

Kansas. In the time allowed, many of the current issues and rhetoric surrounding trade discussions and policy will be addressed in a reasoned and easy to understand manner.

If you are a woman involved in agriculture, whether producer, spouse, landlord, or are interested in learning more about trade, plan to attend this

free Women in Ag program. The session will be at American Ag Credit at 925 W. Magnolia, Salina. Registration begins at 6 p.m. followed by the meeting at 6:30 p.m. Drinks and dessert will be served.

Pre-registration is requested. Call the K-State Research and Extension office in Salina, at 785-309-5850 by November 1 to register.

This Women in Ag meeting is sponsored by K-State Re-

search and Extension-Central Kansas District, Farm Service Agency, Natural Resources Conservation Service, American Ag Credit, Saline County Conservation District, and Saline County Farm Bureau.

Sheep and goat update meeting planned for November 12 in Holton

By Jody G. Holthaus, Meadowlark District Extension Agent, Livestock and Natural Resources

In 2018, Kansas ranked 12th in meat goat inventory and 32nd in the nation for the number of sheep. Adding in bison, these livestock enterprises combine for a direct output of \$11.5 million and create 75 jobs in the state. Small ruminants require less space and grazing resources, making them easier to raise on

small acreages.

Last year after our Northeast Kansas Sheep & Goat school, several people had asked for more information on parasite prevention and control and vaccination information. Dr. Alison Crane, our KSU Sheep and Goat specialist, had us mail out her recommended vaccination protocol to meeting participants. Now we are going to have Dr. Crane come out and present the latest research information regarding

parasites and diseases.

That meeting will take place on November 12, 2019 at the NE Kansas Heritage Complex, 12200 214th Road in Holton. The meeting will begin at 7 p.m. All interested persons, young and old are invited to attend.

Two injured in Dodge City Cargill plant explosion

(AP) - Two Cargill employees are being treated for burns after an explosion at a Cargill plant in Dodge City.

Cargill spokesman Daniel Sullivan says the explosion occurred early Thursday, October 17 in a stand-alone building away from the main plant.

The two employees were the only people in the building. Their conditions were not immediately available.

Sullivan said the cause of the explosion is under investigation.

The plant stopped production for the day Thursday while the explosion was investigated. Sullivan said Cargill expected the plant to resume operations soon and said it will meet its commitments to customers.

Sullivan said the Dodge City protein facility employs 2,700 people.

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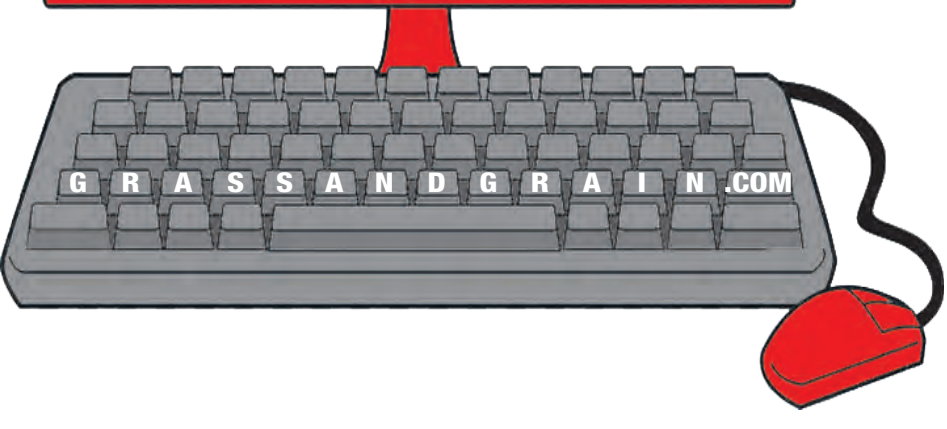
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You are invited to bid on the tract listed. To view the property please contact Galloway, Wieggers & Brinegar to schedule an appointment.

Bids sheets can be obtained by contacting Galloway, Wieggers & Brinegar or by visiting the website: sealedbidauction.net. Bids must be received by 12:00 p.m. Friday, November 15, 2019. Seller reserves the right to accept any bid, reject all bids or invite certain bidders to a subsequent private auction.

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Kansas Water Office Conference scheduled for November 7-8

The eighth annual Governor's Conference on the Future of Water in Kansas will be Thursday, November 7 and Friday, November 8, 2019 at a new location, the Hyatt Regency in Wichita.

Conference topics include: Sustainability Across the Supply Chain
Flooding Impacts
Groundwater Quality
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agement
To view the brochure for a current list of speakers and panelists visit: www.kwo.ks.gov
Some of the day one speakers include Jill Wheeler,

head of Sustainable Productivity for Syngenta in North America; Matthew Lohr, Chief NRCS; Kim Dirks, Tyson Foods; Colonel Scott Preston, USACE Tulsa and more.

from the previous day with technical presentation posters and talks. Graduate and undergraduate students will present their research.
The Water Legacy Award and Be the Vision recipients will be presented at the conference and the KWO Photo Contest will be a feature again

this year.
The Governor's Conference on the Future of Water in Kansas is hosted by the KWO and K-State/Kansas Water Resource Institute. Major sponsors for the event include 96 Agri Sales, Inc., Black & Veatch, Burns & McDonnell and Great Lakes Dredge & Dock.

Study reveals ramifications of limited rural broadband service on American farmers

A new study commissioned by the United Soybean Board (USB) reveals the lack of access to broadband in rural areas takes a significant toll on American farmers and the economy.

According to "Rural Broadband and the American Farmer: Connectivity Challenges Limit Agriculture's Economic Impact and Sustainability," an alarming 60% of U.S. farmers say they do not have enough connectivity to run their businesses. USB initiated the rural broadband study to better understand how and why farmers currently access the internet, and the implications that access has for farm business decisions, economic viability and overall sustainability.

Data from the United States Department of Agriculture Economic Research Service indicates that farming contributes to nearly \$133 billion of our country's gross domestic product. Based on USB's rural broadband survey, the lack of connectivity negatively impacts farmers responsible for \$80 billion of gross domestic product.

"End-users ask farmers to deliver a consistent and high-quality crop without adequate internet access and reliable broadband speeds, which undoubtedly impacts their efficiency and sustainability," says Tim Venverloh, vice president of sustainability strategy for USB.

Other significant findings include:

- 78% of farmers do not have a choice in internet service providers.

- 60% of farmers say the internet service they do have is slow, with most relying on cell signals or hotspots to connect to the internet.

- 40% of farmers have a fixed internet connection, while others rely on satellite connections.

"There's a clear disparity between connectivity in rural versus non-rural areas," says

Venverloh. "The lack of connectivity, however, extends to farmers past the farm gate. When farmers can't maximize the functionality of their equipment, particularly in the middle of the field, it has repercussions beyond the farm. More and more of the future is about data and data transfer. The timely dissemination and use of data is becoming more important in a precision ag and decision ag world."

The results of the qualitative and quantitative research highlight the critical need to improve rural broadband access, which has implications far beyond quality of life (information, communication and entertainment) in addition to the livelihood for rural communities.

"Farmers continually look for ways to improve efficiencies while protecting natural resources," adds Venverloh. "Upwards of 50% of the farmers we surveyed want to incorporate more technology into their operations, but they are held back by limited connectivity. Improving their access to broadband needs to be a priority."

USB will share survey data with internet service providers, as well as influencer organizations working to tackle policy and technical challenges involved in delivering high-speed broadband access to rural communities.

For background on the study, more than 2,000 primary and secondary farm operators responded to a combination of online and mail-in surveys to participate. Thanks to cooperation from American Farm Bureau Federation, American Soybean Association, Illinois Soybean Association and North Carolina Soybean Producers Association, the report represents a cross-section of U.S. agriculture. Participants included 86% who grow field or row crops such as corn and soybeans; 21% who grow specialty crops such as fruits and

vegetables; and 55% who raise livestock. In-depth telephone interviews were also conducted with participants in eight states in July and August 2019.

National Sorghum Producers partners with USDA to quantify sorghum sustainability

National Sorghum Producers has announced a partnership with the U.S. Department of Agriculture Natural Resources Conservation Service in Kansas. The partnership will be executed through a conservation collaboration grant that will document sorghum farmer practices to promote positive conservation outcomes and quantify the environmental footprint of the crop.

"Sorghum farmers in Kansas and across the nation have long been good stewards of the environment around them," said NSP CEO Tim Lust. "Today, we will continue documenting this fact and work to understand how we can improve even more. With 74 percent of sorghum grown using conservation tillage and 91 percent receiving no supplemental irrigation water, improvement is a tall order, but we believe our farmers are up to the challenge."

"One-third of the U.S. sorghum crop is used to produce fuel ethanol, which receives a premium for lower carbon intensity scores in certain markets," he said. "This makes demonstrating sustainability and continuous improvement at the farm level extremely important. Fortunately, sustainability goals in fuel markets and conservation goals here at home go hand-in-hand, and we look forward to working with NRCS to further these goals and create additional opportunities for sorghum farmers."

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