



**K-STATE**  
Research and Extension

## **Extension Agronomy**

# eUpdate

---

*08/07/2025*

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](mailto:kgehl@ksu.edu), or Dalas Peterson, Extension Agronomy State Leader and Weed Management Specialist 785-532-0405 [dpeterso@ksu.edu](mailto:dpeterso@ksu.edu).

Subscribe to the eUpdate mailing list: <https://listserv.ksu.edu/cgi-bin?SUBED1=EUPDATE&A=1>

---

<b>1. Planning your wheat fertility program: Start now by soil testing.....</b>	<b>3</b>
<b>2. Soil fertility and wheat production: Profile nitrate levels and wheat yield .....</b>	<b>6</b>
<b>3. Wheat Streak Mosaic Complex: Webinar and management resources now available.....</b>	<b>8</b>
<b>4. Late-season insect pest considerations and Bt stewardship in cotton.....</b>	<b>12</b>
<b>5. Late-summer insect update: Fall armyworms.....</b>	<b>16</b>
<b>6. Self-guided tours of herbicide evaluation plots are open near Manhattan.....</b>	<b>18</b>
<b>7. North Central Kansas Experiment Field Fall Field Day - August 21 .....</b>	<b>20</b>
<b>8. Wheat Rx Preplant Seminar - August 20 in Pratt.....</b>	<b>21</b>

## 1. Planning your wheat fertility program: Start now by soil testing

Wheat planting is just around the corner in parts of Kansas, so now is the time to complete your soil sampling. This ensures you have solid information on which to base fertilizer decisions, especially important following drought conditions and lower-than-expected yields in some areas of the state.

### Which nutrients should be tested?

The most important nutrients to focus on this year will depend on your location, nitrogen application strategy, and tillage system. Statewide, the nutrients most likely to generate a wheat yield response are **nitrogen (N)** and **phosphorus (P)**.

Wheat is the most P-responsive crop grown in Kansas. While P removal by wheat is lower than with corn or soybeans, the relative yield response is often greater. As such, knowing your soil test P levels and corresponding fertilizer needs is key.

Additionally, **low soil pH** is becoming an increasing concern, particularly in fields with a history of high N application and low cation exchange capacity (CEC).

Beyond the “Big 3” (pH, N, and P), **potassium (K)** deficiency can occasionally be an issue, especially in southeast and south central Kansas. While wheat is less prone to K deficiency than crops like corn, soybeans, or grain sorghum, deficiencies can still occur. In most cases, K fertilization is focused on those rotation crops; meeting their higher K needs often reduces the risk of deficiency in wheat.

### The 0-6 inch soil sample: Non-mobile nutrients and pH

A standard 0-6 inch surface sample is normally used to evaluate pH (more information about liming acid soils for wheat is available here: <https://bit.ly/4mqcFtR>), and non-mobile nutrients such as P and K. Phosphorus and K availability are buffered processes in Kansas soils. This means the soil contains significant quantities, and the K-State soil tests provide an index value of the amounts available to the plant, not a direct measure of total soil content. In most Kansas soils:

- It takes 18 pounds of P<sub>2</sub>O<sub>5</sub> to raise soil test P by 1 ppm.
- It takes 8 pounds of K<sub>2</sub>O to raise soil test K by 1 ppm.

The buffering value for both nutrients varies with CEC and existing soil test levels:

- High CEC soils, especially those high in clay, buffer changes more, so soil test values shift slowly.
- Low CEC soils have a lower buffer capacity and can show more rapid changes in soil test levels.
- Likewise, soils with initially low P or K will need more fertilizer to raise levels than those already testing high.

In addition to pH, P, and K, consider testing for **soil organic matter (SOM)** and **micronutrients like zinc (Zn)**:

- Zinc is not commonly deficient in wheat, but it's crucial for corn and grain sorghum. Including Zn in your test package can support crop rotation planning.

- SOM is an important source of nutrients like N and S. When calculating the fertilizer needs for these nutrients, each 1% of SOM contributes a credit of 10 lbs of available N and 2.5 lbs of S.

### **The 0-24 inch soil sample: Mobile nutrients**

While pH, SOM, P, K, and Zn are non-mobile and tend to accumulate in surface soils, the mobile nutrients nitrogen, sulfur, and chlorine (Cl) move through the soil and accumulate in the subsoil. For this reason, a 24-inch profile sample is strongly recommended before planting wheat, corn, or grain sorghum.

**Nitrogen** is likely to produce a yield response across Kansas. Contrary to popular belief, soil N accumulation isn't limited to western Kansas. Our dry winters mean N can accumulate throughout the state. Since rainfall typically peaks in June and July and drops off in fall and winter, N losses tend to be limited after harvest.

Wheat takes up most of its N before flowering — typically April in southeast Kansas and early May in north central Kansas. Following dry years, significant residual N may be present at planting. On the other hand, strong yields may leave behind less residual N than assumed. Either way, adjusting N fertilizer rates based on soil tests is critical. (See the companion article in this issue for details on the correlation between soil nitrate levels and wheat yield.)

**Sulfur** deficiency in wheat is increasing across Kansas, largely due to:

- Reduced atmospheric S deposition over the past 2–3 decades.
- Lower S content in many modern P fertilizers.

Though not as soluble as nitrate, S is still mobile and tends to collect in the subsoil. A 24-inch profile test is a good way to evaluate S needs.

**Chlorine** (chloride is the plant-available ionic form) is the third essential mobile element to consider. Chloride deficiency is normally found in the eastern half of the state on soils that do not have a history of potash (KCl) application. This includes many areas north of the Kansas River and across central Kansas wheat-producing regions.

Cl deficiency affects **grass crops** like wheat, corn, and grain sorghum, and is linked to reduced disease resistance. Kansas has well-calibrated Cl soil tests, so a profile sample can help determine whether application is needed.

### **Summary**

Kansas wheat producers should use soil testing to guide fertilizer decisions, especially in a year with tight margins and varied yield outcomes.

- Use 0–6 inch surface samples to assess pH, P, K, Zn, and SOM.
- Use 0–24 inch profile samples to evaluate N, S, and Cl.

Sampling now allows ample time to analyze the results and adjust your fall fertilizer plan accordingly.

For more information on soil sampling or to submit samples to the K-State Soil Testing Lab, visit:

<http://www.agronomy.k-state.edu/services/soiltesting/>

Dorivar Ruiz Diaz, Nutrient Management Specialist  
[ruizdiaz@ksu.edu](mailto:ruizdiaz@ksu.edu)

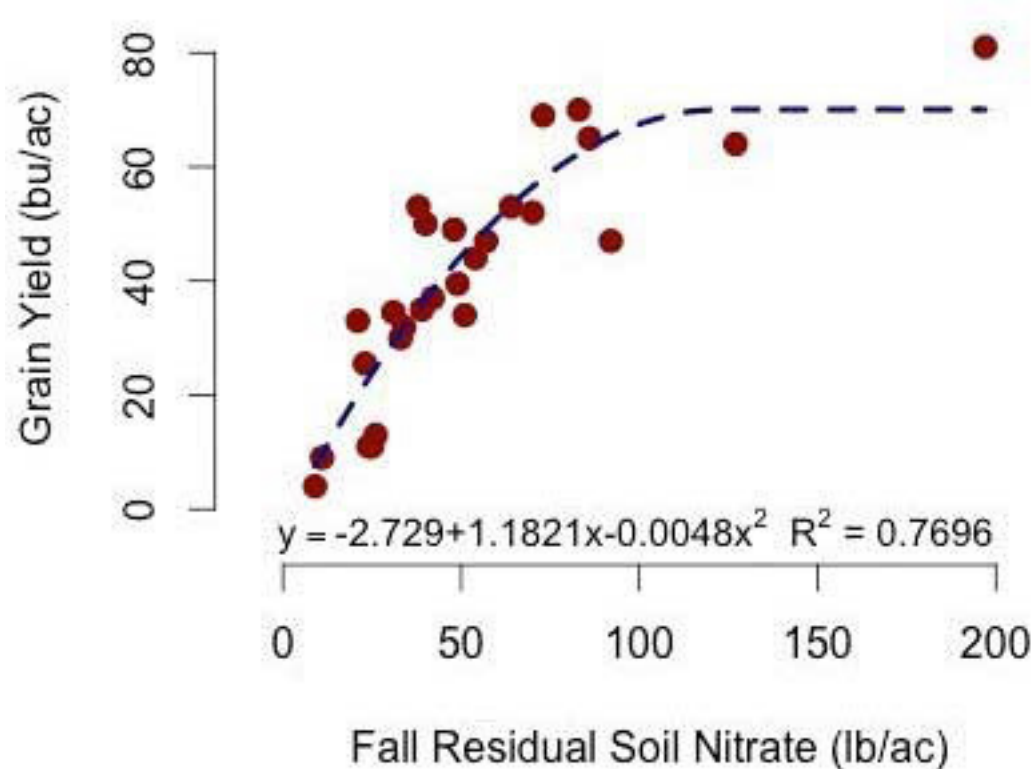
## 2. Soil fertility and wheat production: Profile nitrate levels and wheat yield

A separate article in this eUpdate provides guidance on planning an effective wheat fertility program through timely soil testing. This companion piece explores a specific aspect of that plan, the relationship between fall soil profile nitrate-N levels and wheat yield.

For many years, taking 24-inch soil profile-N samples in the fall has been a recommended practice for making an N recommendation for winter wheat. However, due to the mobility of nitrate-N in the soil, soil test values observed in the fall may differ from those observed in the spring, particularly on soils prone to leaching. Because many producers wait until spring green-up to make their N application, **does soil sampling in the fall for nitrate really provide useful information for N management in wheat?** That is a legitimate question.

### What Research Shows

In K-State trials where no N fertilizer was applied, there was a strong positive relationship between fall nitrate-N levels and final wheat yield (Figure 1)



**Figure 1. Relationship between fall soil profile nitrate-N level and wheat yield with no N fertilizer applied. Graph by Dorivar Ruiz Diaz, K-State Research and Extension.**

When fall nitrate-N levels were low, wheat yields responded well to fertilizer. When nitrate-N levels exceeded 80–100 lb/acre, additional spring-applied N rarely increased yield. In short, fall nitrate-N levels are a reliable predictor of whether or not a crop will benefit from additional N fertilizer. This makes soil sampling in the fall an important tool for maximizing yield and efficiency.

When soil sampling for N is not done, the K-State fertilizer recommendation formula defaults to a standard value of 30 lb/acre available N. In this particular dataset, the average profile N level was 39 lb N/acre. However, the N level at individual sites ranged from 11 to 197 lbs N/acre. Most recommendation systems default to a standardized set of N recommendations based on the yield goal and/or the cost of N.

### **In Summary**

Without soil sampling or some other method of estimating available N, such as crop sensing, N recommendations will be inaccurate. Failure to account for the N present in the soil wastes a valuable resource. It can result in excess foliage, increased plant disease, inefficient use of soil water, and reduced yield.

Fall soil profile testing for nitrate-N continues to play a valuable role in efficient N management for winter wheat in Kansas. It's a cost-effective way to fine-tune your fertilizer program, avoid unnecessary inputs, and protect both yield and the environment.

Dorivar Ruiz Diaz, Nutrient Management Specialist  
[ruizdiaz@ksu.edu](mailto:ruizdiaz@ksu.edu)

### 3. Wheat Streak Mosaic Complex: Webinar and management resources now available

Kansas State University Research and Extension, with support from the Kansas Wheat Commission, recently hosted a webinar on the wheat streak mosaic complex, addressing the significant 2025 outbreak and sharing current best management practices. This special-topic webinar is now available to view on demand via the K-State Agronomy YouTube channel.

**Watch the webinar recording:** <https://youtu.be/eK63rZBnrv4>

Both afternoon and evening sessions were held live on Tuesday, July 29, and featured presentations from specialists across K-State Research and Extension, including the Departments of Plant Pathology, Agronomy, and Entomology. Topics included:

- The 2025 outbreak overview
- Mite and virus biology
- Volunteer wheat control strategies
- Variety selection and genetic resistance

#### **Related eUpdate Series on Wheat Streak Mosaic Management**

In addition to the webinar, the eUpdate featured a three-part article series in July where we took a deep dive into topics related to wheat streak management.

##### **Week 1: Wheat-free windows and herbicide recommendations**

Learn how timely volunteer wheat control reduces risk.

<https://bit.ly/4eSVKgP>

##### **Week 2: The role of alternative host crops**

Explore how non-wheat hosts contribute to green bridge persistence.

<https://bit.ly/3GIY2Ta>

##### **Week 3: Variety selection for wheat streak complex management**

Review resistance traits and limitations of key wheat varieties.

<https://bit.ly/3H24www>

These articles highlight the importance of integrated management, including coordinated volunteer wheat control, careful timing of planting, and strategic variety selection based on resistance to viruses and wheat curl mites and proximity to areas of known risk for curl mites.

Even the best tools have limitations, especially in the presence of mixed infections, early planting, or prolonged high temperatures. Variety performance and risk vary by region, particularly between central and western Kansas.

#### **Additional Resources**

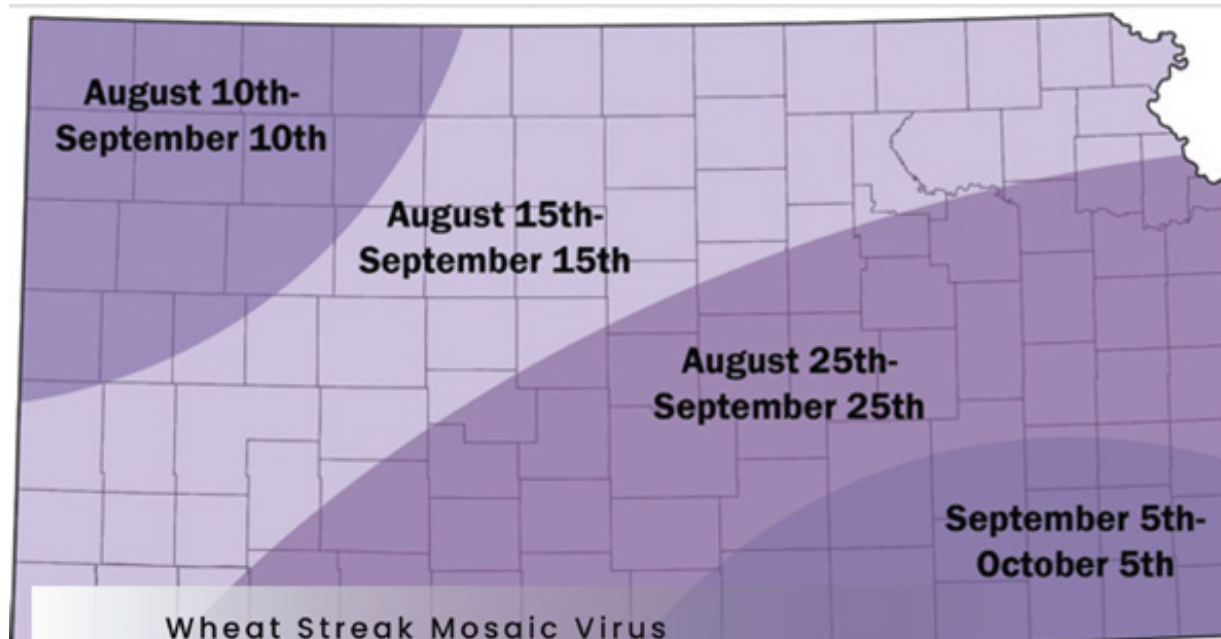
*Wheat streak mosaic virus:* [https://bookstore.ksre.ksu.edu/pubs/wheat-streak-mosaic\\_MF3383.pdf](https://bookstore.ksre.ksu.edu/pubs/wheat-streak-mosaic_MF3383.pdf)

*Triticum mosaic virus:* [https://bookstore.ksre.ksu.edu/pubs/triticum-mosaic\\_EP145.pdf](https://bookstore.ksre.ksu.edu/pubs/triticum-mosaic_EP145.pdf)



Kansas Wheat Variety Guide: [https://bookstore.ksre.ksu.edu/pubs/kansas-wheat-variety-guide-2024\\_MF991.pdf](https://bookstore.ksre.ksu.edu/pubs/kansas-wheat-variety-guide-2024_MF991.pdf)

Infographic developed by Kansas Wheat:



## VOLUNTEER CONTROL WINDOWS

### Wheat Streak Mosaic Virus

*Wheat streak mosaic is a complex of three viruses: wheat streak mosaic virus, Triticum mosaic virus, and High Plains wheat mosaic virus. The wheat streak mosaic complex of viruses is vectored by the tiny wheat curl mite. The highest risk place for curl mites to survive the summer is volunteer wheat.*

### Volunteer Control Windows

*Volunteer control windows are defined as the 30-day period prior to the start of the optimal winter wheat planting date for the region.*

If mites are allowed to survive on this volunteer wheat or alternative hosts until the fall established wheat crop is planted, there is a high likelihood of another WSMV outbreak in 2026.



### CONSIDERATIONS

- All volunteer wheat should be terminated and completely dead prior to the start of your regional volunteer control window.
- Where possible, the fall wheat crop should not be planted until the end of the volunteer control window.
- Other winter cereals (such as rye and triticale) should not be planted during this period as they can serve as a "bridge" for the curl mites to move to fall-established wheat.
- A regional "break" in the volunteer wheat green bridge will allow for wheat curl mites to die off prior to the start of the optimal wheat planting window.
- Volunteer wheat that emerges after this period is of less concern, as it will be emerging at a similar time as the fall-established winter wheat crop.
- Success is dependent on coordinated efforts in communities.

### Contact the Specialists

Kansas State University Department of Agronomy  
 2004 Throckmorton Plant Sciences Center | Manhattan, KS 66506  
[www.agronomy.ksu.edu](http://www.agronomy.ksu.edu) | [www.facebook.com/KState.Agron](https://www.facebook.com/KState.Agron) | [www.twitter.com/KStateAgron](https://www.twitter.com/KStateAgron)

For more information or localized recommendations, contact your local county K-State Extension office (<https://www.ksre.k-state.edu/about/statewide-locations/>) or reach out to any of these K-State Research and Extension specialists:

**Kelsey Andersen Onofre**, Wheat Pathology – [andersenk@ksu.edu](mailto:andersenk@ksu.edu)

**Romulo Lollato**, Wheat & Forages – [lolato@ksu.edu](mailto:lolato@ksu.edu)

**Sarah Lancaster**, Weed Science – [slancaster@ksu.edu](mailto:slancaster@ksu.edu)

**Anthony Zukoff**, Entomology – [azukoff@ksu.edu](mailto:azukoff@ksu.edu)

**Jeanne Falk Jones**, Multi-County Specialist – [jfalkjones@ksu.edu](mailto:jfalkjones@ksu.edu)

**Lucas Haag**, Agronomist-in-Charge, Tribune – [lhaag@ksu.edu](mailto:lhaag@ksu.edu)

**Logan Simon**, Southwest Area Agronomist – [lsimon@ksu.edu](mailto:lsimon@ksu.edu)

**Tina Sullivan**, Northeast Area Agronomist – [tsullivan@ksu.edu](mailto:tsullivan@ksu.edu)

#### 4. Late-season insect pest considerations and Bt stewardship in cotton

Cotton bollworm (a.k.a. corn earworm, sorghum headworm, or soybean podworm) had been responsible for significant losses in the early years of Kansas cotton production and still has the potential to be a serious pest. In more recent years, damage has been limited in Kansas with the common usage of Bt cotton (WideStrike3™ and Bollgard® 3) varieties. However, bollworm resistance to currently used Bt traits has been documented in other states. Producers should monitor fields even if Bt products work well in the area.

##### Scouting for bollworms

Adults are medium-sized, cream-colored moths seen frequently throughout the day during periods of heavy infestations (Figure 1). Moths deposit eggs individually, usually on young terminal leaves but sometimes on leaves and squares within the canopy. Eggs are the size of a pinhead, white to cream in color, and hatch in two or three days during warm weather. Young larvae are difficult to find until they are three or four days old. They are about ¼ inch long and brownish at this stage with some scattered hairs (Figure 1).

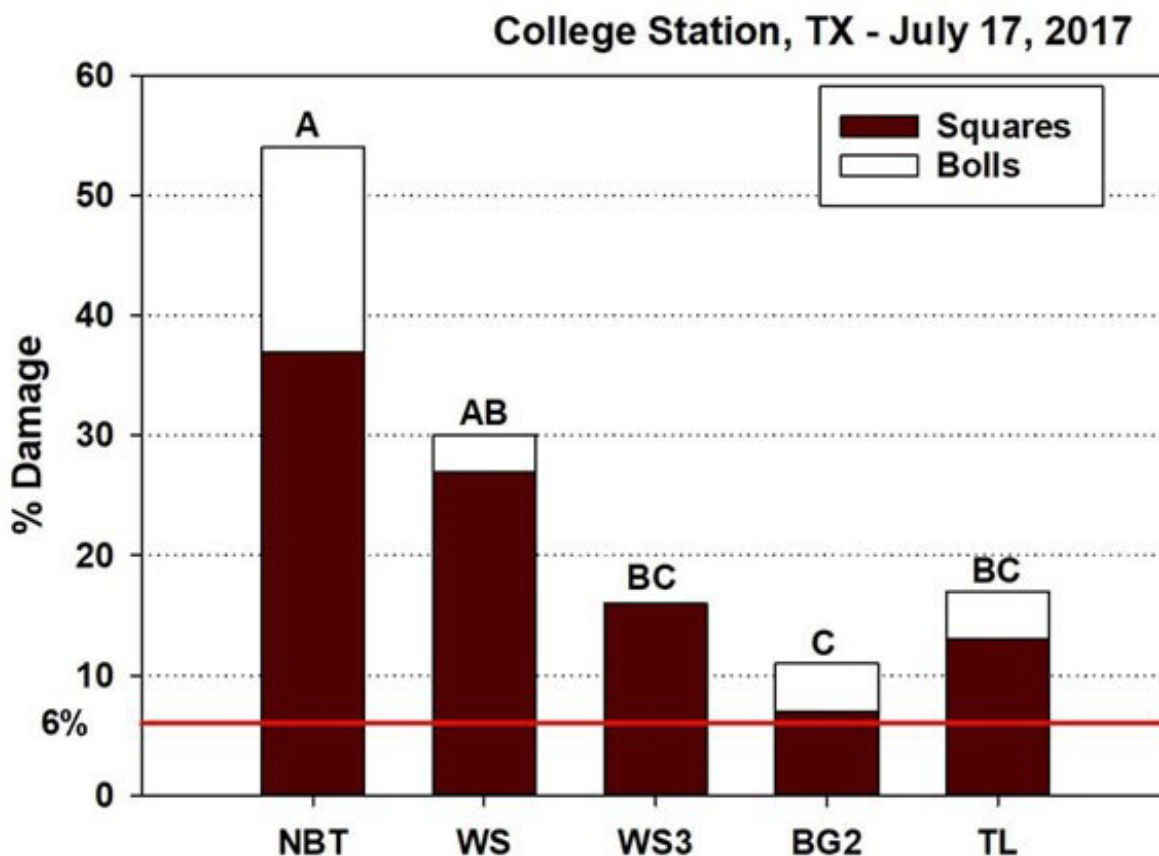


**Figure 1. Adult moth (left) and bollworm larvae (right). Photo courtesy of J.P. Michaud, K-State Research and Extension.**

The full-grown larva is about 1½ inches long with a light-colored head capsule. The predominant body color may range from pink or green to various shades of tan or dark brown. Dark stripes run lengthwise on the body. Larvae begin feeding on leaf tissue and small squares, then move down the plant and damage the larger squares and bolls. Bollworm management is based on scouting for eggs or small larvae. Thresholds differ for bollworm-resistant and bollworm-susceptible cotton. Treatment for non-Bt cotton is recommended when 10 eggs or five small worms per 100 plants are present during early bloom in late July and early August. Treatment for Bt cotton is recommended if fruit and boll damage is excessive, as indicated by 10 small worms (¼- to ½-inch long) per 100 plants or six small worms in 100 flowers.

##### Control options for bollworms

The use of Bt cotton (WideStrike3™ and Bollgard® 3) is common in Kansas. However, it is important to note that bollworms must ingest the Bt toxin to be killed, and it may take up to five days from the time of ingestion to death. After ingesting the toxin, susceptible larvae lose their appetite and stop feeding within a few hours. However, bollworm resistance to currently used Bt traits has been documented in other states (Figure 2). Rates of bollworm survival increase as larvae mature and exceed ½-inch long or five days old.



**Figure 2. Bollworm injury to cotton near College Station, TX, in 2017. NBT = Non-Bt, WS = WideStrike™, WS3 = WideStrike3™, BG2 = Bollgard® 2, TL = TwinLink®. \*The red line represents the economic threshold.**

Source: <https://agrillife.org/texasrowcrops/2019/03/18/developing-resistance-to-bt-genes-in-cotton-bollworm/>.

Preventative treatments applied during the pre-bloom period are discouraged because they can destroy beneficial insects (i.e., natural predators), which help keep bollworms and other pests under control. Chemical control (Table 1) is rarely effective after larvae exceed ½ inches in length (five days old, third instar). Once cotton has blooms within four to five nodes of the top of the plant (i.e., cutout), the need for bollworm control has usually passed.

The value of late-season treatments depends on the weather. Because of the relatively short growing season for cotton in Kansas compared to most of the US Cotton Belt, late blooms can add little to final yields in most cases. Because of this, late-season treatments are usually not justified unless populations are heavy and the weather remains favorable.

Table 1. Insecticides labeled for bollworm control in cotton<sup>3</sup>. Source: Cotton Insect Pest Management 2024, K-State Research and Extension.

Chemical Name	Product(s)
Acephate	Acephate, Bracket, and Orthene
Acetamiprid	Intruder and Assail (used as an ovicide)
Alpha-cypermethrin	Fastac CS (2.6 to 3.6 fl. oz./acre)
Bacillus thuringiensis	Biobit, Deliver, Dipel, Lepinox, and Xentari <sup>1</sup>
Beta-cyfluthrin	Baythroid XL
Bifenthrin	Numerous products, including Annex, Bifenthrin, Brigade, Discipline, Empower 2, Fanfare, Sniper, and Tundra
Bifenthrin + abamectin	Athena
Bifenthrin + chlorantraniliprole	Elevest
Bifenthrin + imidacloprid	Brigadier and Tempest
Bifenthrin + zeta-cypermethrin	Hero
Chlorantraniliprole	Vantacor
Chlorpyrifos	Multiple products
Chlorpyrifos + lambda-cyhalothrin	Cobalt Advanced
Chlorpyrifos + zeta-cypermethrin	Stallion
Cyfluthrin	Tombstone
Cyfluthrin + imidacloprid	Leverage
Cypermethrin	Ammo
Deltamethrin	Delta Gold
Endosulfan	Endosulfan, Phaser, and Thionex
Esenfenvalerate	Asana XL
Fenpropathrin	Danitol
Gamma-cyhalothrin	Proaxis
Imidacloprid	Alias 4F, Couraze Max 4F, Trimax, and Wrangler
Indoxacarb	Steward
Lambda-cyhalothrin	Numerous products, including Warrior II with Zeon Technology, Silencer, Taiga Z, and Lambda T
Lambda-cyhalothrin + chlorantraniliprole	Besiege
Lambda-cyhalothrin + thiamethoxam	Endigo ZC
Methomyl	Lannate LV and Lannate SP
Methoxyfenozide	Intrepid
Naled	Dibrom
Novaluron	Diamond
Profenofos	Curacron <sup>2</sup>
Spinosad	Entrust, Blackhawk
Thiodicarb	Larvin
Zeta-cypermethrin	Mustang MAXX. etc.

<sup>1</sup>Products containing Bt should not be used on Bt cotton or its refuge.

<sup>2</sup>Curacron and Lannate may be phytotoxic to cotton under stress and may redden cotton.

<sup>3</sup>For use rate and any other information relative to any insecticide listed in these tables, ALWAYS consult the actual label on the product.

## **Other late-season insect pests: Stinkbugs**

Several types of stinkbugs can feed on cotton. Stinkbugs have piercing-sucking mouthparts that they use to feed on cotton bolls by piercing them and feeding on developing seeds, which can lead to decreases in yield and fiber quality. Stink bug feeding can result in warts inside the boll and stain fibers. Feeding by stinkbugs can also transmit pathogens that cause boll rot. Action thresholds are based on injury and not on insect counts. Action thresholds are 10-15 percent boll injury during weeks 3-5 of bloom, 20 percent during weeks 2 and 6, and 30 percent or more 7 or more weeks after bloom.

For more information on insect pest management in cotton, see the 2025 Cotton Insect Pest Management bulletin available from the KSRE Bookstore:

[https://bookstore.ksre.ksu.edu/download/cotton-insect-pest-management-2025\\_MF2674](https://bookstore.ksre.ksu.edu/download/cotton-insect-pest-management-2025_MF2674)

*The use of trade names is for clarity to readers and does not imply endorsement of a particular product, nor does exclusion imply non-approval. Always consult the insecticide label for the most current use requirements. Users should read and follow all label directions.*

Logan Simon, Southwest Area Agronomist – Garden City  
[lsimon@ksu.edu](mailto:lsimon@ksu.edu)

Anthony Zukoff, Extension Entomologist – Garden City  
[azukoff@ksu.edu](mailto:azukoff@ksu.edu)



## 5. Late-summer insect update: Fall armyworms

Fall armyworms, *Spodoptera frugiperda*, can damage several important Kansas crops as well as pasture, turf, and home landscaping, and are currently being reported across the state in various crops and pasture scenarios. The first fall armyworm flight into Kansas occurred during the first week of July in south central parts of the state, and trap counts of adult moths continued to increase in those areas through July, while moths also started showing up in the central and northeast parts of the state in notable numbers. There were scattered and treatable infestations of caterpillars in these areas during that timeframe. During this first week of August, trap counts of moths are increasing dramatically in south central areas, and reports of significant infestations in the central and eastern parts of the state have been reported.

Given these recent trap observations and reports of caterpillar outbreaks, scouting should continue until the first frost of the season for at-risk crops and pasture. It is critical to scout often and treat, if needed, when the caterpillars are less than an inch long. Larger caterpillars are harder to control and do the most damage. Recommended thresholds and products labeled for control of fall armyworm caterpillars (Table 1) can be found below.

### Fall Armyworm Thresholds

**Alfalfa:** 1-2 caterpillars per square foot can destroy seedling alfalfa. 10-15 per square foot can destroy 12" tall plants.

**Corn:** Damage to the whorl stage in early summer is typically not a concern and will not impact yield. Bt corn may prevent ear damage.

**Sorghum:** Damage to the whorl stage in early summer is typically not a concern. 1-2 larvae/head during flowering to soft dough reduces yield by 5-10%.

**Wheat:** Larval "window-paning" in early planted wheat can be a concern. Very late second-generation fall armyworms will be the biggest concern for wheat. If 25-30% of plants show damage, examine the field frequently. Treat at 2-3 active larvae/ft.

**Pasture/Brome:** If damage is notable or there is window-paning, treatment may be warranted with 4 to 5 caterpillars per square foot.

**Table 1. Registered products for the control of fall armyworm in Kansas crops. For more specific information relative to any insecticide, always refer to the actual label on the product.**

Chemical Name	Trade Name	Mode of Action Class	Alfalfa	Corn	Sorghum	Wheat	Grass Forage/Hay
<i>alpha-cypermethrin</i>	Fastac CS	3A	yes	yes	yes	yes	yes
<i>beta-cyfluthrin</i>	Baythroid XL	3A	yes	yes	yes	yes	yes
<i>bifenthrin</i>	numerous products	3A		yes			yes
<i>biological</i>	Fawolgen	-			yes		

Kansas State University Department of Agronomy

2004 Throckmorton Plant Sciences Center | Manhattan, KS 66506

[www.agronomy.ksu.edu](http://www.agronomy.ksu.edu) | [www.facebook.com/KState.Agron](https://www.facebook.com/KState.Agron) | [www.twitter.com/KStateAgron](https://www.twitter.com/KStateAgron)



<i>insecticide</i>							
<i>carbaryl</i>	Sevin	1A	yes				yes
<i>chlorantraniliprole</i>	Vantacore	28		yes	yes	yes	yes
<i>cyfluthrin</i>	Tombstone	3A	yes	yes			yes
<i>deltamethrin</i>	Delta Gold	3A		yes	yes		
<i>gamma-cyhalothrin</i>	Proaxis	3A	yes	yes	yes	yes	
<i>indoxacarb</i>	Steward EC	22A		yes			
<i>lambda-cyhalothrin</i> + <i>chlorantraniliprole</i>	Besiege	3A+28	yes	yes			yes
<i>lambda-cyhalothrin</i>	numerous products	3A	yes	yes	yes	yes	yes
<i>methomyl</i>	Lannate	1A	yes	yes	yes		yes*
<i>methoxyfenozide</i>	Intrepid 2F	18			yes		
<i>permethrin</i>	numerous products	3A	yes				
<i>spinosad</i>	Blackhawk	5		yes	yes	yes	yes
<i>zeta-cypermethrin</i>	Mustang MAXX	3A	yes	yes	yes	yes	
<i>zeta-cypermethrin</i> + <i>bifenthrin</i>	Hero	3A		yes			

\*For use only in bermudagrass pastures.

For additional information on the life history of fall armyworm in Kansas, please refer to the following early season eUpdate:

<https://eupdate.agronomy.ksu.edu/article/fall-armyworm-season-approaches-get-ready-to-scout-fields-647-7>

Anthony Zukoff, Entomologist – Garden City  
[azukoff@ksu.edu](mailto:azukoff@ksu.edu)

## 6. Self-guided tours of herbicide evaluation plots are open near Manhattan

Each summer, K-State's Extension Weed Science team evaluates a variety of herbicide programs for corn and soybeans. This year, you don't need to wait for a field day or special invitation; the plots are open for self-guided tours at your convenience.

To visit the plots, head to the Ashland Bottoms Research Farm near Manhattan. The plots are located at the intersection of S 33rd Street and W 40th Avenue, just off McDowell Creek Road. Click [here](#) for driving directions to 39.1170, -96.6359.

At the site, look for a sign with a QR code. Scan it with your smartphone to access the plot treatment lists and trial names. You can also preview the information [here](#) before you go.

The plots will remain accessible until harvest, so feel free to stop by anytime.





Sarah Lancaster, Extension Weed Science Specialist  
[slancaster@ksu.edu](mailto:slancaster@ksu.edu)

## 7. North Central Kansas Experiment Field Fall Field Day - August 21

All are invited to the North Central Kansas Experiment Field Fall Field Day on Thursday, August 21, 2025, starting at 5:00 PM.

**Location:**

Intersection of 60 Road and Highway 36  
(3 miles east of Courtland or 2.5 miles west of Scandia)

This year's event will highlight timely topics in crop production, with a strong focus on precision agriculture and technology-driven strategies. Attendees will hear from K-State specialists on the following topics:

- **Harnessing Drone Technology for Precision Agriculture** – *Dr. Deepak Joshi*
- **Precision Weed Management** – *Dr. Sarah Lancaster*
- **No Luck, Just Logic: How Technology Breeds Better Soybeans** – *Dr. Bill Schapaugh*

Following the presentations, a free dinner will be served on-site.

This is a great opportunity to connect with K-State researchers, ask questions, and see how emerging technologies are being applied in real-world cropping systems.

If you require accommodations due to disability or special needs, please contact Scott Dooley at 785-706-8450 or [sjdooley@ksu.edu](mailto:sjdooley@ksu.edu) prior to the event.

## 8. Wheat Rx Preplant Seminar - August 20 in Pratt

All are invited to attend the Wheat Rx Preplant Seminar on Wednesday, August 20, 2025, in Pratt, Kansas. This educational event is hosted by K-State Research and Extension and [Kansas Wheat](#) and will cover critical topics to support wheat management decisions ahead of the 2025-26 planting season.

The seminar will feature expert presentations on:

- Wheat variety selection
- Wheat streak mosaic virus
- Conservation practices in wheat-based cropping systems
- Wheat management for high yield and profit

This seminar is part of the Wheat Rx initiative, an ongoing partnership between Kansas Wheat and K-State Research and Extension to promote the adoption of proven, research-based management strategies for producing high-quality, high-yielding winter wheat in Kansas. In this event, we will also highlight a new initiative to promote the adoption of conservation practices in wheat-based cropping systems across Kansas, which is funded by the National Fish and Wildlife Foundation. In addition to in-person seminars, the Wheat Rx effort includes a collection of Extension publications and resources available at [kswheat.com/wheatrx](https://kswheat.com/wheatrx).

### Event Details

**Date:** August 20, 2025

**Location:** Pratt County 4-H Events Center

**Address:** 81 Lake Road, Pratt, KS

**Registration:** <https://kswheat.com/prattrx>

### Tentative Program Schedule

Time	Topic	Speaker
8:00 AM	Registration	
8:15 – 8:45	Kansas Wheat Overview	Aaron Harries
8:45 – 9:30	Wheat Variety Selection	Allan Fritz
9:30 – 10:15	Wheat Streak Mosaic Virus	Kelsey Andersen Onofre
10:15 – 10:30	Break	
10:30 – 11:15	Conservation Practices in Wheat-Based Systems	Logan Simon
11:15 – Noon	Wheat Management for High Yield and Profit	Romulo Lollato
Noon	Lunch	

### Registration

Members of the Kansas Association of Wheat Growers (KAWG) receive one free registration to this event. Non-member registration is \$110. To take advantage of the member benefit, join or renew at

[kswheat.com/join](https://kswheat.com/join). The registration link for the event is <https://kswheat.com/prattrx>. Lunch will be provided for all attendees.

Romulo Lollato, Wheat and Forages Specialist  
[lolato@ksu.edu](mailto:lolato@ksu.edu)

Aaron Harries, Kansas Wheat Commission  
[aharries@kswheat.com](mailto:aharries@kswheat.com)