

K-STATE

Research and Extension

Sunflower Extension District #6



January 2024

Online! Newsletter

www.sunflower.ksu.edu

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Go to www.sunflower.ksu.edu for more details on these programs.

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Test Your Home. Protect Your Health.

5 Radon Health Facts You Need to Know:

- Breathing radon in your home can cause lung cancer.
- Radon is the second leading cause of lung cancer in the United States and the number one cause of lung cancer among non-smokers.
- Radon is responsible for about 21,000 lung cancer deaths every year.
- Elevated radon levels have been found in every state.
- Addressing radon in your home is one of the best ways to prevent lung cancer for you and your family.

RADON: Know Your Risks Training:

January 24, 2024 in Goodland, KS @ the Wolak Building

- 9:00 a.m.-12:00 p.m. for Real Estate (3-HR CE)
- 1:00-2:00 p.m. for Public

Stop by any Extension Office in the District and pick up a Radon kit to test your home.



Research on Tillage Intensity in a Long-Term Wheat-Sorghum-Fallow Rotation

This is a research report from a long-term research project at the K-State Southwest Research-Extension Center at Tribune. Authors of the research report are L.A. Haag, A. Burnett, D. Bond, J. Slattery, and A. Schlegel. You can see this research report and others from K-State at www.newprairiepress.org and search for this title or there is a direct link on the K-State Sunflower District Agronomy website at www.sunflower.ksu.edu/agronomy.

Summary.

This study was initiated in 1991 at the K-State Southwest Research-Extension Center near Tribune, KS. The purpose of the study was to identify the effects of tillage intensity on precipitation capture, soil water storage, and grain yield in a wheat-sorghum-fallow rotation. Grain yields of wheat and grain sorghum increased with decreased tillage intensity in a wheat-sorghum-fallow (W-S-F) rotation. In 2022, available soil water at sorghum planting was greater for no-tillage (NT) than reduced tillage (RT), which was greater than conventional tillage (CT). For wheat there was a similar pattern as sorghum, with available soil water at wheat planting being in the order of NT>RT>CT. Averaged across the most recent 22 years of the study, available soil water at wheat planting was 0.60 inch greater for NT than RT and approximately 1.7 inches greater than CT. Average available soil water at sorghum planting was greater in the order RT=NT>CT averaging 7.9 inches for RT and NT and 5.9 inches for CT. Averaged across the past 22 years, NT wheat yields were 6 bu/a greater than RT and 10 bu/a greater than CT. Averaged across the past 22 years, sorghum yields with longterm NT have been 57% greater than with RT (82 vs. 52 bu/a).

Experimental Procedures.

Research on different tillage intensities in a W-S-F rotation at the Tribune, KS, unit of the Southwest Research-Extension Center was initiated in 1991. The three tillage intensities in this study are conventional (CT), reduced (RT), and no-tillage (NT). The CT system was tilled as needed to control weed growth during the fallow period. On average, this resulted in 4 to 5 tillage operations per year, usually with a blade plow or field cultivator. The RT system originally used a combination of herbicides (1 to 2 spray operations) and tillage (2 to 3 tillage operations) to control weed growth during the fallow period; however, in 2001, the RT system was changed to using NT from wheat harvest through sorghum planting (short-term NT) and CT from sorghum harvest through wheat planting. The NT system exclusively used herbicides to control

weed growth during the fallow period. All tillage systems used herbicides for in-crop weed control.

Results and Discussion.

Soil Water. The amount of available water in the soil profile (0–8 ft) at wheat planting varied greatly from year to year. In 2022, available soil water at wheat planting was greater with NT (15.3 inches) than RT (12.5 inches) and CT (13.9 inches). Across the 22-yr study, available soil water at wheat planting was greatest for NT (8.44 inches) followed by RT (7.85 inches), and CT (6.72 inches). Similar to wheat, the amount of available water in the soil profile at sorghum planting varied greatly from year to year. In 2022, available soil water at sorghum planting was greater with NT (7.8 inches) than RT (5.7 inches) and least with CT (5.3 inches). On average, available soil water at sorghum planting was similar for NT and RT and about 2 inches greater than CT.

Grain Yields. Wheat yields in 2022 were significantly reduced by hail damage and are not reported. Since 2001, wheat yields have been depressed in 12 of 22 years, primarily because of lack of precipitation, winterkill (2015), viral disease (2017), and hail (2022). Reduced tillage and NT increased wheat yields. On average, wheat yields were 10 bu/a higher for NT (33 bu/a) than CT (23 bu/a). Wheat yields for RT were 4 bu/a greater than CT even though both systems had tillage prior to wheat. Yields of NT were significantly less than CT in only one year (2008) and RT in 2 of the 22 years (2001, 2008). Grain sorghum yields in 2022 were slightly above the long-term average. Sorghum yields were 60% greater with NT than RT (108 vs. 67 bu/a) while CT yields were the least (52 bu/a). The yield benefit from reducing or eliminating tillage was greater for grain sorghum than wheat. Grain sorghum yields for RT averaged 20 bu/a more than CT, whereas NT averaged 30 bu/a more than RT. For sorghum, both RT and NT used herbicides for weed control in the wheat stubble post-harvest, and in both the RT and NT systems, the sorghum was “no-till” planted into wheat stubble. Using tillage in the summer-fallow period ahead of seeding wheat, while only reducing wheat yields in a minor way, subsequent sorghum yields were being significantly reduced. This yield benefit with long-term vs. short-term NT (RT) has been observed in most years since the RT system was changed in 2001. Averaged across the past 20 years, sorghum yields with long-term NT have been 57% greater than with RT (82 vs. 52 bu/a).



Beef cattle experts say now is the time to make a treatment plan for sick calves

By Lisa Moser, K-State Research and Extension news service

Walk into any kindergarten classroom in the middle of winter and you are bound to find a little person fighting off a cold. In much the same way, young calves are also prone to respiratory disease and pneumonia after they are weaned, say the veterinarians at the Kansas State University Beef Cattle Institute.

Speaking on a recent Cattle Chat podcast, K-State veterinarians Brian Lubbers, Bob Larson and Brad White share why now is the time to stock the medicine cabinet and make a treatment plan with the local veterinarian so that producers are prepared when illness hits the herd.

“That plan should include a case definition that would indicate when the animal would need treatment and what those steps would be,” Lubbers said.

In the case of a respiratory illness in calves, some of those signs would be difficulty breathing and/or coughing, a reduced appetite and depressed behavior among others, Lubbers said.

If those signs are observed, the second stage of the plan might include bringing the calf into the chute for a closer inspection in which the person evaluating them could take their temperature, listen to their breathing through a stethoscope and perhaps run other tests.

“Whatever the protocol is, the important thing is that it is consistent across the operation,” Lubbers said. “That consistency will allow producers to monitor treatment outcomes in the best way.”

He added: “If the case definition is changing over time, then it will confound and confuse the assessment of treatment outcomes.”

Regarding treatment, Larson said ideally producers will want to have medicine at the ranch ahead of when sickness hits.

“We have a lot of effective treatment options for respiratory illness, so it is good to have those on hand and know the dose and route of administration for the products you will need to use when that sickness arises,” Larson said. “Most cattle will respond to treatment and show improvement. But some will not, so it is important to talk to the veterinarian ahead of time to plan that next step.”

Lubbers said this conversation also establishes the veterinary client patient relationship (VCPR) contract that is legally needed for producers to administer treatment to the animals without the veterinarian performing an exam first.

“Along with having a valid VCPR, producers will also need to keep an accurate record of when treatments were administered,” Lubbers said. “All products have a withdrawal time that must be adhered to and so we don’t want to send them on for sale or processing if they have residues in their systems.”

White agreed and said he recommends producers hold the calves on the property until they’ve cleared the withdrawal time.

“I don’t always know what happens to the calf once they leave my place so I always make sure the calves are out of the withdrawal time before they leave the ranch,” White said.



Lubbers also recommended that producers share those health records with the calf’s next owner.

Also, along with antibiotic treatment, Larson said it is important to include comfort care in the illness plan.

“A good nursing care plan includes offering the sick calves dry bedding to lay on, providing them palatable feed and moving them away from others in the herd so they don’t have to compete with their penmates,” Larson said. “Those attentions to detail are important in the recovery of that animal.”



Happy New Year

Let's Live a Little!

Many people grow up believing it is normal for older people to become weak, to slow down, and to stop doing most of the things they once did. This is not necessarily true, although many people have taken this idea much too far. People are not weak just because they are old; people are often weak because they are inactive. A good number of older adults have believed a myth and lost much of their functional ability in the process.

The good news: It is not so difficult for most people to maintain or recover their functional ability and live an active, independent lifestyle. People can significantly improve their quality of life with a few minutes of physical activity each day. Older adults can feel good and do the things they want to do with less pain and more energy. And it can be fun!

Why is physical activity important?

- strengthens the cardiovascular system (heart, lungs and blood vessels);
- Promotes muscle strength;
- Increases endurance and stamina;
- Increases flexibility;
- Helps reduce fatigue;
- Helps produce good-quality sleep;
- Helps balance and coordination;
- Reduces anxiety and depression;
- Helps regain physical function;
- Helps prevent constipation;
- Improves ability to participate in family and social activities;
- helps prevent bone loss, resulting in fewer fractures; and increases life expectancy.

Make Active Habits Stick

Let's start the new year out right!

Starting in January, I will be starting my "Knowledge at Noon" programs that will be given in Wallace, Sherman and Cheyenne Counties for the next 4 months.

The first one will be given in:

Sherman County, January 8, at noon (M.T) at the Sunflower Extension office. Call 785-890-4880 to sign up.

Wallace County, January 11, at noon (M.T) at the Sunflower Extension Office. Call 785-852-4285 to sign up.

Cheyenne County, January 22, at noon (C.T) in the Commissioner's room on the middle floor of the courthouse. Call 785-332-3171 to sign up.

The programs will be given at Noon in each county, so if you are on a break from work bring your lunch with you.

Make Active Habits Stick

If your doctor gave you a prescription for exercise, would you follow it? Exercise is like medicine for many reasons. Obviously, physical activity strengthens muscles, and it also prevents blood vessels from getting damaged and clogged. In turn, this helps prevent heart attacks, strokes, and even some types of dementia. In fact, regular exercise can be as good as medication at preventing diabetes and heart disease in at-risk people. And, it is even more effective than drugs for stroke recover.

So let's start creating our plan of action and know which activities you would like to incorporate throughout 2024.



Spring Events

It's not too early to start thinking about **Spring Events** which include:

***4-H Club Days & Talent Night, Project Talks, Demonstrations, Creative Tables, Promotional Posters, and Model Meetings.**

***Beef Weigh-in is coming up in all 3 counties. Dates and times will be posted soon.**

Citizenship In Action

The purpose of the event is for Kansas youth to learn how the state legislative process works and how their voice and participation in decision-making can make a difference in their local communities.

Where: Topeka KS—Hotel Topeka at City Center:

When: February 18-19, 2024

Registration closes:

January 26, 2024



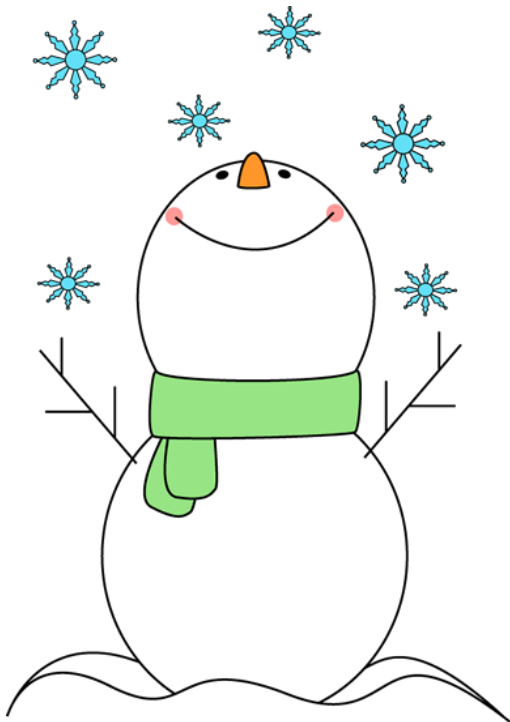
Horse Panorama

The State Horse Panorama for adults & youth will be at the K-State Salina Campus on:

January 27, 2024

Registration closes:

January 2, 2024



SATURDAY, JANUARY 13, 2024



K-STATE
Research and Extension



KANSAS 4-H DAY WITH K-STATE WOMEN'S BASKETBALL

\$30: Ticket, Voucher (\$10 concessions), & Shirt

\$20: Ticket & Voucher (\$10 concessions)

HOW TO GET TICKETS?

1. Register! Use the QR code or the link below!
2. Pick up ticket packages - location TBD (1/13/24, 11:30 AM-12:30 PM)
3. Doors open for the general public (1/13/24, 12:00 PM)
4. Tip-off! (1/13/24, 1:00 PM)

Online registration for this event will be due **January 1st, 2024**. No paper registrations will be accepted. To register, go to: <https://bit.ly/3N85oPY>

Kansas State University Agricultural Experiment Station and Cooperative Extension Service

K-State Research and Extension is an equal opportunity provider and employer. Resource: <https://www.apa.org/topics/resilience>



Build Your New Year's Resolution with the 4-H Pledge



I pledge my **HEAD** to clearer thinking,

- Learn a new skill
- Organize your schedule
- Take a challenging class
- Read one book a week

my **HEART** to greater loyalty,

- Plan a weekly family game night
- Make family dinner a priority
- Set time aside to visit friends and family each month

my **HANDS** to larger service,

- Hold a food drive
- Volunteer at a pet shelter
- Plan a social event at a nursing/assisted living home

and my **HEALTH** to better living for my club, my community, my country, and my world.

- Exercise 5 days a week
- Drink 64 oz. of water a day
- Buy a new fresh fruit or vegetable to try each week

Congratulations!

SH Co. Project Record Books Qualifying for Regionals:

- Kaelyn Schilling - Beef
- Rylea Martin - Foods
- Hayden Short - Leadership
- Matthew Berls - Rabbit
- Mason Berls - Wildlife: Sports Fishing

WA Co. Project Record Books Qualifying for Regionals:

- Trell Larson—Goat
- Brennan Aldridge—Leadership
- Lincoln Stramel—Swine



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New 4-H policy Guide: <https://www.kansas4-h.org/resources/policy-guide/Kansas%204-H%20Policy%20Handbook%202023.pdf>

January 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1. Happy New Year! Extension Office Closed!	2.  Horse Panorama Registration Due	3. SH-Foods 3:30-5:00 PM 4-H Building	4.	5.	6.
7.	8. SH-Knowledge at Noon	9.	10.	11. WA-Knowledge at Noon	12. KS Project Record Book Due to the Extension Office	13.
14.	15.  Extension Office Closed!	16.	17.	18.	19. KS Project Record Book Judging Hays, KS	20.
21.	22. CN-Knowledge at Noon	23.	24. SH-Radon Training	25.	26.	27.
28.	29.	30.	31.			



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K-State Research and Extension is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to physical, vision or hearing disability, or a dietary restriction please contact Karen Nelson at (785)890-4880. Kansas State University Agricultural Experiment Station and Cooperative Extension Service. K-State Research and Extension is an equal opportunity provider and employer.