



**K-STATE**  
Research and Extension

## Extension Agronomy

# eUpdate

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*11/30/2023*

These e-Updates are a regular weekly item from K-State Extension Agronomy and Kathy Gehl, Agronomy eUpdate Editor. All of the Research and Extension faculty in Agronomy will be involved as sources from time to time. If you have any questions or suggestions for topics you'd like to have us address in this weekly update, contact Kathy Gehl, 785-532-3354 kgehl@ksu.edu, or Dalas Peterson, Extension Agronomy State Leader and Weed Management Specialist 785-532-0405 dpeterso@ksu.edu.

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<b>1. Considerations for wheat fields prone to sulfur deficiency.....</b>	<b>3</b>
<b>2. Significant snow fell across Kansas in late November.....</b>	<b>7</b>
<b>3. 2023 K-State Crop Pest Management Schools - Dec. 5 and 6.....</b>	<b>12</b>
<b>4. K-State/KARA Crop Production Update: Dec. 6-7.....</b>	<b>14</b>
<b>5. New in January 2024 - K-State Corn and Soybean Schools held together.....</b>	<b>17</b>

## 1. Considerations for wheat fields prone to sulfur deficiency

In recent years, sulfur (S) deficiency in wheat has become more common in many areas of Kansas, particularly in no-till wheat. The likely reasons for this are a reduction in sulfur additions to the crop from atmospheric deposition (there is less S in the air now) and cooler soil temperatures as a result of no-till, which slows S mineralization in the soil. Some crops in the rotation, such as soybean, can also take up significant amounts of S, resulting in an S deficit for the following wheat crop. Most of the crop's S needs will occur after spring green-up when the crop goes through stem elongation.

Historically, S deficiency was most common in high-yielding crops grown on irrigated, sandy soils that are low in organic matter and subject to leaching. However, due to the reasons discussed above, an increasing number of finer-textured soils have shown S deficiency in recent years.

### Identification of S deficiency

The photos below are good representations of S deficiency in wheat. Generally, S-deficient wheat is yellow and stunted and is observed in patches in the field, especially in areas with previous soil erosion or movement (Figure 1). The patchy S-deficient areas of the field are often found on hilltops or side slopes where erosion has occurred, and soil organic matter is reduced or where leaching is more pronounced. Wheat in areas where topsoil was removed or significant cuts were made (i.e. terraced or leveled fields) also commonly shows symptoms.



**Figure 1. Patches of sulfur deficiency in a wheat field. Photo by Dave Mengel, K-State Research and Extension.**

Sulfur deficiency in growing crops is often mistaken for nitrogen (N) deficiency. However, unlike N deficiency, where older leaves show firing and yellowing, with S deficiency, the pale-yellow symptoms often appear first on the younger or uppermost leaves. Wheat plants with S deficiency eventually become uniformly chlorotic (yellow leaf tissue; Figure 2).



**Figure 2. Close-up of sulfur deficiency in wheat. The wheat is exhibiting yellowing (chlorosis), a sign of insufficient sulfur. Photo by Dorivar Ruiz Diaz, K-State Research and Extension.**

Sulfur deficiencies in wheat have been showing up early in the spring, shortly after green-up, before organic S is mineralized from soil organic matter and before wheat roots can grow into the subsoil to utilize any available S (sulfate) accumulations. Deficiencies of S are often difficult to identify because the chlorosis is not always obvious. Crops lacking S also may be stunted, thin-stemmed, and spindly. In the case of wheat and other cereal grains, maturity is delayed. Winter annual weed competition is also enhanced due to the slower growth and lack of good tillering.

Many fields in north central and northeast Kansas have an established history of S deficiency for wheat. In this situation, rather than waiting for symptoms to appear in the spring, farmers may want to consider a winter top-dress application of S as a preventive measure.

### Forms of sulfur in soil

The majority of S in soils is present in organic forms in surface soils and as sulfate ( $\text{SO}_4^{2-}$ ), an inorganic form. Sulfate is relatively soluble and tends to leach down into the subsoil. Many of our Kansas soils will accumulate sulfate in the B horizon (subsoil) in two forms. Clay surfaces and coatings will retain some sulfate, and sulfate will also be present in the subsoil of many Kansas soils as gypsum (calcium sulfate).

### Testing soil for sulfur

There is a soil test for available sulfate-S in the soil profile. Soil texture, soil organic matter, the crop to be grown, and the expected yield level should all be considered when interpreting this soil test. Accurate estimates of S needs cannot be made from a surface sample alone. Since sulfate is mobile, sampling to a **24-inch depth** is important. However, due to the relatively high demand for S during the rapid vegetative growth phase of wheat and relatively shallow rooting by the wheat crop at this time, the S measured in the deeper subsoil levels by the test may not be available to wheat in the early spring, especially where soils are cold. Now is a good time to collect soil samples and assess S levels as we plan for topdressing.

### Testing leaves for sulfur

Leaf tissue tests can be useful, particularly when determining the exact cause of yellow wheat. A representative sample can be made by collecting the newest mature leaves from 30+ plants throughout the area where deficiency symptoms are observed ("bad" areas). A similar sample from a "good" area (no deficiency symptoms) should also be collected. This will allow direct comparisons between "good" and "bad" areas.

### Choosing a fertilizer material

There are many S-containing fertilizer materials. Several dry materials are available that can be blended with dry phosphorus or nitrogen fertilizers for winter/spring topdressing. However, some of these products are best used in pre-plant applications.

#### Dry fertilizers

- **Elemental S** (typically 90-95 percent S) is a dry material marketed by several manufacturers. Before it becomes available for plant uptake, elemental S must first be oxidized by soil microorganisms to sulfate. This can be a slow process, as a result, elemental S is not well suited for spring topdress applications to S-deficient wheat due to the time required for oxidation to sulfate, but it could be a good source for future crops in the rotation. This oxidation process also generates acidity and soil pH should be monitored, especially when broadcast over minimum-tillage fields.
- **Ammonium sulfate**, AMS (21-0-0-24S), is a dry material that is highly water-soluble and is a good source of both N and S. However, it has a high acid-forming potential and soil pH should be monitored. Ammonium sulfate is a good source to consider for either pre-plant or



topdressing.

- **Gypsum** (analysis varies) is calcium sulfate and is commonly available in a hydrated form containing 18.6 percent S. This material is commonly available in a granulated form that can be blended with other materials. Since it is a sulfate source, it would be immediately available and is another good source for spring topdressing. However, gypsum is not as water soluble as many fertilizer materials such as ammonium sulfate.
- **New N-P-S products** such as Microessentials, 40-rock, MAP+MST, and others that are typically ammonium phosphate materials formulated with S, and in some cases, micronutrients such as zinc. In most of these products, the S is present as a combination of elemental S and sulfate.

#### Liquid fertilizers

- **Ammonium thiosulfate**, ATS (12-0-0-26S), is the most popular S-containing product used in the fluid fertilizer industry as it is compatible with N solutions and other complete liquid products.
- **Potassium thiosulfate**, KTS (0-0-25-17S), is a clear liquid product that can be mixed with other liquid fertilizers.

Topdressing with thiosulfate and UAN can be done early, before Feekes 5 growth stage (green up), and at temperatures below 70 degrees F. Be aware that some leaf burn may be expected with some of these liquid fertilizers. These products would be good sources for pre-plant application as well.

#### Supplemental resources

- Sulfur in Kansas (MF 2264), <http://www.ksre.ksu.edu/bookstore/pubs/MF2264.pdf>
- For estimations of required application rates of S - Soil Test Interpretation and Fertilizer Recommendations, (MF2586) <http://www.ksre.ksu.edu/bookstore/pubs/mf2586.pdf>

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## 2. Significant snow fell across Kansas in late November

A Thanksgiving weekend snowstorm brought accumulating snow to most of the state. The highest totals were in central Kansas, where over a foot of snow was measured in a few locations (Table 1). In some places, this was the most snow from a single event in nearly a decade. In addition, the snow from this single event totaled more than what fell last season in some spots.

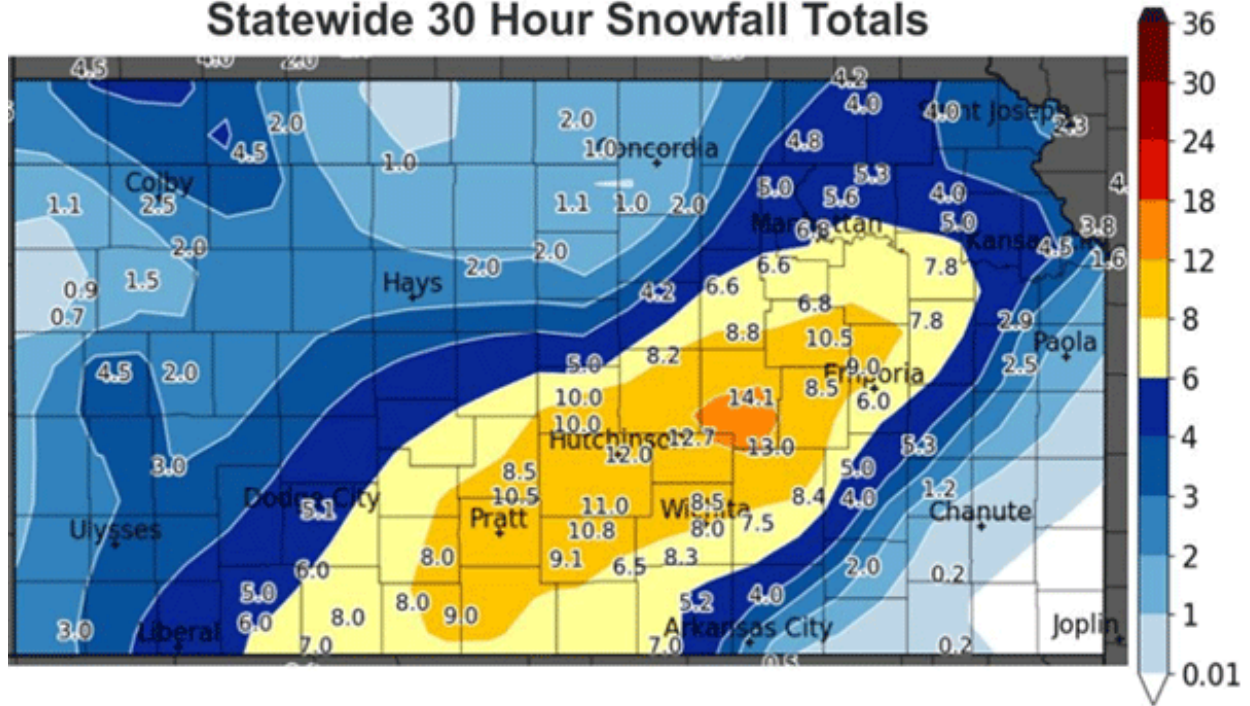
**Table 1. Snowfall totals for select locations around the state. These reports are from the public, which includes cooperative and CoCoRaHS observers.**

Location	County	Amount (inches)	Location	County	Amount (inches)
<b>Marion</b>	Marion	14.1	Eureka 0.9 NW	Greenwood	8.1
<b>Burns</b>	Marion	13.0	Coldwater	Comanche	8.0
<b>Council Grove 0.3 N</b>	Morris	12.0	Eskridge 0.1 SW	Wabaunsee	8.0
<b>Hutchinson 3 ESE</b>	Reno	12.0	Assaria 6.2 SE	Saline	7.8
<b>Preston 6 NW</b>	Stafford	10.5	Greensburg	Kiowa	7.3
<b>Lyons</b>	Rice	10.0	Wamego 1.3 W	Pottawatomie	7.0
<b>Byers</b>	Pratt	9.5	Belle Plaine 2.8 W	Sumner	7.0
<b>Americus</b>	Lyon	9.0	Offerle 9.8 S	Edwards	6.7
<b>Hope</b>	Dickinson	9.0	Lawrence 9.2 WNW	Douglas	6.5
<b>Cottonwood Falls</b>	Chase	8.5	Junction City	Geary	6.5

The event began early on Friday, the 24th, with an area of snow that moved out of eastern Colorado into northwest Kansas. The highest snow totals were in Decatur, Rawlins, and Thomas Counties. A CoCoRaHS observer south of Oberlin measured 4.5 inches of snow, the highest total from the first round of snow. By early Saturday, another area of snow had developed in southwest Kansas, and by 7 AM CST, totals from 1 up to 3.5 inches had already fallen in Ford, Clark, Meade, and Seward Counties. The main event was later on the 25<sup>th</sup>, as this area of snow increased in coverage over south central Kansas during the daylight hours and intensified as it moved east and northeast. Snow was the predominant precipitation type across central and northeast Kansas. Still, with warmer temperatures in southeast Kansas, rain was observed during the day, with a transition to snow overnight as colder air arrived. A few areas of freezing rain were reported in the evening in the Winfield and Chanute areas. By early Sunday morning, snow had exited the state and moved into western Missouri, leaving treacherous road conditions in its wake for those returning home from Thanksgiving travels.

South central and central Kansas had the highest snowfall totals from this event (Figure 1), where over a foot of snow fell in parts of Reno, Harvey, Marion, and Morris Counties. There were two reports of 14 inches of snow in Marion County, the highest amount in the state. There were reports of 6 to 8 inches of snow in the Wichita, Manhattan, Topeka, and Lawrence areas and 4 to 6 inches in the Dodge City and Salina areas. The Kansas City metropolitan area picked up from 2 to 4 inches. In at least a dozen locations, the snowfall from this event was more than what fell during the entire winter of 2022-23 (Table 2).

## Statewide 30 Hour Snowfall Totals



**Figure 1. Snowfall totals from the Thanksgiving weekend storm. Source: National Weather Service-Wichita, KS Facebook page.**

**Table 2. A partial list of locations where this past weekend's snowfall exceeded the total for all of last season.**

Location	County	Total Snowfall (inches)	
		Nov. 25-26, 2023	Jul. 1, 2022-Jun. 30, 2023
<b>Hesston</b>	Harvey	12.7	2.4
<b>Kingman</b>	Kingman	10.8"	4.2
<b>Sterling</b>	Rice	9.0	7.8
<b>Newton</b>	Harvey	8.2	5.1
<b>McPherson</b>	McPherson	8.0	6.0
<b>Osage City</b>	Osage	8.0	5.2
<b>Wichita</b>	Sedgwick	7.8	5.0
<b>Topeka</b>	Shawnee	7.2	6.1
<b>Ashland</b>	Clark	7.0	1.2
<b>Manhattan</b>	Riley	6.0	3.3
<b>El Dorado</b>	Butler	6.0	3.0
<b>Anthony</b>	Harper	4.5	4.0

Historically, this was a significant snow event (Table 3). While heavy snow is not unprecedented in November, it is certainly unusual. Average snowfall during November is only around half an inch in the southeast, one to two inches in central Kansas, and from 2 to 3.5 inches in northwest Kansas



(Table 4). The totals from this recent event exceed the monthly averages in many areas. If we take a closer look at historical snowfall data at some of Kansas' long-term climate sites, the significance of this event becomes apparent. The snow totals from this single event ensure that November 2023 will rank in the top 10 snowiest Novembers on record in Wichita, Topeka, Manhattan, and Dodge City. This was also the most snow from a single storm in nearly ten years at Wichita (7.8 inches), Topeka (7.2 inches), and Manhattan (6.0 inches), the most since a snowstorm on February 4-5, 2014, dumped between 8 to 14 inches of snow in these areas.

**Table 3. Comparison of November 2023's snow to historical totals at long-term climate sites. All amounts are reported as inches.**

Location	Wichita	Topeka	Manhattan	Dodge City
<b>Nov. 2023 Snowfall</b>	7.8	7.2	6.0	5.3
<b>Normal Nov. Snowfall</b>	0.8	1.0	1.1	1.4
<b>Nov. 2023 Snowiest Rank / # Years in Record</b>	4 / 135	6 / 137	5 / 127	10 / 131
<b>Last Nov. with More Snow (Amount)</b>	1951 (8.1)	2018 (8.0)	2018 (7.2)	2004 (8.5)
<b>Snowiest Nov. on Record (Amount)</b>	1888 (9.0)	1888 (9.8)	1975 (8.8)	1929 (16.8)
<b>Normal Seasonal Snowfall</b>	12.7	17.1	17.6	19.1
<b>Last Nov. Storm with More Snowfall (Amount)</b>	Nov. 9-11, 1906 (8.7)	Nov. 25-26, 1975 (8.1)	Nov. 26, 1975 (7.8)	Nov. 28-30, 2004 (6.0)
<b>Last Storm with More Snowfall (Amount)</b>	Feb. 4, 2014 (8.7")	Feb. 4-5, 2014 (13.0")	Feb. 4-5, 2014 (14.0")	Jan. 21, 2023 (7.4")

**Table 4. Monthly snowfall averages (in inches) for select locations in Kansas.**

Region	City	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total
Northwest	Colby	0.2	1.6	3.5	3.9	5.1	5.8	4.2	2.2	0.7	27.2
	Goodland	0.2	2.0	3.3	5.2	4.7	6.3	4.8	3.2	0.3	30.0
	Hill City	0.0	0.7	1.5	3.8	3.3	5.5	2.1	0.3	0.2	17.4
	Oberlin	0.0	1.3	2.3	4.2	5.7	6.2	3.4	1.9	0.2	25.2
	St. Francis	0.3	0.9	2.0	2.9	4.6	4.5	2.9	1.7	0.0	19.8
North	Cawker City	0.0	0.3	1.6	3.5	4.5	5.8	1.7	0.5	0.0	17.9
Central	Concordia	0.0	0.3	1.9	4.5	5.4	5.2	1.6	0.4	0.0	19.3
	Minneapolis	0.0	0.3	1.6	4.5	4.7	3.4	2.2	0.9	0.0	17.6
	Phillipsburg	0.0	0.7	1.1	3.2	3.4	6.6	1.5	0.5	0.0	17.0
	Washington	0.0	0.1	1.0	2.4	4.6	4.6	1.4	0.3	0.0	14.4

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Northeast	Atchison	0.0	0.3	0.9	3.8	5.0	4.8	1.8	0.4	0.0	17.0
	Bonner Springs	0.0	0.3	1.1	4.3	5.0	5.1	1.5	0.1	0.0	17.4
	Hiawatha	0.0	0.0	1.2	3.6	4.7	4.1	2.2	1.1	0.0	16.9
	Manhattan	0.0	0.0	1.1	4.8	4.8	5.0	1.8	0.1	0.0	17.6
	Marysville	0.0	0.1	1.0	3.3	4.9	4.3	1.5	0.7	0.0	15.8
West	Ness City	0.0	0.4	1.3	3.2	3.2	3.5	3.3	0.4	0.1	15.4
	Oakley	0.0	1.2	2.5	4.5	4.5	6.6	4.2	1.8	0.4	25.7
Central	Scott City	0.0	1.2	1.1	3.1	4.5	4.0	3.9	1.8	0.0	19.6
	Tribune	0.1	1.3	2.1	3.8	4.2	4.2	3.6	2.1	0.3	21.7
	WaKeeney	0.0	1.1	1.8	4.3	4.3	4.3	3.2	1.3	0.0	20.3
Central	Abilene	0.0	0.2	1.0	2.2	4.1	2.8	1.7	0.2	0.0	12.2
	Great Bend	0.0	0.1	1.7	2.3	2.2	2.6	2.3	0.3	0.0	11.5
	Hays	0.0	0.3	1.4	3.3	3.4	4.8	2.1	0.5	0.0	15.8
	McPherson	0.0	0.1	0.6	2.9	4.1	3.3	2.6	0.6	0.0	14.2
	Salina	0.0	0.5	1.4	4.1	3.8	4.0	1.3	0.4	0.0	15.5
East	Council Grove	0.0	0.4	0.5	2.8	4.0	2.9	1.2	0.2	0.0	12.0
	Emporia	0.0	0.1	1.4	3.9	5.5	4.1	1.0	0.3	0.0	16.3
Central	Garnett	0.0	0.5	0.4	3.0	4.8	2.5	1.4	0.2	0.0	12.8
	Olathe	0.0	0.3	1.2	3.4	3.9	3.3	1.4	0.3	0.0	13.8
	Topeka	0.0	0.4	1.0	4.1	4.6	5.2	1.7	0.1	0.0	17.1
Southwest	Ashland	0.0	0.1	0.5	3.2	2.3	3.6	1.8	0.1	0.0	11.6
	Dodge City	0.0	0.6	1.4	4.0	3.9	4.7	3.7	0.8	0.0	19.1
	Elkhart	0.0	0.7	1.2	4.7	4.2	2.1	3.5	0.4	0.8	17.6
	Garden City	0.0	0.8	1.0	2.7	3.4	3.3	3.2	1.1	0.1	15.6
	Liberal	0.0	0.7	1.0	4.6	3.5	1.8	2.3	0.4	0.1	14.4
South	Greensburg	0.0	0.4	1.4	3.6	4.5	2.6	3.8	0.0	0.0	16.3
	Hutchinson	0.0	0.0	0.7	3.1	3.5	1.9	2.3	0.3	0.0	11.8
Central	Medicine Lodge	0.0	0.0	0.3	2.1	2.1	4.0	0.8	0.1	0.0	9.4
	Pratt	0.0	0.1	0.4	2.6	3.6	3.9	4.1	0.4	0.0	15.1
	Wichita	0.0	0.2	0.8	3.1	2.7	3.6	2.1	0.2	0.0	12.7
Southeast	Arkansas City	0.0	0.0	0.2	1.9	1.8	1.1	1.1	0.1	0.0	6.2
	Coffeyville	0.0	0.0	0.6	3.2	1.8	1.4	1.3	0.0	0.0	8.3
	Eureka	0.0	0.1	0.5	3.0	2.8	1.2	0.9	0.1	0.0	8.6
	Fort Scott	0.0	0.0	0.4	2.3	3.9	1.0	0.7	0.1	0.0	8.4
	Pittsburg	0.0	0.0	0.6	2.9	3.4	1.0	1.6	0.0	0.0	9.5

The last time Wichita had this much snow in November was over 70 years ago, in 1951, but more noteworthy, the last time Wichita received more snow from a single storm in November was over a century ago, in 1906. This was the largest November snow event in Topeka and Manhattan since 1975. Wichita's one-day snow total of 7.8 inches on the 25<sup>th</sup> was rare in two additional ways. It was the second snowiest November day on record in Wichita, behind only an 8.7 inches total on November 9, 1888. It also ranks as the 14<sup>th</sup> snowiest day in any month since weather records began in Wichita in September 1888.

Was this the first event in what may prove to be a snowy winter in Kansas? Time will tell; stay tuned!

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### 3. 2023 K-State Crop Pest Management Schools - Dec. 5 and 6

K-State Research and Extension and the NW Region Extension Counties/Districts are hosting two Crop Pest Management Schools, December 5 in Colby at the City Limits Convention Center and December 6 in Russell at the Elks Lodge starting at 7:45 a.m. with registration and concluding at 5:00 PM.

Join us in person to learn how to control the latest pests – weeds, insects, and diseases – affecting all crops in central and western Kansas! The entire agenda with speakers and topics is featured in the flyer below.

Commercial Applicators will earn 1 Core Hour & 7 Hours for 1A, certified by the Kansas Department of Agriculture. Certified Crop Advisors (CCA) will also earn 8 Pest Management Credits. These schools would also be an excellent educational opportunity for producers.

It's not too late to get registered for these schools. After Nov. 27, the fee is \$75. To register, go to <http://www.northwest.k-state.edu/events/crop-pest-management-school> or any Extension Office website in the NW region. You can also call Jeanne Falk-Jones, K-State Research and Extension, Multi-County Agronomist, at 785-462-6281 or Craig Dinkel, Midway Extension District, at 785-472-4442.

# K-State Crop Pest Management School

Focused on weeds, diseases and insects found in central and western Ks

**December 5 in Colby**

City Limits Convention Center

**December 6 in Russell**

Elks Lodge

**\$50, if registered by November 27**

After November 27, cost is \$75

## Continuing Education Credits:

For 1A Commercial Applicators, 7 hours and core hour

For Certified Crop Advisors, 8 pest management credits

**Register online:**

[www.northwest.ksu.edu/events](http://www.northwest.ksu.edu/events)



### The Schedule:

- 7:45 Registration
- 8:05 Welcome
- 8:15 **Weather Influences on Herbicides**  
*Chip Redmond, K-State Climatologist and Mesonet Manager*
- 9:10 **Herbicide Application Technology Update**  
*Ajay Sharda, K-State Agricultural Engineer*
- 10:05 Break
- 10:20 **Emerging Diseases in Corn and Soybeans**  
*Maira Duffeck, Oklahoma State Plant Pathologist*
- 11:15 **Controlling Palmer Update in Row Crops**  
*Sarah Lancaster, K-State Extension Weed Scientist*
- 12:10 Lunch
- 12:50 **What You Need to Know About Adjuvants**  
*K-State Weed Science Team and Jay Wisbey, K-State Central Kansas District*
- 1:45 **Wheat Diseases That Are Problematic in Central and Western Kansas**  
*Craig Dinkel, K-State Midway District, Jeanne Falk Jones, K-State Agronomist, K-State Wheat Pathology*
- 2:40 Break
- 2:55 **Insects to Be on the Lookout for in 2024**  
*Anthony Zukoff, K-State Entomologist*
- 3:50 **Kansas Regulation (Core Hour)**  
*Kansas Dept of Ag*
- 4:45 Questions/Adjourn

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#### 4. K-State/KARA Crop Production Update: Dec. 6-7

There is still time to register for the 2023 Crop Production Update, hosted by the Kansas Agribusiness Retailers Association (KARA) and in cooperation with K-State Research and Extension. The two-day event is set for December 6 and 7 at the Hilton Garden Inn, Manhattan, KS. Each day will kick off at 8:30 a.m. and conclude around 4:00 p.m. There will be 12 CCA CEUs offered, four 1A credits, and one core hour.

This training provides the latest research and technological advances in weed and insect control, fertilizer and chemical recommendations, crop production, water management, soil fertility, and more.

#### **Speakers and Topics**

##### December 6 – Wednesday

- Northwest Kansas crop production update – Lucas Haag
- Fertility management in winter wheat – Romulo Lollato
- Cover crops management strategies in water-limited cropping systems – Logan Simon
- Corn tillers: Plasticity or atrocity – Rachel Veenstra
- Advancing corn and soybean management for yield and quality – Ana Carcedo and Ignacio Ciampitti
- Soil water dynamics research update – Andres Patrignani
- Core hour – Kansas Department of Agriculture

##### December 7 – Thursday

- Irrigation and water management – Jonathan Aguilar
- Weather outlook and expectations for 2023 – Chip Redmond
- Row crops disease update – Maira Duffeck, Oklahoma St. Univ.
- Palmer amaranth control in row crops – Sarah Lancaster
- Rangeland management in Kansas – Walt Fick
- Digital ag applied to entomology – Brian McCornack

You can register for the conference by visiting <https://www.ksagretailers.org/events-training/crop-production-update/>. The cost breakdown can be found by clicking on the registration button.



# 2023 KARA Crop Production Update

Kansas Agribusiness Retailers Association  
K-State Research and Extension

9:20 a.m. – 4:40 p.m. December 6 and

8:30 a.m. – 2:50 p.m. December 7

Hilton Garden Inn (Kaw Nation Room), 410 S 3<sup>rd</sup> St., Manhattan, KS

## Topics

- Row crop production in NW Kansas
- Fertility management in winter wheat
- Cover crops in semi-arid environments
- Considerations on corn tillering
- Corn and soybean production update
- Soil water dynamics research
- Irrigation technologies
- Weather outlook and expectations
- Row crops disease update
- Palmer amaranth control in row crops
- Rangeland management in Kansas
- Digital Ag applied to Entomology

## Speakers

- Lucas Haag
- Romulo Lollato
- Logan Simon
- Rachel Veenstra
- Ana Carcedo
- Ignacio Ciampitti
- Andres Patrignani
- Jonathan Aguilar
- Maira Duffeck (Oklahoma State Univ.)
- Sarah Lancaster
- Walt Fick
- Brian McCornack

This event will offer 12 CCA CEUs and four Commercial Applicator credits.

Register online at <https://www.ksagretailers.org/events-training/crop-production-update/>  
For registration questions, please contact Clay Fagan at [clay@kansasag.org](mailto:clay@kansasag.org) or 785-234-0461.  
Prices differ depending on membership status and program selected.

Coffee breaks and lunch are included with registration and will be provided both days.

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Kansas State University is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to a physical, vision, or hearing disability, contact Clay Fagan, 785-234-0461. Kansas State University Agricultural Experiment Station and Cooperative Extension Service  
K-State Research and Extension is an equal opportunity provider and employer.

Kansas State University Department of Agronomy

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Romulo Lollato – Wheat and Forages Specialist

[lolato@ksu.edu](mailto:lolato@ksu.edu)

Clay Fagan, Kansas Agribusiness Retailers Association – Director of Member Investment and Training

[clay@kansasag.org](mailto:clay@kansasag.org)

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## 5. New in January 2024 - K-State Corn and Soybean Schools held together

In January 2024, look for a new format for the traditional K-State Corn and Soybean Winter Crop Schools. K-State Research and Extension, in collaboration with Kansas Corn and Kansas Soybean, has combined the schools for a whole-day program covering both crops. Save the date for one of the locations near you!

### 2024 K-State Corn and Soybean Crop Schools

- **January 16 (Tuesday) – Parsons**  
K-State Southeast Research and Extension Center
- **January 17 (Wednesday) – Hesston**  
Agco Corporation
- **January 18 (Thursday) – Garden City**  
Corteva Agriscience Research Center
- **January 19 – Olathe**  
John Deer Ag Marketing Center

Stay tuned to the Agronomy eUpdate in the coming weeks for the complete agendas and how to register.

Ignacio Ciampitti, Farming Systems  
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