

McPherson County

K-STATE RESEARCH AND EXTENSION NEWS

July/August 2023

AG NEWS

SHAD MARSTON
COUNTY EXTENSION AGENT
AGRICULTURE AND NATURAL RESOURCES



July is here and this halfway point of the year is a busy time for us in the Extension office. Harvest is finishing up; summer crops are doing well with the recent rains; extension programming is going well and it's now Fair time. This year's theme is, "Barn in the USA". This is an exciting time for 4-Her's, leaders, volunteers and fair goers. 4-Her's will be putting their finishing touches on their projects as they prepare for the County Fair in Canton and then the 4-H Fair here in McPherson. Plan to attend one or both fairs this July so we can share our excitement with you.

On a special note, I would like to introduce Ms. Shyanne Jones, our new 4-H agent, as she starts her position with K-State Research and Extension here in the McPherson County office on July 24th! Please stop into the office and meet Shyanne and give her a warm welcome. We are excited to have her here in the office to work with our 4-H members and their families.

Remember to attend the Rural Appreciation Picnic on the opening night of the McPherson County 4-H Fair, on July 21. This annual event was started as a way celebrate with our agriculture producers and their families for their contributions to our way of life. Kansas agriculture continues to be a vital force in the state's economy, bringing in dollars and providing jobs.

Cattle Chat: Ponds as a water source for livestock

K-State beef cattle experts discuss changes in water quality as ponds dry up in the summer heat.

Anyone who has spent time working outside in the summer knows the importance of drinking adequate amounts of clean water to keep heat-related illnesses away. Just like people, cattle will increase their water consumption in the summer, and that source needs to be well maintained for optimum health, say the experts at Kansas State University's Beef Cattle Institute. "Cows typically will drink twice as much water in the summer per day as compared to what they drink daily in the winter," said K-State veterinarian Brad White, speaking on a recent **Cattle Chat** podcast. Typically, for a lactating cow that ranges from 20-30 gallons per day.

One source of water that many producers turn to for cattle out on summer pasture is ponds, White said. And like any water source, they must be monitored for quality and quantity as the summer progresses. "As ponds start to get low on water, the cattle are sourcing the water from a smaller access point, and so it is important to monitor them," said K-State veterinarian Brian Lubbers. He added that there are increased health risks when cattle are drinking from a depleted water source that is hard to get to. "As ponds shrink, accessibility to the water can be an issue depending on the shape of the pond," Lubbers said. "Deep ponds can have steep sides that make it difficult for the cattle to reach and leave the water source."

Also as the pond water becomes stagnant, the quality goes down, White said. "As the water amount decreases, there is more fecal contamination coming from cattle trying to get to the available water," Lubbers said. Once ponds are no longer viable watering options, it is time to look for other solutions, say the experts. "A temporary solution is to haul water in tanks to the pastures where the cattle are," K-State nutritionist Phillip Lancaster said.

He added that it is critical that the water tank only be used for storing water and that no amount of rinsing will fully clear the chemicals from a tank that was used for something else prior to hauling water. “The plastic polymers in the tank may hold onto the nitrates and you cannot dilute them enough through rinsing to be sure that it won’t kill cattle,” Lancaster said.

White agreed, adding: “If the tank has been used for something besides water, it is no longer a viable option for water.” Another solution to a possible pond dry-up is to look at the grazing rotation of the herd, Lancaster said. “Producers may need to graze a pasture with the pond earlier in the season to use that water source first, and then rotate cattle to other pastures that either have other water sources or are easier to haul water to,” he said.

Fungicide considerations for corn diseases in 2023

We are entering the time window in Kansas where corn producers should be scouting fields and assessing the need for a foliar fungicide application. Several fields in eastern Kansas are approaching V14-VT (tassel) development stage. Now is the time to be out scouting for the following fungal diseases of corn:

1. Southern rust (Figure 1, left)
2. Common Rust (Figure 1, right)
3. Gray leaf spot (Figure 2)
4. Tar Spot (Figure 3)



Figure 1. Typical symptoms of southern rust (left) and common rust (right). Photo courtesy of Rodrigo Borba Onofre, Department of Plant Pathology, K-State Research and Extension.

Southern rust scouting. Southern rust is typically first reported in Kansas in mid-July. Pustules will appear on the upper leaf surface (unlike common rust which can be found on either side of the leaf). Pustules will be scattered on the leaf surface and spores will appear orange and will rub off on fingers (and clothes!). Severe infections can be seen on the leaf sheaths.



Figure 2. Gray leaf spot lesions are rectangular in shape and delimited by leaf veins. Photo courtesy of Rodrigo Onofre, Department of Plant Pathology, K-State Research and Extension.

Gray leaf spot scouting. Begin scouting for gray leaf spot in corn about two weeks before expected tassel emergence. Gray leaf spot is characterized by rectangular lesions that are 1-2 inches in length and cover the entire area between the leaf veins. Early lesions are small, necrotic spots with yellow halos that gradually expand to full-sized lesions. Lesions are usually tan in color but may turn gray during foggy or rainy conditions. The key diagnostic feature is that the lesions are usually very rectangular in shape.

Tar spot was detected in Kansas during the 2022 corn season. To date, it has been reported in Atchison, Brown, Doniphan, Jackson, Jefferson, and Nemaha counties in Kansas. Tar spot lesions are black, raised, and have a round/elliptical shape (Figure 3). Irrigated corn may be at particularly high risk for yield or silage loss.



Figure 3. Tar spot of corn. Purple arrows are indicating a few of the tar spot lesions. Photo courtesy of Rodrigo Onofre, Department of Plant Pathology, K-State Research and Extension.

For confirmation of tar spot, please submit samples to the K-State Plant Pathology Diagnostic Clinic at <https://www.plantpath.k-state.edu/extension/plant-disease-diagnostic-lab/>

Factors that influence corn yield response to fungicide applications

Research clearly demonstrates that the single best time to apply a fungicide to corn for gray leaf spot control is from VT to R1. A single application at V6 – V8 will not hold up against late-season pressure. A VT to R1 application may also provide suppression of southern rust and tar spot. Some fungicides that are good to excellent for gray leaf spot are also very good for tar spot and southern rust control. Summaries of multi-year university research about fungicide efficacy can be found here: https://cropprotectionnetwork.s3.amazonaws.com/CPN2011_FungicideEfficacyControlCornDiseases_04_2022-1650470887.pdf

Disease risk factors to consider when weighing the benefits of a fungicide application

Susceptibility level of corn hybrid. Seed companies typically provide information on the susceptibility of their hybrids to gray leaf spot and southern rust. In general, hybrids that are more susceptible to fungal foliar diseases will have a greater response to a foliar fungicide (if disease pressure is high enough).

Previous crop. Because gray leaf spot and tar spot survives in corn residue, the risk of disease increases when corn is planted back into a field that was in corn the previous year. Fields with a history of gray leaf spot and tar spot should be closely scouted. Southern rust, on the other hand, blows in from the south each year. It is important to watch regional updates about southern rust pressure in the state.

Weather. Rainy and/or humid weather generally is most favorable to gray leaf spot. In growing seasons when these conditions prevail, the risk for disease development increases. Southern rust is favored by warm days and nights (> 80 degrees) as well as high humidity. Tar spot is favored by mild temperature (60F to 73F), high relative humidity (>75%), and a prolonged leaf wetness period (>7h).

Field history. Some field locations may have a history of high foliar disease severity. Fields in river bottoms or low areas or surrounded by trees may be more prone to having gray leaf spot.

Current disease management guidelines suggest the following criteria for considering an application of foliar fungicide.

- **For susceptible hybrids** (those with the lowest rating within a company's lineup): Fungicide applications should be considered if disease symptoms are present on the third leaf below the ear or higher on 50 percent of the plants examined.
- **For intermediate hybrids** (those with an average rating within a company's lineup): Fungicide applications should be considered if disease symptoms are present on the third leaf below the ear or higher on 50 percent of the plants examined if the field is in an area with a history of foliar disease problems, the previous crop was corn, there is 35 percent or more surface residue, and the weather is warm and humid.
- **For resistant hybrids** (those with the best rating within a company's lineup): Fungicide applications generally are not recommended.

According to the data from Illinois corn fungicide trials, if at least 5 percent of the ear leaf area is affected by disease at the end of the season, a foliar fungicide applied at VT and R1 would likely have been beneficial. Using the disease risk factors and scouting observations collected just before tassel emergence will help predict how severe disease pressure may be several weeks after the VT to R1 stages, and help decide whether to apply a foliar fungicide.

If no disease is present or pressure is low, I recommend holding off on the R1 application since efficacy will begin to wane in three to four weeks, just as late-season pressure may begin to develop. Data exists that would suggest that if disease pressure begins to develop later, an R2 application can be economical and will provide protection later into the grain fill period. This later application could also protect against any late-season southern rust pressure.

Distinguishing between gray leaf spot and bacterial streak

Bacterial streak, identified as a new corn disease in the U.S. in 2016, is now active in most of western Kansas. While yield loss potential for this disease remains unknown, we do know that it can be misidentified as gray leaf spot, resulting in unwarranted fungicide applications. Fungicides will not have any effect on bacterial streak. Keep in mind that gray leaf spot typically has very sharp edges defined by the leaf veins, whereas bacterial streak will have a wavy edge that can cross the leaf vein (Figure 4). Also, when backlit with light, gray leaf spot lesions will have an opaque appearance while bacterial streak lesions are more translucent (Figure 4).

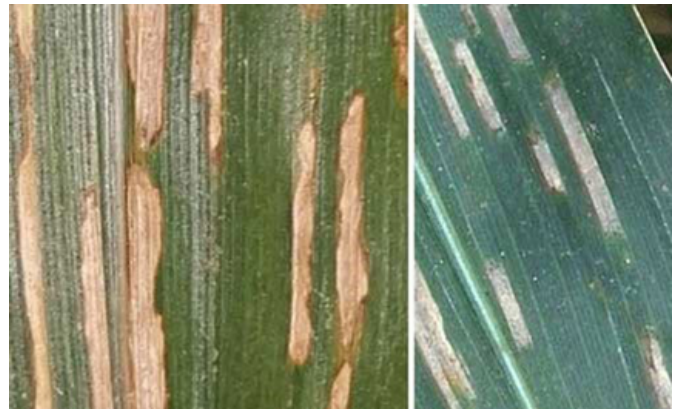


Figure 4. Comparison of sharp-edged gray leaf spot lesions (right) with wavy-edged bacterial streak lesions (left). Photo courtesy of the University of Nebraska.



Unmanned Aerial Vehicle Pesticide Applications - What You Need to Know

There is a good deal of interest in using drones, also called unmanned aerial vehicles (UAVs) for the application of pesticides. In this context, a drone is a small, remotely controlled fixed-wing or rotary-wing aircraft. A drone application might be appealing to individuals wanting to spray where it is not practical or desirable to use a traditional spray, or perhaps, for spot spraying. However, applications are limited by the size of the payload the drone is able to carry, and compliance and logistics for such applications can be challenging. Downdraft can affect the deposition of the product and cause off-target movement or volatilization. If you are an applicator considering using a drone for applications, here is some basic information regarding licenses that you need to know before applying any pesticides.

Remote Pilot Certification/FAA Requirements

First, any individual who will be operating a drone for pesticide applications shall have a current Remote Pilot Certification under Title 14 of the Code of Regulations (14 CFR) 107 and meet all Federal Aviation Administration (FAA) requirements. This can be achieved by taking a Commercial Remote Pilot Training course or simply taking the exam at an approved testing center. The fee to schedule an examination is usually around \$175. Drones shall be operated under the applicable FAA requirements and the necessary exemptions must be obtained according to the weight of the drone being flown. A Commercial Agricultural Aircraft Operator Certificate shall be obtained if the drone does not meet the requirements for exemption.

UAV (Drone) Registration

The applicator needs to provide the Kansas Department of Agriculture with the make, model, serial number (if applicable), and any other requested information related to the drone and submit a completed and signed application to apply pesticide products. Documentation is needed to confirm that each drone is properly registered with the FAA (FAA registration certificate) and that the individual flying it has the proper certification (copy of remote pilot license). The business making the applications also has to prove they have the proper certification (exemption/rulemaking documentation, a Commercial Agricultural Aircraft Certificate) or has obtained the necessary exemptions to KDA.

Allowed Application Categories

Commercial pesticide applications via drones or unmanned aerial vehicles are only permitted in the following categories.

- **Category 1: Agricultural Pest Control**
 - o 1A: Agricultural Plant Pest Control
 - o 1B: Agricultural Animal Pest Control
 - o 1C: Wildlife Damage Control
 - o 1D: Stump Treatment
- **Category 2: Forest Pest Control**
- **Category 3: Ornamental and Turf Pest Control**
 - o 3A: Ornamental Pest Control
 - o 3B: Turf Pest Control
- **Category 5: Aquatic Pest Control**
- **Category 6: Right-of-Way Pest Control**



Pesticide Label Requirements

Finally, commercial pesticide applications via drone or unmanned aerial vehicle need to comply with the label requirements of each pesticide product being applied. **Remember the label is the law!** Unfortunately, there is little clear guidance on pesticide labels that pertains to drone applications. One thing to note is that if the label prohibits aerial application then the product cannot be applied by a drone. If an aerial application is permitted, the application rate and other parameters need to be in compliance with the label. Also, it is important to note, manufacturers and users are adopting commercial nozzles meant for self-propelled sprayers, which can be a concern for product deposition and coverage

Save the Date

Save the date for the Flickner Innovation Farm summer field event on August 10, 2023! Experts will be on hand to discuss the ins-and-outs of weed management as well as how to improve and maintain soil health. There will also be planned demonstrations of a John Deere See-and-Spray (see photo), a Redekop Harvest Weed Seed Control system, and more. The event will begin at 9 am at the Flickner Farm in Moundridge, Kansas. Lunch will be provided. Email kstatekcare@ksu.edu to subscribe to the distribution list for this event.



Keep your eyes peeled for more information about these upcoming programs!

- **Pre-Plant Wheat School**
- **Master Gardeners Class starting September 2023**



Clover Corner

4-H YOUTH DEVELOPMENT



McPherson County Fair (Canton)

July 12-16

<https://www.mcphersoncountyfair.com/>
for class entry dates and information!

McPherson County 4-H Fair

July 21-24

"Barn in the U.S.A."

Fair Reminders:

- No concession stands this year.
- Club responsibilities have been assigned! Fair is a huge task and we are thankful for your help!
- No silent auction this year.
- Each club is strongly encouraged to enter either a booth (6' X 6' area) or banner in the McPherson 4-H Fair!



Shirts available for pick-up during fair set-up!

YQCA

The last in person training prior to fair will be Tuesday, July 18 at 4:00 PM (directly before fairground set-up)

Register online at <https://yqcaprogram.org>.

Call if you have questions!

Family of the Year

Award nominations are due to the Extension Office on or before August 3!

You can find the form at

<https://www.mcpherson.k-state.edu/>

Kansas State Fair Reminders

Entries for Kansas State Fair are due:

4-H/FFA Beef, Sheep, Swine - July 15

Horse-August 1

All Others- August 3

If you have an exhibit qualify for the State Fair (from 4-H fair only-The County Fair in Canton is NOT a state fair qualifying fair with the exception of certain animal projects that can qualify at multiple shows), it is your responsibility to fill out the entry form at the Extension Office before August 3.

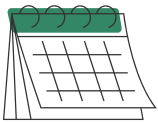
To qualify for the State Fair:

1. 4-H member must be 9 years of age before January 1, 2023 AND

2. Your 4-H Fair Exhibit* must have received a purple ribbon.

*Not all projects are eligible for the State Fair. See your 4-H Fairbook for details. The Extension Office has a copy of the Kansas State Fair 4-H Rules as well, or they can be found online at

<http://www.kansas4-h.org/p.aspx?tabid=46>



Calendar of Events

July/August

- July 3 & 4 Office Closed
- July 12-16 McPherson County Fair (Canton)
- July 18 YQCA Training (FINAL ONE BEFORE FAIR)-4:00 PM
- July 18 Fairground set-up
- July 21-24 McPherson County 4-H Fair
- July 25 Fair Ground Clean-up
- August 3 Family of the Year nominations DUE
- August 3 State Fair Entries Due

Get Published

Have project news or reports of fun 4-H happenings? Please email or bring in any articles to Lauralee at Lhelm@ksu.edu by August 21 to get them into the Clover Corner!



FCW News

CHUCK LAUGHLIN
COUNTY EXTENSION AGENT
FAMILY & COMMUNITY WELLNESS



Reimagine Canton Kick-Off



2030 ● 2030 ● Reimagine ● 2030 ● 2030



A crowd of just over **80** dedicated community members streamed into the Canton Community Building on June 27th as K-State Research & Extension Community Vitality from McPherson County and Kansas State hosted a kick-off meeting for Reimagine Canton. The City of Canton, which has seen a steady decline in population since the 2000 census committed to change with a vote by the Canton City Council on April 10, 2023. With the vote, the journey began. Canton has joined the Kansas Community Empowerment Program (formerly Kanas PRIDE) and signed up for First Impressions. Days before the meeting on June 27th, the Extension Office was notified that the City of Canton has been paired up with the city of Leon, Kansas for a First Impression visit. Over the next month a delegation from Canton will travel to the City of Leon for a First Impression visit and likewise a group from Leon will travel to Canton. The results of those visits along with the results of a First Impressions visit from a group from K-State will be compiled and will be presented at a future community meeting. Now that the prep work has been done the real work begins.

The initial stages of this program will be led by the McPherson County Extension office in cooperation with the K-State Research & Extension Community Vitality group until such time the core team emerges in the City of Canton that the program can be turned over. The results of the Comprehensive Community Wide survey were shared at the June 27th community meeting where 6 (six) definite themes emerged. We are currently working on compiling a list of team members for the 6 committees and a meeting of those groups will be held over the next month. There is still an opportunity to join in this endeavor so if you would like to participate in one of the committees, please contact claughlin@ksu.edu.

The committees that will be forming over the next month will be; Community Engagement, where we will begin to look at programs that can unite the community. Economic Development, here we will explore options to bring businesses to the community. Housing was identified as a critical need for the growth of the community and this group will explore options for housing for young families, adults, and options for senior care. Infrastructure is by far one of the most critical needs to the growth and development of the community and will be critical in developing a path forward. Parks & Recreation combined with Beautification will focus on expanding or reimagining the current park spaces and how we move them into the next phase of the City. Preservation will be the section that will ensure that as we work to develop and reimagine the City of Canton that we don't lose sight of those things that make Canton what it was, is, and will be.

First FRIDAY e-CALL
Rural Downtown Revitalization
Luke Mahin, Owner, Irrigation Ales; Former Republic Co Economic Dev
Kelly Gourley, Lincoln County Economic Dev Fdn, Owner, Post Rock Fitness

Join Us July 7, 2023
9:30am

Register Today
<https://ksre-learn.com/ecall>

K-STATE
Research and Extension

Luke Mahin, owner Irrigation Ales and Kelly Gourley, Lincoln County ED will share their experiences with revitalizing rural downtowns. Mahin will speak of his experiences setting up an Empty Buildings tour and updating a former cafe into a brewery in a town of 294. Gourley will share how a downtown historic designation opened funding opportunities that were the catalyst for several downtown projects including rehabbing a vacant building into a fitness center. The purpose of the First Friday e-Call is to increase the local community's knowledge of the experts, education, and economic resources available to help small businesses and entrepreneurs and to share innovations in community development.

Registration link:

https://www.ksre.kstate.edu/community/business/entrepreneurship/#sign_up

State Summer Interns

McPherson County was fortunate this year to be able to host 2 summer interns (Colt Hahn and Mia Birkes) from the KSU State Intern program. The interns right off the bat hosted a 2 week Educa-Fun Summer Camp that was centered around cooking and making healthy choices for food and fitness. This section was combined with STEM programming on Tuesday and Thursday that focused on programming from Kansas Corn and the Kansas Cosmosphere.

Since completing that program, the state interns along with our County Intern (Reiley Bartel) have been busy developing programming to take us through the summer. They have put together a range of programs for kids with summer activities. Their programs dates and sign-up function can be found on our McPherson County Extension Facebook page. Included so far will be; Livestock Care Camp Vet Day, Livestock Care ID Day, Firearm Safety Camp, Shooting Sports Camp, Ecology 101, Leatherwork Camp, and a Craft Camp that will run every Wednesday in the month of July so plan to sign up your kids and join us for one of these exciting summer camps!

VET DAY

From administering shots to grooming a horse, join us for an exciting day of livestock care!



McPherson County
Extension Office
600 W Woodside
July 10, 9-11am
Ages 12-18



K-STATE
Research and Extension

Livestock Identification

learn how livestock are notched, tagged,
or tattooed!



McPherson County
Extension Office
600 W Woodside
July 11, 9-11am
Ages 12-18



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FIREARM SAFETY



McPherson County
Extension Office
600 W Woodside
July 27th, 9-11am
Ages 12-18



K-STATE
Research and Extension

Shooting Sports Day Camp

Join us to learn about archery and
clay shooting sports!



McPherson County
Extension Office
600 W Woodside
July 28th, 9-11am
Ages 12-18



K-STATE
Research and Extension

ECOLOGY 101

JULY 31 - AUGUST 4
9 AM - 11 AM
MCPHERSON COUNTY
EXTENSION OFFICE
600 W. WOODSIDE
AGES 11-17

Join us for a week of natural science:
Play games, conduct labs, and build
your own ecosystem!

SIGN UP HERE
OPEN TO 30 YOUTH



K-STATE
Research and Extension

Teach & Taste

After our record breaking crowd at the last Teach & Taste, we look forward to having everyone come back and bring a friend as we all make Carmel Apple Pie Packets. We look forward to seeing you July 12, 2023 at 6:30pm at the Extension Office. Our August Teach & Taste will feature Tuna Melts as our recipe of the month so put it on your calendar for August 9, 2023 at 6:30pm at the Extension office!



TEACH & TASTE
Carmel Apple Pie Packet
July 12, 2023
6:30 PM
McPherson County Extension Office
600 W. Woodside
McPherson, KS

REGISTER AT:
<https://tinyurl.com/TeachandTasteJuly>

SCAN ME

DID YOU KNOW?
The first caramel apple was created in the 1950s when a Kraft Foods employee named Dan Walker discovered the recipe when he experimented with excess caramels from Halloween sales. He melted the caramels down and dipped the apples, and as they say – the rest is history.

K-STATE

Please RSVP to ensure we have enough for everyone.

This recipe is...
Gluten Free (option available)
Vegetarian (option available)

Registration links:

<https://tinyurl.com/TeachandTasteJuly>
<https://tinyurl.com/TeachandTasteAugust>



TEACH & TASTE
August 9, 2023
6:30 PM
McPherson County Extension Office
600 W. Woodside
McPherson, KS

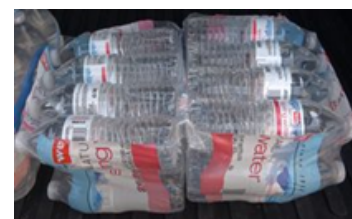
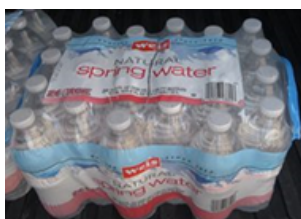
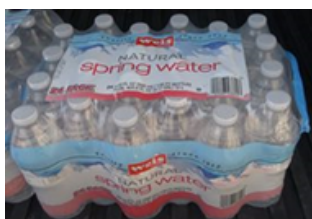
Tuna Melt

DID YOU KNOW?
The tuna melt was accidentally invented in the 1960s at the Woolworth's lunch counter in Charleston, S.C., when the cook didn't notice that a bowl of tuna salad had tipped over onto a grilled cheese.

SCAN ME

<https://tinyurl.com/TeachandTasteAugust>

K-STATE



Quick and easy hack to open cases of water and keep them contained and easily accessible:

1. Find the middle of the case.
2. Cut along the top and partially down each side
3. Using your hands lift up from the bottom where the cut lines are
4. Fold both sides back to make two holders

The “Blender Bike” or “Smoothie Bicycle” is not your ordinary stationery bike. It’s a K-State purple bike with an apparatus above the wheel where we attach a blender container. Resistance against the tire when the bike is pedaled spins the blades of the blender.

The Blender Bike is scheduled to be at both the McPherson County Fair (in Canton) and the McPherson County 4-H Fair (in McPherson)! So get ready to come by and peddle away to blend your own smoothie!



County Connection E-News

To register to receive updates on upcoming events, calendar updates, webinars, senior and military discounts available, county resource phone numbers, as well as tips and tricks to make life easier.

County Connection Sign-Up



<http://eepurl.com/iicSFN>



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RETURN SERVICE REQUESTED

AGENT CONTACT INFORMATION

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Radio Every Monday:

7:40 AM-96.7 KMPK

8:40 AM-98.9 KMCP

Ad Astra Radio Station

Chuck Laughlin
County Extension Agent
Family & Community Wellness

claughlin@ksu.edu