Issue 1055

K-STATE Research and Extension

Extension Agronomy

# eUpdate

*05/30/2025*

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, or Dalas Peterson, Extension Agronomy State Leader and Weed Management Specialist 785-532-0405 dpeterso@ksu.edu.

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## 1. Early summer control of sericea lespedeza using herbicides

Sericea lespedeza is a major invasive species of concern on rangeland, pasture, and some CRP acres in Kansas. This Category C noxious weed infests over 465,000 acres in Kansas as of 2022. The species is primarily found in the southeastern US, but is expanding west and north (Figure 1). Category C noxious weeds are well-established and known to exist in large or extensive populations. Control efforts should be directed at reducing or eliminating new infestations and using approved control methods on established populations.

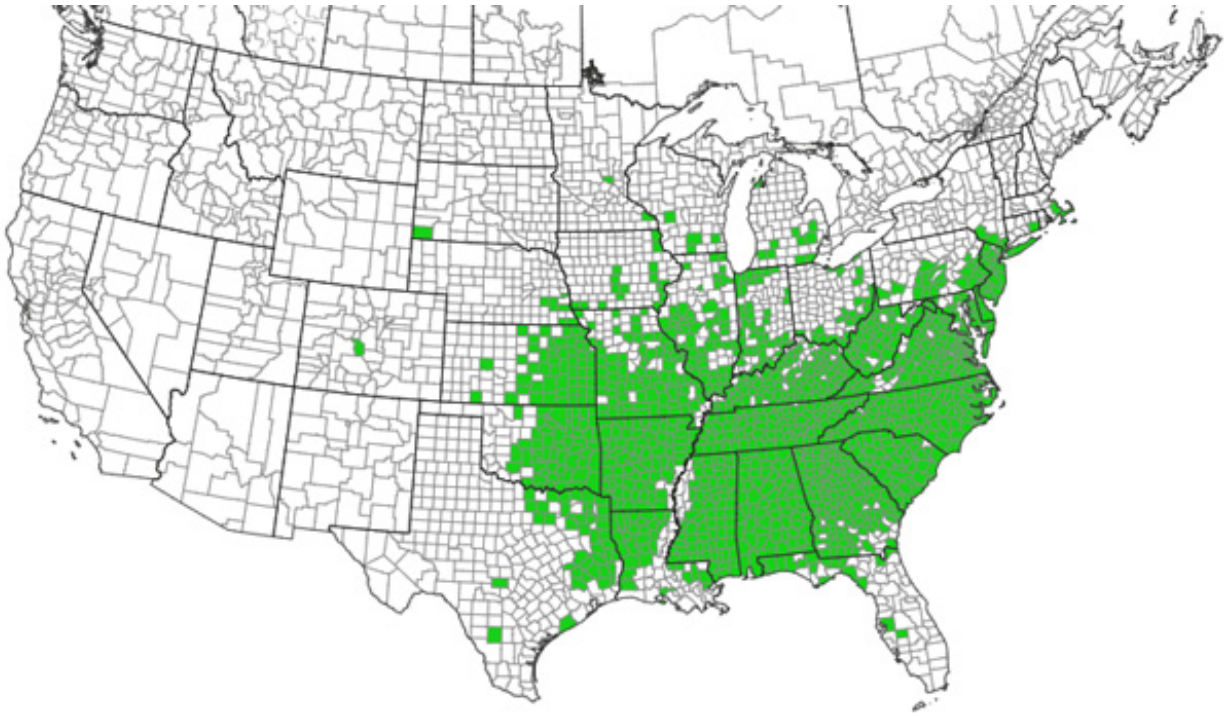

**Figure 1. Distribution of sericea lespedeza in the U.S. Source: EDDMaps (2025).**

Sericea lespedeza is a perennial legume with trifoliate leaves. The leaves are club or wedge-shaped (Figure 2). Plants are usually about 3 feet tall but can grow to several feet in height under ideal conditions. Plants will start to bloom in August with white to cream-colored flowers with a purple throat. The most seed production occurs in September.

**Figure 2. Trifoliate, wedge-shaped leaflets and flowers of sericea lespedeza. Photo by Walt Fick, K-State Research and Extension.**

Prescribed burning stimulates the germination of sericea lespedeza seed. Mid-May to June is a good time to control new seedlings and established sericea lespedeza plants that are at least 10-12 inches tall, using herbicides. At this time, sericea lespedeza is in a vegetative growth stage (Figure 3) and is rapidly growing. By the end of June, plants will begin to branch and become woodier.


**Figure 3. Vegetative growth stage of sericea lespedeza. Photo by Walt Fick, K-State Research and Extension.**

**Chemical control options**

The most effective herbicides to treat sericea lespedeza during the vegetative growth stage are Remedy Ultra (triclopyr) and PastureGard HL (triclopyr + fluroxypyr). Broadcast applications of Remedy Ultra at 1 to 2 pints/acre and PastureGard HL at 0.75 to 1.5 pints/acre should be applied in spray volumes of 10 to 20 gallons/acre. Another herbicide option would be Surmount (picloram + fluroxypyr) at 2 pints/acre. Surmount is a restricted-use pesticide and would be a good choice if you want to treat roughleaf dogwood or blackberry simultaneously. Once sericea starts to branch, metsulfuron-containing herbicides such as Escort XP (0.5 to 1 oz/acre) can be effective.

For spot application, mix 0.5 fl oz PastureGard HL per gallon of water or use a 1% solution of Remedy Ultra in water. Aerial applications of these products should be done with a minimum spray volume of

3 gallons per acre. Higher volumes, e.g., 5 gallons per acre, will generally be more effective.

There are no grazing and haying restrictions for livestock and lactating grazing animals following the use of Remedy Ultra and PastureGard HL. There is a 14-day waiting period prior to hay harvest using these two herbicides. If Surmount is used, there is no waiting period before grazing all livestock except for lactating dairy animals (14 days before grazing). Surmount also requires a 7 to 14-day waiting period before hay harvest, depending on whether the hay will be fed to beef animals or lactating dairy animals. There are no grazing or haying restrictions following the application of Escort XP.

**As a noxious weed in Kansas, sericea lespedeza needs to be controlled. Sericea lespedeza has a tremendous seed bank that helps reestablish stands.**

Herbicide treatments must be repeated every 2 to 4 years to keep this invasive species in check. Initial treatments should reduce dense stands to the point where spot treatment can be used in future years. Left untreated, sericea lespedeza will dominate a site, greatly reducing forage production and species diversity.

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## 2. Kansas Mesonet Animal Comfort Tool monitors current and forecasted livestock conditions

Summer brings heat, often amplified by humidity. Recent rains across the state and more in the short-term forecast (Figure 1), much of it in drought-stricken regions, have increased atmospheric and surface moisture. When we factor in warmer-than-normal temperatures, especially at night, heat stress can rapidly develop in humans and animals alike. It's been nearly three years since a major cattle loss event occurred in southwest Kansas. This marked a time when producers were caught off guard by a sudden transition from cool/wet to hot conditions.

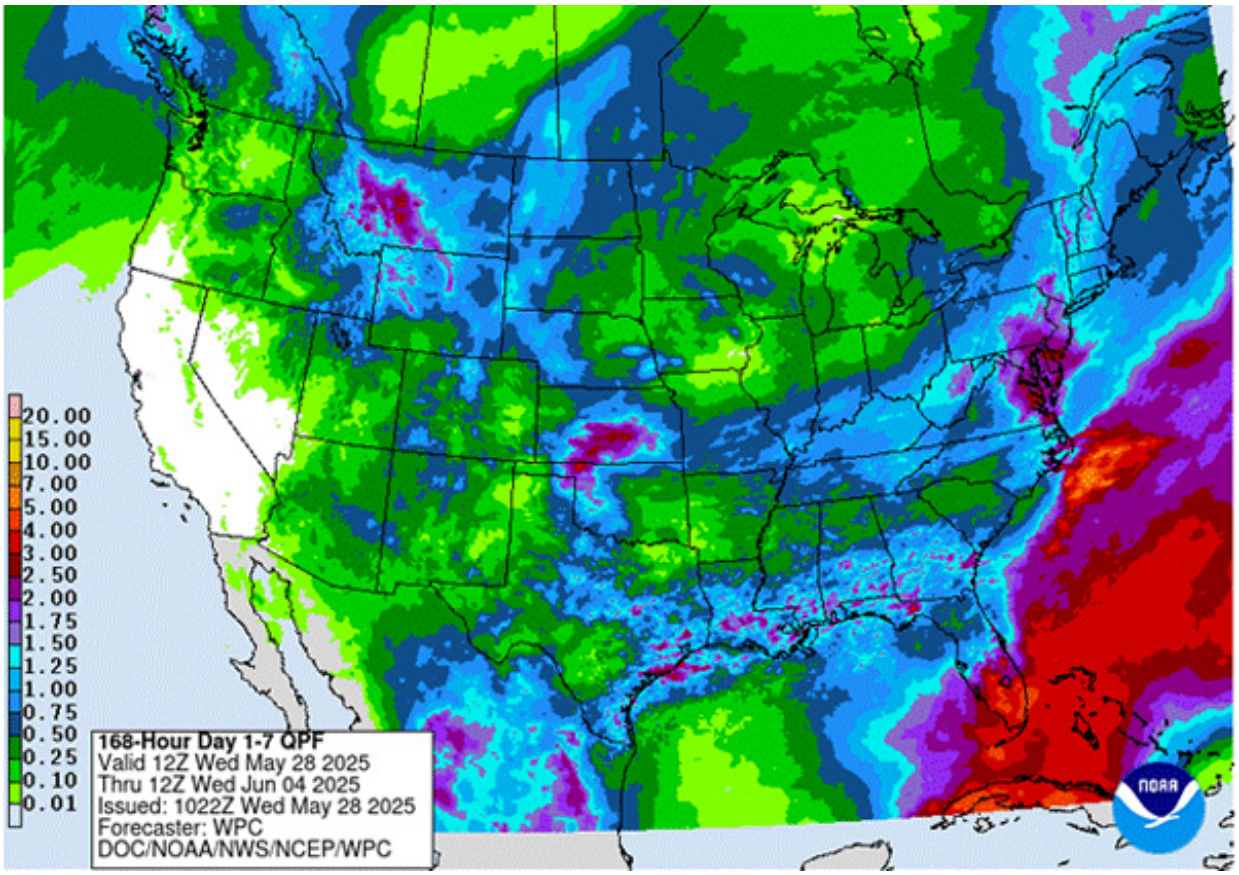


**Figure 1. Seven-day estimated precipitation for May 28 through June 4, 2025, from the Weather Prediction Center (https://www.wpc.ncep.noaa.gov).**

When heat stress develops with hot, sunny, and humid conditions, increased proactive steps are required to avoid potential illness. This is compounded when heat stress values remain elevated for long periods of time and when cattle have not been exposed to cooler conditions over time without the ability to acclimate. Of special importance is the animal's ability to recover at night. High temperatures overnight prevent the body from recovering from the previous day's heat and can compound the next day's stress if not mitigated.

The Kansas Mesonet has an Animal Comfort Tool that tracks current heat stress values with real-time data and looks ahead at the 7-day forecast, helping farmers stay one step ahead of potential issues.

Users can access this tool from the main Mesonet page (https://mesonet.k-state.edu/) by selecting "Agriculture" from the drop-down menu on the top left of every page and then "Comfort Index" (Figure 2). Also, users can access the tool directly from this link: http://mesonet.k-state.edu/agriculture/animal/

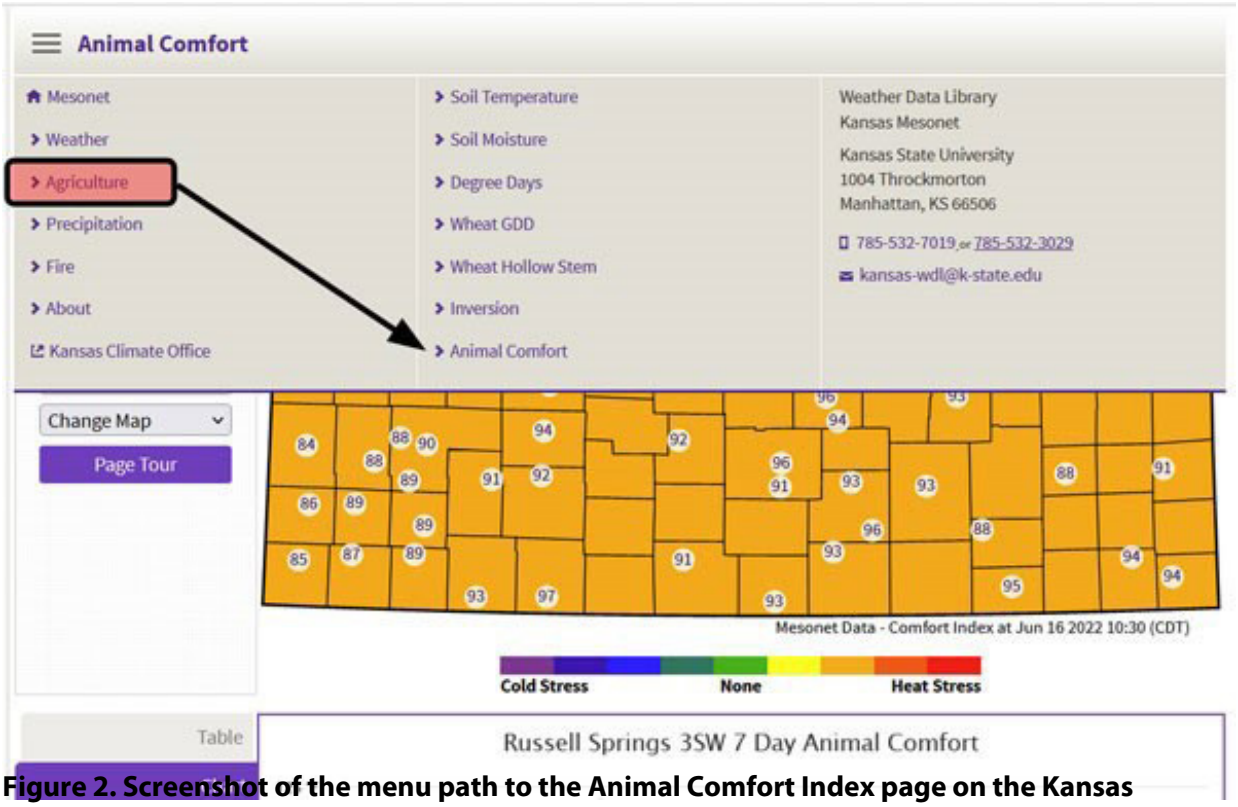


**Figure 2. Screenshot of the menu path to the Animal Comfort Index page on the Kansas Mesonet.**

**Utilizing the Forecast Animal Comfort Index**

This product utilizes the National Weather Service hourly forecast (averaged over the hour, meaning extremes could be slightly more) for the next seven days. This data, consisting of solar, wind, temperature, and humidity, is utilized in the Comprehensive Comfort Index equation from the University of Nebraska. The ability to handle both hot and cold extremes provides a year-round product to increase producer awareness in advance of critical weather. Data is displayed on a graph and a summarized table (Figure 3), allowing quick analysis of conditions on desktop and mobile browsers in an easy-to-read format.

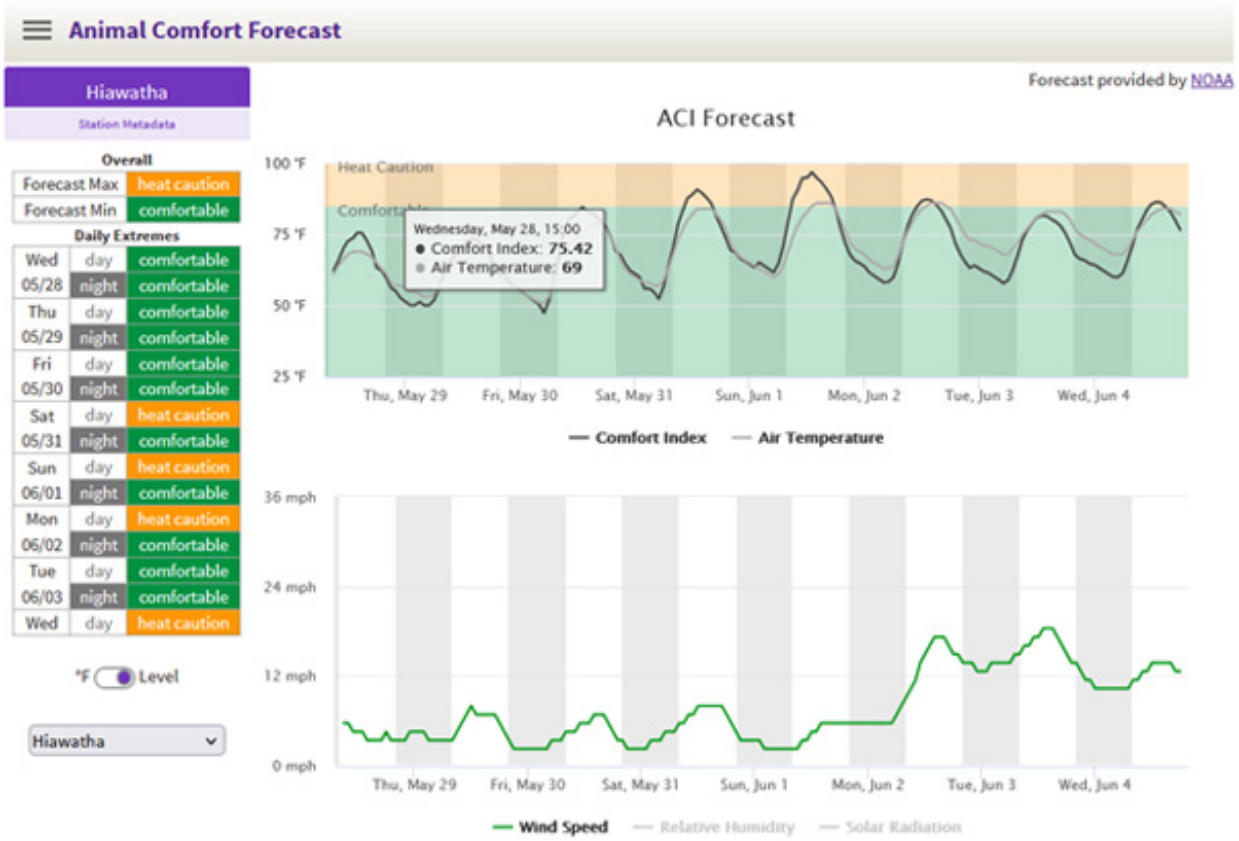


**Figure 3. The Animal Comfort Forecast in advance of increased warmth this coming weekend and into early next week. The selected location is Hiawatha.**

It is important to note that the forecast is only a guidance product. Forecasts are subject to change, and conditions could vary significantly based on numerous external factors. Actual animal response to temperature stress will depend on several factors not accounted for in the index. Those include but are not limited to age, hair coat (winter vs. summer; wet vs. dry), health, body condition, micro-environment, and acclimatization. Additionally, recent moisture can result in mud, increasing livestock stress levels.

Important note: The National Weather Service forecasts hourly average values rather than extremes. In addition, fluctuations in cloud cover (which affects solar radiation) and wind speed have a large effect on comfort levels. Producers should recognize that localized conditions may be significantly warmer/cooler than the predicted comfort index.

**Tracking conditions with current data**

One of the most basic ways to verify a forecast is to look at current conditions. The original Animal Comfort product remains to allow producers to see the real-time weather stress at the nearest Mesonet location. This displays both the current data up to (fifteen-minute intervals).

Users can scroll down the page and view the previous seven days' hourly data on the “Chart” (Figure 4). This is particularly useful for producers that suffered loss and want to capture the conditions that took place in the previous week. You can also download the data in a comma-delimited form for use in Excel or similar software. This can be found under the "Download" tab.

No historical data download is available beyond the last seven days, so this information must be captured quickly.

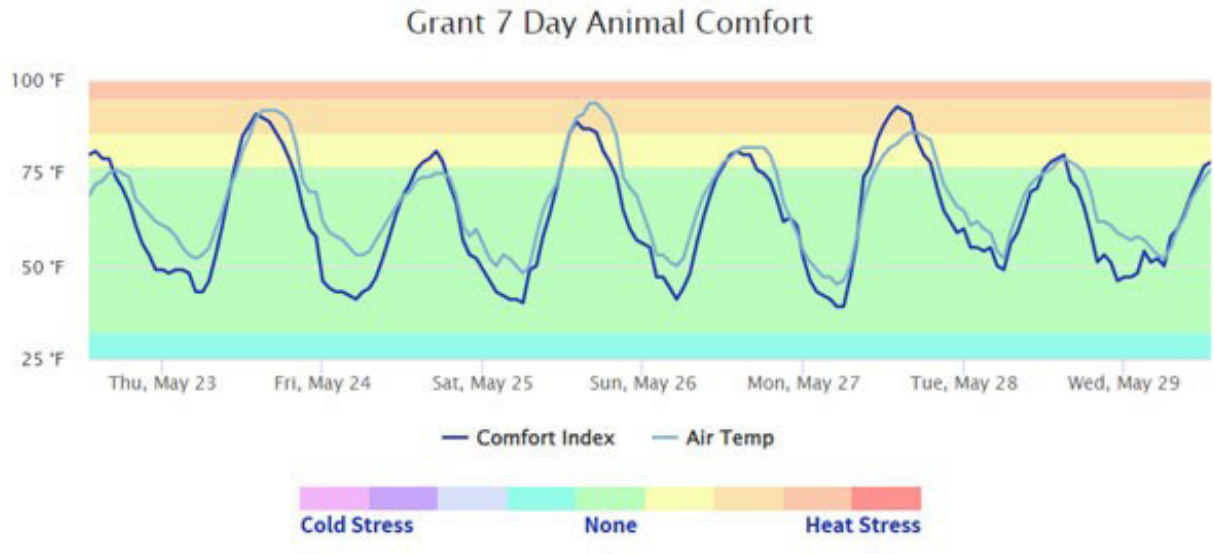


**Figure 4. Animal Comfort Index history at the Mesonet station in Grant. Graphic from Kansas Mesonet.**

The displayed data does not consider conditions compared to "normal." Solar radiation, wind, and humidity data are hard to put into a climatological (or long-term) perspective since recorded data is relatively new (only about 15 years of data at most stations). Thus, climatological data is limited for the animal comfort index. If you need historical data, please contact our staff at Kansas-wdl@ksu.edu, and we'd be glad to pull older data that may exist.

If you want to read more about the Forecast or Current Conditions pages, please visit https://mesonet.ksu.edu/agriculture/animal and scroll down to the "Resources" tab.

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## 3. Distinguish chinch bugs from false chinch bugs for better pest management

Chinch bug activity has been elevated in Kansas over the last couple of seasons. Now would be a good time to discuss the differences between chinch bugs (*Blissus leucopterus)* and false chinch bugs (*Nysius sp.*). To make proper management decisions, knowing how to correctly identify these insects is critical.

**Adults bugs**

Adult chinch bugs are 3-4mm long bugs with black bodies and white wings that are kept folded over their backs. Two dark, triangular markings are present near the center of the wings, creating a distinctive "X" mark (Figure 1).

Adult false chinch bugs are very similar in appearance, but smaller. Instead of having black bodies, false chinch bugs are brownish-gray with clear wings that lack a distinct "X" mark (Figure 2).

**Figure 1. Adult chinch bug. Photo by K-State Entomology.**


**Figure 2. Adult false chinch bug. Note the lack of a dark "X".**

**Immature bugs**

Immature chinch bugs are bright red after hatching, darkening to black as they go through a series of 5 molts. A distinct white band will be visible across the nymphs' bodies until the wing buds become large enough to obscure it (Figure 3).

**Figure 3. Immature chinch bugs. Photo by K-State Entomology.**

Immature false chinch bugs are grayish-brown, never bright red, and lack the white band across their bodies (Figure 4).

**Figure 4. Immature false chinch bugs. Photo by K-State Entomology.**

**Damage by bugs**

Chinch bugs and false chinch bugs are true bugs in the order Hemiptera, which means they both have piercing-sucking mouthparts that they use to puncture plant tissue to feed on plant juices. However, the symptoms of feeding appear differently for these two bugs. **When chinch bugs feed**, digestive enzymes are injected into the plant tissue, causing it to break down and discolor (Figure 5). Reddish spots are often present at chinch bug feeding sites. Heavy chinch bug feeding can also cause stunting, wilting, and necrotic lesions on plants. **False chinch bug feeding**, on the other hand, usually has little effect on plants, but extreme numbers of the bugs on a plant can cause wilting and death (Figure 6).

**Figure 5. Discoloration caused by chinch bug feeding. Photo Jeff Whitworth, K-State Research and Extension.**

**Figure 6. False chinch bug feeding damage to sorghum. Photo by K-State Entomology.**

**Be proactive about chinch bug management**

Think about chinch bug management before wheat is harvested. Simply relying on rescue treatments for young sorghum fields is not recommended. If possible, avoid planting sorghum adjacent to wheat, particularly if the wheat stand is thin and stressed out. Wheat fields should be scouted for the presence of chinch bugs before harvest to provide an estimate of risk to newly planted sorghum fields. One adult chinch bug or 5 nymphs per foot of row will be a hazard to the borders of sorghum planted nearby. If chinch bug problems are expected, an early planted trap crop of sorghum can be utilized between the wheat and sorghum fields, and this trap crop can be sprayed if migrating chinch bugs become numerous. Follow-up sprays will likely be needed if the local chinch bug population is high; 5 chinch bugs per seedling would warrant action. Planting time insecticides

and seed treatments can provide some early protection for young sorghum, but their effectiveness deteriorates beyond a few weeks. Additionally, scouting should be done weekly during the growing season. Plants that are a foot tall and all the way through flowering can be damaged by 50 chinch bugs per plant.

Additional details on life history and management recommendations for these two pests can be found in the following Kansas Crop Pest publications.

- Chinch Bug: https://bookstore.ksre.ksu.edu/pubs/MF3107.pdf
- False Chinch bug: https://bookstore.ksre.ksu.edu/pubs/MF3047.pdf

## 4. 2024 Risk Management Agency county wheat yields released: Will SCO or ECO payouts be triggered?

Last week, the Risk Management Agency (RMA) published county wheat yields for 2024. These yields are used to calculate indemnities for Supplemental Coverage Option (SCO) and Enhanced Coverage Option (ECO) policies purchased for the 2024 crop. The attached maps show actual county revenue as a share of expected county revenue (Figures 1 and 2). This provides an estimate of whether SCO or ECO will be triggered for individual Kansas counties for dryland and irrigated wheat for 2024. Note, the projected 2024 price for winter wheat was $7.34, and the harvest price was $6.27, so counties with average or lower yields are likely to trigger ECO indemnities. The ranges in the map legend can be interpreted using the following tables.

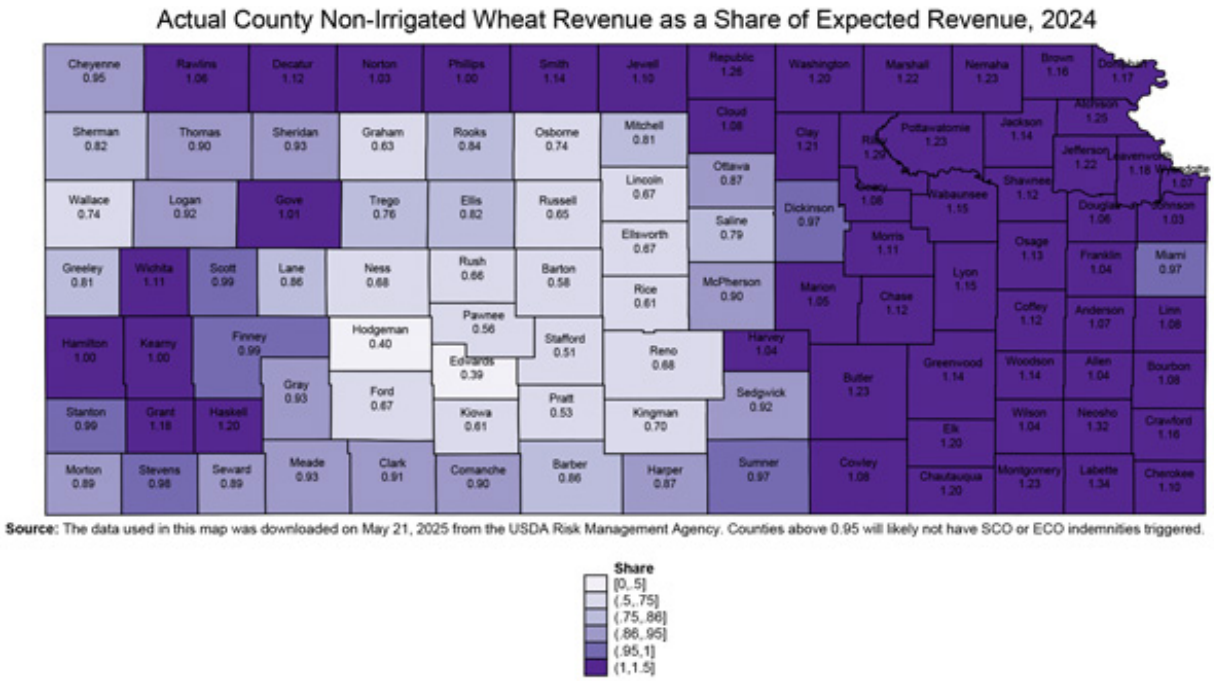


**Figure 1. Actual county non-irrigated wheat revenue as a share of expected revenue, 2024.**

**Table 1. Non-irrigated wheat.**

| Range | # Counties | Interpretation |
|---|---|---|
| 0 - 0.50 | 2 | Deep yield losses, SCO and ECO triggered, underlying individual policies likely triggered |
| 0.50 - 0.75 | 17 | Substantial yield losses, SCO and ECO triggered, several individual policies likely triggered |
| 0.75 - 0.86 | 9 | Shallow yield losses to average yield, SCO and ECO triggered |
| 0.86 - 0.95 | 14 | Average or slightly above average yields, ECO triggered |
| 0.95 - 1 | 7 | Above average yields, SCO and ECO not triggered |
| 1 or higher | 56 | Above average yields, actual revenue higher than expected |

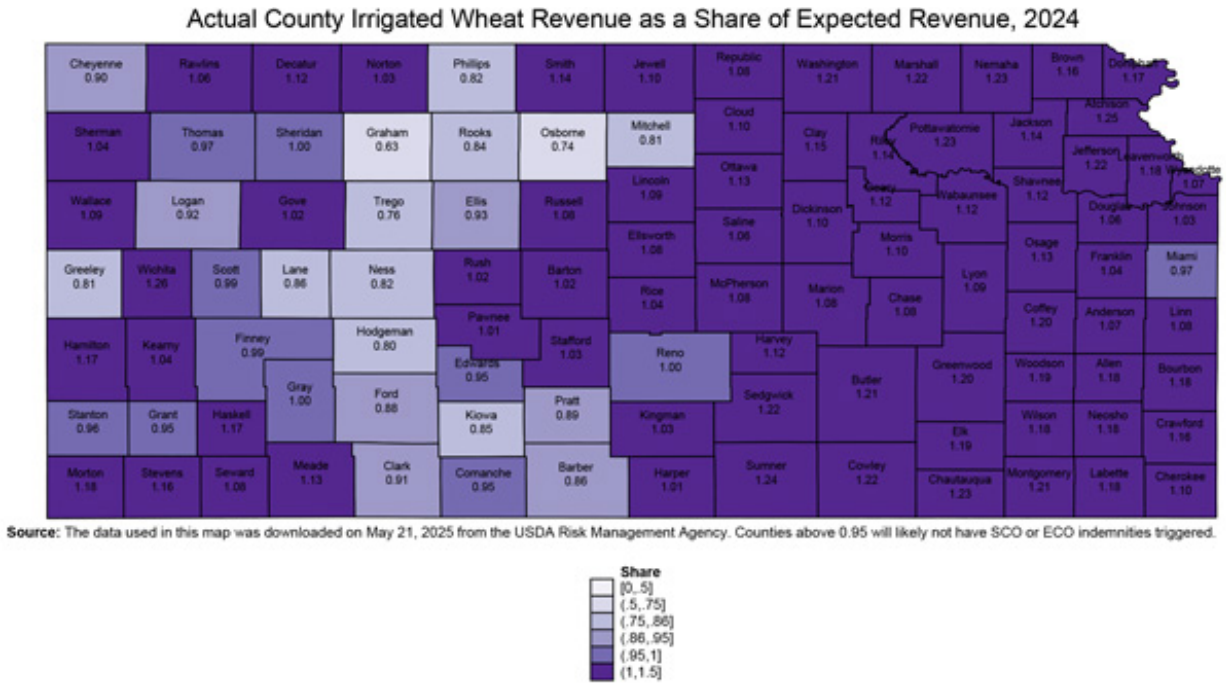


**Figure 2. Actual county irrigated wheat revenue as a share of expected revenue, 2024.**

**Table 2. Irrigated wheat.**

| Range | # Counties | Interpretation |
|---|---|---|
| 0 - 0.50 | 0 | Deep yield losses, SCO and ECO triggered, underlying individual policies likely triggered |
| 0.50 - 0.75 | 2 | Substantial yield losses, SCO and ECO triggered, several individual policies likely triggered |
| 0.75 - 0.86 | 9 | Shallow yield losses to average yield, SCO and ECO triggered |
| 0.86 - 0.95 | 7 | Average or slightly above average yields, ECO triggered |
| 0.95 - 1 | 11 | Above average yields, SCO and ECO *not* triggered |
| 1 or higher | 76 | Above average yields, actual revenue higher than expected |

When county yields are published for additional commodities, additional maps will be generated and published on AgManager.info. Crop insurance yield maps and several resources on SCO and ECO are currently available on AgManager.info. Contact jifft@ksu.edu for an individual link to the 2024 SCO and ECO payout tool (spreadsheet), which can be used to estimate 2024 crop year individual indemnity amounts.

**Disclaimer: These are estimates only. Contact an insurance agent for information on actual payouts.**

. more information about this publication and others, visit AgManager.info.

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## 5. 2025 Kansas Wheat Plot Tours - Updated schedule

The Department of Agronomy and K-State Research and Extension will host several winter wheat variety plot tours in different regions of the state starting May 13, 2025. Please make plans to attend a plot tour near you to see and learn about the newest available and upcoming wheat varieties, their agronomics, and their disease reactions.

Below is a list of the last remaining plot tour dates, times, and locations with directions.

**May 29 – Thursday**

| Time | County | Location | Agent | Directions |
|---|---|---|---|---|
| 6:00 PM | Lane | Dighton | Lacey Noterman | The plot is located 7 miles west of Dighton to Eagle Road, 2 miles south to west Road 130, then 200 yards west toward Ehmke's farmstead, east of the scale. |

**June 3 - Tuesday**

| Time | County | Location | Agent | Directions |
|---|---|---|---|---|
| 7:30 AM (CT) | Thomas | | Helen Geifer | From I-70 Levant Exit, go 10 miles south on County Road 11 (Levant-Winona Blacktop) to County Road G, then just over 1/2 mile west |
| 5:30 PM (MT) | Sherman | | Jeanne Falk Jones | Plot tour at F&J Farms: 7 miles north of Goodland on Hwy 27, east of the scale house. Supper to follow at 4-H Building. |

**June 4 - Wednesday**

| Time | County | Location | Agent | Directions |
|---|---|---|---|---|
| 7:30 AM (MT) | Wallace | | Jeanne Falk Jones | Plot tour at Mai Farms: 9 miles south of Sharon Springs on Hwy 25 to Field Road, 4 miles east and 3/8 mile south. 7:15 AM (MT): Breakfast at Mai Farms. |
| 10:00 AM (MT) | Wallace | | Jeanne Falk Jones | Plot tour at E&H Farms: 3 mi west of Weskan on Hwy 40 to Road 3 and south 5.5 mi (south of intersection of Gooseberry Rd and Rd 3) |
| 5:30 PM | Cheyenne | | Jeanne Falk | Plot tour at Hingst Farm: 12 miles west of |

| | | | | |
|---|---|---|---|---|
| (CT) | | | Jones | St. Francis to Road 2, 2 miles north to Road P, 1 mile east to Road 3, and ¾ miles north to the plot. Sandwiches after the tour. |
| 9:00 AM (CT) | Republic | Polansky | Luke Byers | 1 mile east of Belleville on U.S. 36 (1196 Co Rd 18, Belleville) |

**June 6 - Friday**

| Time | County | Location | Agent | Directions |
|---|---|---|---|---|
| 8:15 AM (MT) | Greeley | Tribune | Lucas Haag | SWREC-Tribune Headquarters, 1 mile west of Tribune on Highway 96. |

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## 6. Update of wheat streak mosaic virus complex testing across Kansas

Over the month, symptoms of wheat streak mosaic virus have been showing up in wheat fields across Kansas (Figure 1). This disease complex can be caused by several viruses, including *wheat streak mosaic virus*, *Triticum mosaic virus*, and *wheat mosaic virus* (high plains). It can be important to distinguish wheat streak complex from other wheat diseases. The K-State Plant Disease Diagnostic Laboratory offers wheat virus testing.

For more information on the wheat streak mosaic virus complex, check out the online resources listed below.

KSRE publication MF3383 *Wheat streak mosaic virus*: https://bookstore.ksre.ksu.edu/pubs/wheat-streak-mosaic_MF3383.pdf

KSRE publication EP145 *Triticum mosaic virus*: https://bookstore.ksre.ksu.edu/pubs/triticum-mosaic_EP145.pdf

May 8, 2025 eUpdate article: *High levels of wheat streak mosaic virus in parts of KS in 2025:* https://bit.ly/3SwJ7gU

Here we are providing a summary of test results for samples received by the K-State Plant Disease Diagnostic Lab for both wheat streak mosaic virus (Figure 2) and Triticum mosaic virus (Figure 3). It should be noted that not all producers send samples from affected fields, so this is not representative of the total area affected in the state. Wheat streak mosaic and Triticum mosaic viruses can be found independently or as "co-infections" in the same plant.

**Figure 1. Field view of a field turning yellow from wheat streak mosaic complex (top) and**

**wheat streak mosaic complex symptoms (bottom photo). Symptoms may vary based on the time of infection, the viruses present, and the wheat variety. Photos by Kelsey Andersen Onofre, K-State Research and Extension.**

**Figure 2. Confirmed positive for wheat streak mosaic virus by county in Kansas this season.**

**Map from K-State Plant Disease Diagnostic Lab.**

**Figure 3. Confirmed positive for triticum mosaic virus by county in Kansas this season. Map**

**from K-State Plant Disease Diagnostic Lab.**

As a reminder, the K-State Plant Disease Diagnostic Lab provides timely diagnostics of plant pathogenic fungi, bacteria, viruses, and fungal-like organisms. Our mission is to provide this service to K-State Research and Extension personnel, consultants, commercial producers, landscape companies, and homeowners both within and outside of Kansas. After diagnosis, we will provide research-based resources and connect you with one of our experts to answer any questions.

**Fee adjustments for 2025**

Below is a table that lists the fees for various services offered by the K-State plant disease diagnostic lab. The wheat virus screen (ELISA) includes testing for 6 common wheat viruses (including those that result in wheat streak mosaic complex). If samples are submitted for virus testing through a county extension office, the fee is $55.00. If they are submitted externally (not through KSRE), the fee is $75.00.

**Table 1. K-State Plant Disease Diagnostic Lab Services and Fees.**

| Diagnostic Service | Internal Charges (KSRE) | External Charges (non-extension) |
|---|---|---|
| **Digital Diagnosis** | $0 | $0 |
| **Routine Diagnosis (per sample)** | $12 | $15 |
| There is no routine diagnosis charge when running the specialized tests listed below. | | |
| **Fescue Endophyte** | $30 | $40 |
| **Nematode – Soybean Cyst Nematode** | $30 | $40 |
| **Nematode – Pine Wilt** | $30 | $40 |
| **ELISA (wheat virus screen-6 pathogens)** | $55 | $75 |
| **Molecular (first/single pathogen)** | $55 | $75 |
| **Molecular (each additional pathogen)** | $20 | $30 |

The 6 wheat viruses that we screen for are wheat streak mosaic virus (WSMV), triticum mosaic virus (TriMV), high plains wheat mosaic virus (HPWMoV), wheat spindle streak mosaic virus (WSSMV), soil-borne wheat mosaic virus (SBWMV), and barley yellow dwarf virus- PAV (BYDV-PAV).

**Sample Submission** – **High-quality samples lead to high-quality diagnoses**

- Collect and ship samples on or before Wednesday to avoid weekend storage.
    - Collect healthy and symptomatic plants (labeled).
    - Collect the entire plant.
        - Dig up the plant to keep the root system intact.
        - Bag roots separately to avoid soil contact with leaves.
        - Place bagged roots and above-ground materials in a larger plastic bag.
        - Label and use plastic bags instead of paper; do NOT add water. This maintains sample integrity.
- Once collected:

- Fill out the submission form with as much information as possible. Include variety/hybrid info (especially for wheat). Attach it to the outside of the sample bag.
- Ship plants ASAP overnight via UPS or FedEx when possible. **USPS can take up to 14 days**. If necessary, samples can be held in a refrigerator until shipment.

- Send plant sample photos to clinic@ksu.edu with the tracking number or date shipped.
  - 3 useful types of images (see Figure 4 for an example of a good versus bad sample submission)
    - Symptom/problem up close and in focus
    - Entire plant from ground level to the top of the plant
    - Site – capture the pattern in the field, transition areas, terraces, etc.

**Figure 4. The photo on the left is an example of a good sample submission. The picture on the**

**right is a poor sample submission.**

If you have any questions, comments, or concerns, please contact us via clinic@ksu.edu or 785-532-6176. You can also visit the lab website at: https://www.plantpath.k-state.edu/extension/plant-disease-diagnostic-lab/

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