

# K-STATE

Research and Extension

## Sunflower Extension District #6



May 2024  
Newsletter



[www.sunflower.ksu.edu](http://www.sunflower.ksu.edu)

### Sunflower Extension District

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Extension is an equal  
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[www.ksre.ksu.edu](http://www.ksre.ksu.edu)

## May 2024

Go to [www.sunflower.ksu.edu](http://www.sunflower.ksu.edu) for more details on these programs.

### Inside Your Newsletter...

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Lawn Maintenance Should Start Now.....Ag and Natural Resource page  
Health Impacts of Vaping.....Family & Consumer page

## Summer Day Camps

Project Learning Day—Goodland.....May 18  
Fishing Clinic.....May 24  
JR Chef—St Francis.....June 3—7  
JR Chef—Goodland.....June 3—7  
Bicycle/Scooter Rodeo—Goodland.....June 8  
JR Chef—Sharon Springs.....June 10—17  
Food Preservation (4-H Only).....June 20

More info to come!

Watch for the flyers to come to the schools and follow our  
Facebook Page.



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### Nitrogen Placement and Rate for Starter Fertilizer in Corn

Starter fertilizer is typically considered as the placement of a small rate of fertilizer, usually nitrogen (N) and phosphorus (P), near the seed at planting time. This fertilizer is intended to "jump start" growth in the spring, and it is not unusual for a producer to see an early-season growth response to starter fertilizer application. But some producers might also consider using this opportunity to apply higher rates of fertilizer that can supply most of the N and P needs for the corn.

Farmers should be very cautious about applying starter fertilizer that includes high rates of N (and/or K). It is best to have some soil separation between the starter fertilizer and the seed. The safest placement methods for starter fertilizer are either as a deep-band application 2 to 3 inches to the side and 2 to 3 inches below the soil surface (2x2) or as a surface-band application to the side of the seed row at planting time (2x0), especially in conventional tillage or where farmers are using row cleaners or trash movers in no-till (Figure 1).

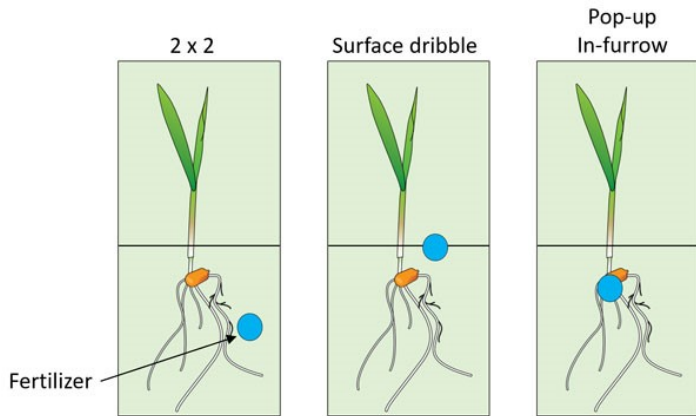


Figure 1. Examples of starter fertilizer placement. Graphic by Dorivar Ruiz Diaz, K-State Research and Extension.

#### What are the risks with "pop-up" placement?

If producers apply starter fertilizer with the corn seed ("pop-up" in-furrow), they run an increased risk of seed injury when applying more than 6 to 8 pounds per acre of N and K<sub>2</sub>O combined in direct seed contact on a 30-inch row spacing (Table 1). Nitrogen fertilizer can result in salt injury. Urea-containing fertilizers can also result in ammonia toxicity. Urea converts to ammonia, which is very toxic to seedlings and can significantly reduce final stands (Figure 2).

#### What is a "salt"?

"Salts" are ionic compounds that result from the neutralization reaction of an acid and base. Most fertilizers are soluble salts (e.g. KCl from K<sup>+</sup> and Cl<sup>-</sup> ions). Salt injury can occur when fertilizer addition increases the osmotic pressure in the soil solution (due to an increase in salt concentration) around the germinating seed and roots. This can cause *plasmolysis*, which is when water moves out of the plant cell, shrinking cell



Figure 2. Symptoms of ammonia toxicity from urea-containing fertilizers placed too close to the seed. Photos by Dorivar Ruiz Diaz, K-State Soil Fertility Specialist.

membranes and collapsing the cell. Symptoms of salt damage are short, discolored roots and a reduced corn population.

Table 1. Suggested maximum rates of fertilizer to be applied directly with corn seed for "pop-up" fertilizer.

Row Spacing	Pounds of N + K <sub>2</sub> O (No urea or UAN)	
	Medium-to-fine textured soil	Sandy soil
40	6	4
30	8	6
20	12	8

#### N rates with 2x2 placement or "surface dribble"

Starter fertilizer placements, such as 2x2 or surface dribble (2x0), provide enough soil between the fertilizer and the seed and are considered safe alternatives for higher rates of N application. Recent studies in Kansas suggest that the full rate of N can be applied safely using these placement options. One concern from some producers is related to the additional time demands for the application of high rates of fertilizer during planting. However, from an agronomic perspective, this can be an excellent time for N application, minimizing potential N "tie-up", and providing available N to the corn, particularly under no-till systems with heavy residue.

#### Take-home message

Producers can apply most of the N needs for corn at planting as long as the fertilizer placement provides enough soil separation between the fertilizer and the seed. The best options are the 2x2 placement or surface-dribble, with similar results in terms of crop response. Nitrogen applications with these starter fertilizer options can provide an excellent alternative for producers who might not have the opportunity for anhydrous ammonia applications this spring or are planning to apply additional N as a side-dress application.



Lawn maintenance should start now

It is time to resume lawn maintenance as spring weather and plant growth arrive. Proper maintenance is a proactive approach to reduce weed growth and other stresses to the lawn while minimizing costs and the environmental impact, said KSU horticulture expert Cynthia Domenghini.

**Mowing** The optimal mowing height for a home lawn depends on the type of grass, lawn use and time of year. “Mow at the high end of the recommended range for each species to improve drought resistance by encouraging deeper roots,” Domenghini said. “Only one-third of the grass leaf should be cut at a time.” Removing more by lowering the mowing height results in physiological stress and possible heat or cold injury. If the lawn has become overgrown and needs more than one-third removed it will need to be done gradually with a few days between each mowing. “Mowing frequency should be based on the growth rate of the lawn,” Domenghini said. She suggests not following a set schedule that may result in excessive clippings left on the grass. “Proper timing of mowing means the grass clippings are shorter and can be returned to the lawn, this contributes nitrogen back to the lawn.” Long clippings can block sunlight to the live turf and promote disease, so they should be bagged and removed. Maintaining a sharp blade on the mower is essential for a clean cut, Domenghini added. “A dull mower blade tears the grass and causes the tips to turn whitish. Mow using a different pattern each time to prevent soil compaction and turf wear from the mower wheels. The grass blades lean the direction of the mower’s path so changing the pattern each time allows the grass to stand more upright,” Domenghini said.

**Watering** “Apply water in the early morning, and wait as long as possible between watering, nighttime watering promotes disease development. “Some signs indicating that the turf needs water include darker bluish-green color, and when footprints remain in the lawn when someone walks across rather than leaf blades bouncing back in place,” Domenghini said. “Soak the soil to a depth of 6-8 inches and wait for signs that more water is needed.”

**Fertilizing** “Fertilize only to maintain a moderately green color during favorable weather and minimally or not at all during times of weather stress. Over-fertilizing increases the water and mowing requirements”. Domenghini suggests not fertilizing when heavy rain is expected, and never dump excess fertilizer into storm drains or sewers.

The timing of fertilizer applications should be based on turfgrass species:

- Fescue and bluegrass -- September and November (optional in May)
- Bermudagrass and zoysiagrass -- between May and August
- Buffalo grass— June



Did you know we have a horticulture Facebook page?  
Check it out-  
Sunflower Extension District  
Cheyenne County Master Gardeners

# Health Impacts of VAPING

Research does show that vaping is dangerous for your health. While e-cigarettes are too new for us to know all of the ways that vaping will impact your body in the long term, we do know that vaping is not safe.

## E-Cigarettes & Vape Pens Generations



### Cig-a Like

E-cigarettes came onto the market around 2007. Most delivered nicotine and were disposable.



### Variations

Variations on the first e-cigarettes included products like e-hookah and rechargeable versions.



### Vape Pens

These have batteries that can reach higher temperatures, have refillable e-liquid cartridges, and allow users to regulate the frequency of inhalations.



### Mods

Large size, modifiable e-cigarettes allow for more aerosol, nicotine, and other chemicals to be breathed into the lungs, at a faster rate.



### Pod-Based

These e-cigarettes are shaped like USBs and contain pods with higher amounts of nicotine than previous generations.

Tobacco Prevention Toolkit

Division of Adolescent Medicine, Stanford University

For more information go to: [www.tobaccopreventiontoolkit.stanford.edu](http://www.tobaccopreventiontoolkit.stanford.edu)

Vaping is not going away, it is progressively getting worse.

Very young kids are even using. The pictures above only show some of the vaping devices. Now there are even more!!!

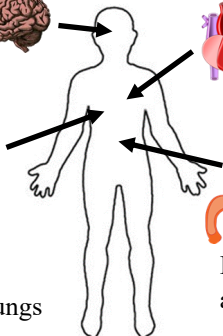
E-cigarette vapor contains lead and nicotine which can cause life-long **PROBLEMS WITH BRAIN DEVELOPMENT** for children and teenagers. The nicotine in e-cigarettes is **EXTREMELY ADDICTING** and may prime the brain for addiction to cigarettes and other substances.

Vaping **HURTS YOUR HEART AND BLOOD VESSELS** by changing your blood enzymes in the same way that cigarettes do.

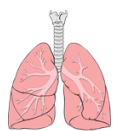
Vaping **HURTS YOUR LUNGS** by shutting down their natural defense system and leaving you more vulnerable to illnesses like bronchitis and pneumonia. Vaping also **MAKES ASTHMA SYMPTOMS WORSE**.

E-cigarettes create many of the same **CANCER-CAUSING CHEMICALS** that are in cigarettes, including formaldehyde and volatile organic compounds like benzene.

Rewires and changes the brain



Heart beats faster due to "fight or flight" response



Trouble breathing & damage to lungs



Increased acid reflux

E-cigarettes vapor contains heavy metals that cause **LUNG, LIVER AND HEART DAMAGE**.

Nicotine can make it **HARDER TO CONTROL YOUR BLOOD SUGAR LEVELS** if you have diabetes.

Vaping nicotine-free e-liquids **DOES NOT PROTECT YOU** from many of these health hazards.

**Spread the Word!!!**

**Don't let you kids Vape!!!**

Physician Advocacy Network  
a project of Twin Cities Medical Society.





*Congratulations Seniors  
Class of 2024  
in the Sunflower Extension District*

Sherman County  
*Kerrek Lockhart*

Cheyenne County  
*Brady Ketzner*  
*Jacki Milliken*  
*Julie Wilson*  
*Matt Hendricks*  
*Rhett Shay*

Wallace County  
*Livingston Perry*  
*Kean Dinkel*  
*Brennan Aldridge*

**Way Out West Livestock Judging Camp**

June 3<sup>rd</sup> – All day beginners camp starting at 9:30 and getting done at 3:30  
Judgers will learn the basics of livestock judging, note taking, and reasons format.  
Hosted by the Wallace County Livestock judging team and alumni  
There will be a cost of \$15 to cover lunch and judging materials.

June 4<sup>th</sup>-6<sup>th</sup> – Advanced camp with approval of camp director  
Judgers will work with a collegiate livestock judging coach to refine their judging skills and give more advanced sets of reasons.  
Campers who are not 18 will ride to livestock producers farms to judge livestock with camp helpers.  
Hosted by Taylor Frank (Butler Community College Livestock Judging Coach), and Wallace County collegiate livestock judging alumni.

Preference given to Wallace County judgers first, followed by Sunflower District judgers, and the rest of the spots will be filled by out of district judgers.

Cost will be \$100 for Wallace County and Sunflower District judgers, but you will be asked to donate food for lunch for one day to help cut down on the cost of camp and make it more affordable. Out of district judgers will be charged \$125.

Spots are almost full. Call Becky Vandike (785-470-1936) to secure a spot ASAP.



**2024 Kansas 4-H Geology Field Trip**  
**Northwest Kansas Chalk Beds**

**When:** June 14th-16th

**Where:** The headquarters for the 2024 4-H Geology State Field Trip is the Trego Community High School

**What:** A variety of workshops and activities are planned for Friday and Saturday evenings. A variety of stops are planned on the Field Trip Saturday and Sunday. Project members are encouraged to participate in judging and quiz bowl. A catered supper will be provided Saturday evening for \$15 per person and we will have a variety of educational publications for sale through the Kansas Geological Survey.

**Registration Deadline:** May 24th—You must register all those who plan to attend including siblings ages 0-18 and all adults 19 and up—One registration per person NO LATE REGISTRATIONS and NO registrations at the door.

**Cost:** Registration—\$15.00 per person

Saturday Meal—\$15.00 per person

Guidebooks—\$4.00 each

T-Shirts—\$20.00 each

**Geology Boxes** (Some woods may be limited)

Pine—\$55.00

Walnut—\$65

Oak—\$65

Elm—\$65

Hackberry—\$65

Indoor camping is available at the Trego Community High School if you are accompanied by a parent/guardian. Other lodgings can be found in Wakeeney.

[https://kstate.qualtrics.com/jfe/form/SV\\_6hhKshAq6jzFNLE](https://kstate.qualtrics.com/jfe/form/SV_6hhKshAq6jzFNLE)



KS 4-H Horse IDs are due June 1, 2024

Horse ID Certificates can be found at:

[KS 4-H Horse ID Certificates](#)

**Fair dates**

**Wallace County**—”Just Another Day In Fairadise”  
July 20-27, 2024

**Cheyenne County**—”Stars, Stripes and Summer  
Nights” July 30-August 3, 2024

**Sherman County**—”Barn In the USA”  
August 3-10, 2024



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<http://www.facebook.com/sunflowerwallace>

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



# Sunflower Extension District 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1. <b>Add/Drop Projects</b> <u>Deadline</u> <b>KSF/KJLS Market Beef</b> <u>Nominations Due</u> <b>SH - Foods</b> 3:30 PM MT 4-H Building <b>CN- Breeding Heifer ID Due</b>	2. <b>SH- Homeschool Group</b>	3. <b>SH- Project Learning Day</b> <b>Registration Due</b>	4. <b>Loyalty Day Spring Live-stock Show—Tribune</b>
5. <b>Loyalty Day Spring Live-stock Show—Tribune</b>	6.	7. <b>CN– Healthy Body, Healthy Brain</b>	8.	9.	10. <b>Fishing Clinic</b> <b>Registration Due</b> <b>WA– Sharon Springs Last Day of School</b>	11.
12.	13.	14. <b>SH– Goodland Last Day of School</b>	15. <b>CN- Market Live-stock ID's Due</b> <b>CN—St Francis Last Day of School</b>	16. <b>WA—Weskan Last Day of School</b>	17.	18. <b>SH- Project Learning Day</b> 8:30 AM MT - 12:00 PM MT Fairgrounds
19.	20.	21.	22.	23 <b>CN—Cheylin Last Day of School</b>	24. <b>Fishing Clinic</b> 8:00 - 12:50 PM MT Bellamy's Ranch	25.
26.	27. <b>Memorial Day Extension</b> <b>Offices Closed</b>	28.	29.	30.	31.	



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**St. Francis Office**

**Vacant**

Livestock Agent

**Linda Elfers**

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**K-State Northwest Research and Extension Center - Colby**

**Jeanne Falk Jones**

Multi-County Agronomist for Cheyenne, Sherman, and Wallace Counties  
jfalkjones@ksu.edu

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