

K-STATE

Research and Extension

Sunflower Extension District #6



February 2022

Online! Newsletter

www.sunflower.ksu.edu

Sunflower Extension District

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

Inside Your Newsletter...

How do we get the most from our fertilizer dollar?.....Crop Production page
Transitioning to a Tighter Calving Window.....Livestock page
Farm Stress—the Health of a Farm Family.....Family & Consumer page
Can Pollinators be Part of your 4-H Project?.....4-H Youth Development page



Managing Farm and Ranch Stress

As a Kansan working in Agriculture, you may experience elevated stress as you work hard to produce quality products, sustain your operation, and support your family.

Identifying signs of stress

Physical	Emotional	Behavioral	Cognitive	Self-Worth
Headaches	Sadness/Depression	Irritability	Memory Loss	Feels Like a Failure
Ulcers	Bitterness	Passive-Aggressive Behavior	Lack of Concentration	Can't do Anything Right
Changes in Appetite	Anger	Anger	Difficulty with Simple Decisions	Not Being Able to Fix Things
Problems Sleeping	Anxiety	Increased Alcohol Use		
Frequent Illness	Loss of Spirit	Taking Drugs		
Exhaustion	Loss of Sense of Humor	Isolation		
		Violence		

Managing stress and developing coping skills are important to your long term health and well-being. Here are some resources, but find what works for you. Help is here.

Resources

Farm Bureau #FarmStateofMind—<https://www.fb.org/land/fsom>
K-State Research and Extension—browse for health and wellness resources <https://www.ksre.k-state.edu/>
Kansas Department of Agriculture—<https://www.kansasagstress.org/>
North Central Farm and Ranch Stress Assistance Center—<https://farmstress.org/>; 800-447-1985
Kansas Suicide Prevention Resource Center—<https://www.ksphq.org/>; 785-841-2345
National Suicide Prevention Lifeline (NSPL): 800-273-8255 (TALK)
Crisis Text Line 24/7: Text “Home” to 741741



How do we get the most from our fertilizer dollar?

With the fertilizer situation (higher prices and unknown supplies), many farmers are wondering about reducing the amount of fertilizer being applied to their fields. This can be a daunting prospect, but maybe a few tweaks to fertilizer plans can help with managing this situation.

We need to think about the fertility that is already in the soil and how efficient we are in the planned fertilizer applications. These are two topics that were heavily discussed at our recent soil fertility school.

When thinking about nitrogen and phosphorus, it is important to account for what is already in the soil. Soil sampling is the best way to account for these 'carry over' nutrients. For phosphorus, it doesn't move around a great deal and a 0-6 inch sample can be used. Since nitrogen is more mobile in the soil, a profile sample should be used (to 36 inches). To help account for the variability in the soil, a representative sample is needed that consists of 10-20 soil cores from throughout the field (or management area).

How much might be lurking below the soil surface? The amounts of nitrogen and phosphorus can vary greatly, based on your applications in prior years and yields in the field. Here is an example looking at residual NO_3 in dryland corn with a yield goal of 135 bu. Other assumptions are \$5.25 corn, \$0.97 N, and N applied as preplant N.

If we **think** there is **15 lb of residual NO_3** in the soil profile, then the N recommendation would be for 95 lbs/ac at a cost of \$92.15/ac.

If there is **actually 80 lb of residual NO_3** in the soil profile, then the N recommendation would be for only 10 lbs/ac at a cost of \$9.70/ac.

The price difference is \$82.45 for 65lb of profile N. That would pay for soil testing to know how much nitrogen is in the profile.

Why could there be this big of a difference in what you thought was there and what was actually there? It could be because a field of dryland corn was fertilized at higher rates last year because there was a high yield goal (and good profile moisture before planting) and the field had low yields because of the dry conditions during the latter half of the growing season. This is probably a 'less than typical' example, but is a good thought-provoking example of the value of nitrogen in the soil profile. And

it may be more typical because of the growing conditions and spotty rain across our area this last growing season.

For phosphorus in the soil, the focus is on maintaining soil test values in the non-responsive range, slightly above 'critical levels'. The critical test value is 20 ppm and the maintenance range is from 20-30 ppm. By doing this, there is flexibility in applications because applications may not be needed every year. It is important not to reduce the amount of P applied in low testing fields because yield responses (and profit) in those fields are likely because of the phos application. The dollar return to fields with high testing P levels may be more limited because of the higher phos costs this year. In the case with high testing P soils, this may be the year to use that 'P that is in the bank (soil)' to help meet crop needs.

On the topic of efficiency, there are several efficiencies that can be discussed - how efficient a plant is at taking up the nutrient, how efficient the application method is and how efficient the soils are. In general, irrigated crops are more efficient at taking up nutrients because they are less stressed from other environmental factors (like drought). Application methods that put the nutrients into the soil (into the root zone) are more efficient than those applied to the soil surface. For example, if nitrogen is applied to the soil surface, we need a rain event to move it into the root zone. Because of this, it may not be in the root zone when the plant needs the nitrogen. One of the most efficient ways of applying nitrogen in irrigated corn is fertigating it through the pivot. This is because it is moving directly into the root zone with the irrigation water and you can apply it just prior to the plant needing it.

There is lots more on this topic - more than can be included in this article! Because of this, I recorded the presentations from the K-State Soil Fertility School in Goodland. Each presentation is roughly 45 minutes long and covers these topics - and more on getting the most out of your fertilizer dollar. The recordings are available at the K-State Sunflower District Agronomy facebook page and there is a link posted to them on the K-State Sunflower District Agronomy webpage at www.sunflower.ksu.edu/agronomy.



Transitioning to a Tighter Calving Window

As spring calving approaches, it gives cattle managers the opportunity to evaluate the current status of the calving window in terms of length and distribution. Extending the breeding season, therefore the calving season often increase herd pregnancy rates, however it comes at a price. First one must determine if an extended calving season poses an issue to the success of the operation. Producers will likely see obvious effects of this management style including, but not limited to; varying calf weights and age at weaning, late bred cows, and mismatched cow nutritional needs to available resources. Having such large variability in the calving distribution could have huge economic impacts on the producer. To illustrate the disadvantage of late born calves, consider the following example. A calf born 90 days prior to another calf has the potential to be 180 lbs heavier at weaning than the late born calf assuming a 2 lb per day gain. This weight advantage makes the earlier born calf more valuable, when the dams likely had similar maintenance costs over the course of a year. Transitioning cows to calve earlier in the calving season in a tighter window requires stricter management and discipline pulling bulls on time, but it could lead to several benefits.

Benefits of an appropriate calving season:

- A more uniform calf crop—as to be expected calves born around the same time are likely to be similar in weight, and therefore more marketable.
• Matching nutritional needs to feed resources—in many management systems it is ideal to match feed resources to nutritional needs of the cattle. When the cowherd is in different phases of gestation, lactation etc. it becomes more difficult to match resources to cow needs. Inefficiency would include supplying a feed source to the cowherd that is exceeding some cows' needs and falling short on others.
• Identifying reproductively unsound cattle more easily—with a defined breeding and calving season, it would be easier to identify open cows at fall pregnancy checks to be culled compared to cows that were bred late and in early gestation. A more defined breeding season also makes it much more

- encouraging to cull an open cow versus a late bred cow.
• Improved herd management—All factors combined, a more defined calving window requires a more structured schedule encouraging producers to become more organized in other areas of management. This may include branding, vaccinations, deworming, weaning, and pregnancy checking.

Generally there are two methods to shorten the calving window; cutting off the breeding season to 90 days (or the desired length of the calving season) and retaining non-pregnant cows to rebreed on time the next year, and shortening the breeding season gradually over several years. While the first method resolves the extended calving period very quickly, it includes holding over cows for an additional year while they are unproductive. Table 1 illustrates an example of converting an extended calving season to a 90-day season over the course of three years. This example gives dates of when breeding should start and end, and when calving begins and ends for both heifers and cows. The included dates are just a scenario and obviously will not be ideal for every producer depending on weather, calving resources, and other activities needing planned around. Once transitioned, the cowherd is more likely to calve in the desired window as they will be given adequate time to calve and rebreed if reproductively sound.

In many cases, tightening the calving season cannot be accomplished in one year alone if a big correction needs to be made. Making small improvements pulling bulls on a yearly basis will slowly improve the calving season length and provide the benefits mentioned previously. More disciplined management and a stricter calendar can provide benefits beyond a tighter calving season that should be explored.

For more information on calving season, please visit or call the Cheyenne County Extension Office at (785)332-3171.

For more resources and event announcements, please follow us on Facebook at K-State Research and Extension Sunflower District.

Table 1. An example of a 3-year plan for converting a year round calving program to a 90-day calving season

Table with 5 main columns: Year, Breeding starts (Heifers, Cows), Breeding Ends (Heifers, Cows), Calving Begins (Heifers, Cows), and Calving Ends (Heifers, Cows). Rows show data for Year 1, Year 2, and Year 3.

Adapted from Mullenix, K., Elmore, M., Rodnig, S. (2020). Transitioning to a Defined Calving Season. Alabama Cooperative Extension System



Farm Stress

The Health of a Farm Family



Unpredictable weather, falling net farm income, spotty health care services and a host of other factors can make for incredible stress on farms and in rural communities. Many of the factors causing sleepless nights are beyond an individual's control, yet there are often ways to manage the stress, according to a North Dakota State University family science specialist Sean Brotherson, a speaker at a recent K-State Research and Extension workshop in Manhattan.

"People will power through even if they don't feel well," said Brotherson. There's a cost to that. You cannot put your health or relationships on the back end for long without consequences. The most important asset of any agricultural operation is the health and wellness of the farm operator.

Farming and ranching ranks in to the top 10 of the most stressful occupations. That stress can lead to depression, anger, health concerns, failed marriages, loss of friendships or relationships with family members, alcohol or substance abuse or worse.

"When we talk about farm safety, we often talk about accident prevention but we tend to neglect to talk about mental and emotional health," Brotherson said, adding that's a mistake.

Current obvious causes of stress have been drought conditions this year, expectations that crop prices will continue to stay relatively low, the potential for trade disruptions linked to tariffs, and uptick in interest rates.

The situation is taking a toll. Some feel extra pressure because their farm has been in the family for generations and they don't want to be the one to lose it.

"Stress signals are like the warning lights blinking on your truck's dashboard," Brotherson said.

"We often want to ignore them but at some point there is a price to pay—a heart attack, broken relationships, depression or worse. You maintain your car to keep it running properly. You have to maintain your health, too."

We know that stress in a family affects each member of the household, not just the farmer themselves.

What can you do to help cope with your stress level. You need to learn how to unwind by listening to music sometimes, rather than farm news, political issues, or other news. Try taking a walk and include others in the family to walk with you. Make time to watch a movie with your family, better yet, choose one night a week to have a movie night or game night. Involve the whole family! If this can work for you, try to plan regular social nights with friends. **DO NOT** just keep to yourself.

Other General Suggestions:

- Exercise at least 20 minutes a day, Walk, bicycle or swim
- Get at least seven to eight hours of sleep
- Take time every day to reflect on good things in your life.
- Write your thoughts in a journal.
- Spend 30 minutes doing something with your hands. (Not working on equipment)
- Learn something new or restart a hobby or activity that you once enjoyed.
- Reach out to someone for support or help—a friend, a counselor, a loved one.
- Volunteer to help with a cause that's important to you.
- Do random acts of kindness.



Can Pollinators be Part of Your 4-H Project?



Did you know?

- Pollinators move pollen from flower to flower so plants can produce fruits and seeds.
 - Over 75% of all flowering plants are pollinated by insects and other animals.
 - It's estimated that 1 of every 3 mouthfuls you eat depend on insect pollination.
 - Flowers and pollinators depend on each other for survival.
 - Many plants cannot produce fruit or seeds unless they are pollinated.
- Most pollinators are insects like bees, wasps, butterflies, flies, ants, and beetles.
 - Hummingbirds and bats also pollinate plants.

What food do you eat that may not be as plentiful without pollinators? No pollinator ...

- No apples, cucumbers, zucchini, almonds, and strawberries.
- No lettuce, tomatoes, squash, cabbage, broccoli and blueberries.
- No vanilla, cranberries, coffee, grapes and cacao (chocolate) and many more!

Pollinator Threats

Changes in habitat (loss, fragmentation, degradation)
 Disease, predation, and parasites
 Improper pesticide and herbicide use



How can you help?

(<https://www.pollinator.org/pollinators>)

- Plant pollinator friendly gardens. (It doesn't have to be a large space.)
 - Choose various plants that bloom from spring to fall.
- Plant each plant in groups of at least 3 because they are easier for pollinators to find.
- Remember there are no butterflies without caterpillars! They need food sources too.
 - Minimize your use of pesticides.
- Keep your garden area a little messy in the fall and winter so pollinators have a place to overwinter.

4-H Project Resources

Integrate a pollinator focus with your plant science or horticulture project.

KS 4-H Pollinator Challenge (<https://bookstore.ksre.ksu.edu/pubs/4H1127.pdf>)

Monarchs on the Move 4-H Project. (See Shop 4-H.)

Planning a Pollinator Garden

<https://kidsgardening.org/resources/lesson-plans-planning-a-pollinator-garden/>

Contact:

Karen Nelson, 4-H Youth Development Agent
 Sunflower District—785.890.4880
karennelson@ksu.edu

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How does 4-H light your SPARK?

Watch your mail for County Club Day information which will be mailed soon. There are resources on the Kansas 4-H Youth Development webpage for all areas of Communications. Contact the Extension Office with any question on County Club Day. 785-332-3171



March 2022:

- 1: State 4-H Scholarship Applications Due
- 1: State KPRF's Due
- 4: Club Day Entries Due
- 5: Junior Beef Day
- 6: Beef Weigh-In 2:00-3:00 pm
- 19: Junior Sheep Producer Day
- 21: County Club Day
- 20-24: National 4-H Conference
- 30: CN County 4-H Scholarship Due

April 2022:

- 27: Small Livestock Weigh-In 6-7:00 pm



4-H members exhibiting animals at the Kansas State Fair or KJLS are required to complete the Youth for the Quality Care of Animals certification (YQCA). The training must be completed in-person or online annually.

Register and pay online at <https://yqca.learnrow.io>

Cost - \$3

Instructor -
Heather McDonald,
Livestock Agent
(785)332-3171

Cheyenne County

April 21, 2022
5:30 pm - 6:30 pm CT
Extension Office
St. Francis, KS



FEBRUARY

Cheyenne County

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2 Pleasant Hill 4-H Plum Creek 4-H	3	4	5
6	7 Lawn Ridge 4-H	8	9	10	11	12
13	14 <i>Happy Valentine's Day</i>	15	16	17 National Random Acts of Kindness Day	18	19
20 Citizenship in Action	21  Closed	22	23	24	25	26
27	28 4-H Council 6:30 pm					



Important Dates

- February 1.....[Citizenship in Action - Reg. closes](#)
- February 2.....Foods
- February 2.....Ground Hog Day
- February 4-5.....[Ambassador Training](#)
- February 5.....Pheasants Forever
- February 7.....4-H Council
- February 7.....Promotion Committee Meeting
- February 11.....JR Leader Meeting
- February 11.....4-H Days & Talent Night Reg. Due
- February 13.....Ruleton Eager Beavers
- February 13.....Prairie Dale
- February 14.....Valentines Day
- February 19.....Cloverbuds
- February 20.....Sunflower
- February 20-21[Citizenship in Action](#)
- February 21.....Country Clovers
- February 21.....Presidents Day/ Extension Closed

4-H Scholarships

“ALL 2022”

Kansas 4-H Scholarships applications are online and must be submitted online.

The **deadline** to complete the applications and submit recommendation letters or references is **March 1, 2022.**

4-H Scholarship Links:

<https://www.kansas4-h.org/resources/awards-and-recognition/scholarships.html>



Beef Weigh-In

Saturday, March 5, 2022,

from 9:00 - 10:00 a.m. (weather permitting)

For any questions about the beef project, please contact:

Clay Schilling Beef Project Leader

@ (785) 694-4589

4- H members must be enrolled in the project prior to the weigh-in date, or the project will show in open class.



Like us on
Facebook

<https://www.facebook.com/sunflowerextensiondistrictshermancounty4h/>

Seeking Volunteers

We need your help!



Will you teach a session at
Sunflower Extension District/NWKTG
4-H Project Spotlight?
Open to all community youth
Grades K - 12
(Choose the grades for your session
based on content and skill level.)

Saturday,
May 7, 2022
8:30 AM – 3:30 PM (MST)

Presenter forms
due Monday,
January 31, 2022.

Northwest Kansas
Technical College
Goodland

4-H Project Spotlight is a day of fun hands-on education
for 4-H members and community youth.

Session times:
9:00 – 10:00; 10:15 – 11:15; Brunch; 12:15 – 1:15.

Your session/s can be
1 hour 2.25 hours (all morning) 3.25 hours (all day)





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My 4H project

4-H Days & Talent Night

March 11, 2022

Project Talks/ Demonstrations* Talent
Creative Foods Table Educational Posters

• **Registration Forms Due:**

February 11, 2022

Sherman County



Sherman



February 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1. Citizenship In Action Registration Closes	2. Foods 3:30-5:00 PM 4-H Building 	3.	4. Ambassador Training Rock Springs Feb. 4-5, 2022	5. Pheasant Forever Elks Lodge
6.	7. Promotion Meeting 6:00 PM 4-H Council 7:00 PM 4-H Building	8.	9.	10.	11. JR Leader Meeting 7:30 AM 4-H Building 4-H Days & Talent Night Reg. Due	12.
13. Ruleton Eager Beavers 3:00 PM Prarie Dale 5:00 PM 4-H Building	14. ♥HAPPY Valentine's DAY♥	15.	16.	17.	18.	19. Cloverbuds 10:00 AM 4-H Building
20. Sunflower 3:00 PM 4-H Building Citizenship in Action February 20-21, 2022 Topkea, KS	21. Country Clover 7:00 PM 4-H Building  Extension Closed	22.	23.	24.	25.	26.
27.	28.					



Dates to Remember

February

- 4-5- Ambassador Training—Rock Springs
- 6- Beef Weigh-In
- 20-21- Citizenship in Action Trip—Topeka
- 21- Office Closed

March

- 14- Club Days Entry Forms Due
- 14- Sewing Day—Extension Office
- 16- Babysitting Clinic—Goodland
- 21- County Club Days
- 28- 4-H Council Mtg

April

- 15- Office Closed 1/2 day
- 20- YQCA Training—Extension Office
- 24- Small Animal Weigh-In

Large animal weigh in will be Feb. 6 from 2:00 –4:00 p.m. @ Smoky River Ranch



Recordkeeping

Congratulations to Claire Helse1 and Calley Stubbs on their KAP being selected to advance onto NW Area Judging!!



YQCA Class

**When: April 20, 2022
6:30—7:30 p.m.**

**Where: @ the Extension Office
Cost: \$3.00**

**Register and pay online at
<https://yqca.learn-grow.io>**

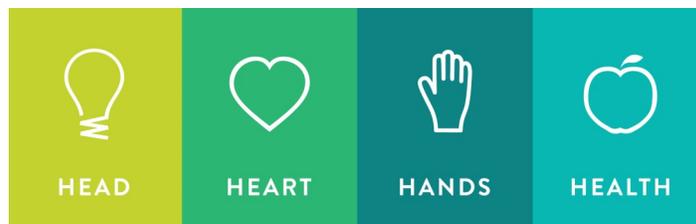
County Club Days

When: March 21, 2022

**4:00-6:00 p.m. Demonstrations and Talks
6:00-8:00 p.m. Talent**

It's not too early to start thinking about 4-H County Club Days. Now would be a good time to visit with your parents and leaders to get ideas and themes together.

Watch for mailings or emails with more information.





February 2022



Wallace County

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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		1	2	3	4	5
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6	7	8	9	10	11	12
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Large Animal
Weigh-In
2:00-4:00 pm

13	14	15	16	17	18	19
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Valentine's
Day

20	21	22	23	24	25	26
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Office Closed

Citizenship in Action

27	28					
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