



**K-STATE**  
Research and Extension

## **Extension Agronomy**

# eUpdate

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*11/20/2025*

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).

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## 1. How Are Winter Canola Stands Looking in Kansas?

Soil moisture conditions were very favorable for winter canola establishment in 2025. Abundant soil moisture and warm temperatures allowed for rapid emergence, which is critical for attaining the right amount of top growth heading into the winter months.

### Planting dates in 2025

Soil moisture conditions dictated planting dates for winter canola in 2025. The most challenging issue with planting canola was waiting for the soil to dry out. This delayed planting beyond the optimum date for some producers. Even though planting may have occurred later, in most cases, warm temperatures throughout October allowed adequate fall growth to develop before winter (Figures 1 and 2). Winter canola variety trials in Caldwell, Hutchinson, and Norwich all exhibited this desirable amount of growth by mid-November.



**Figure 1. Winter canola variety trials at the South-Central Experiment Field near Hutchinson, KS, on November 18, 2025. The field was planted on September 29. Photo by Mike Stamm, K-State Department of Agronomy.**



**Figure 2. Winter canola plant at the correct stage for overwintering, with 8 true leaves and 8-10 inches of top growth, at the South-Central Experiment Field near Hutchinson, KS on November 18, 2025. Photo by Mike Stamm, K-State Department of Agronomy.**

Temperatures have been cooler recently, and we have seen a few hard freezes. Bleaching of leaves is a common sight after a hard freeze (Figure 3). This is a natural occurrence as the plants take on an overwintering appearance.



**Figure 3. Bleaching of canola leaves because of a hard freeze at the South-Central Experiment Field near Hutchinson, KS. Photo by Mike Stamm, K-State Department of Agronomy.**

### **Early planting and excessive fall stem elongation**

In some locations, soil moisture was available early in the planting window, allowing for early planting. A few fields have achieved, or were on the verge of achieving, too much fall growth before cooler temperatures arrived this fall. In the pictures that follow, we see an excessively large crop canopy leading to fall stem elongation.

Stem elongation in the fall -- not to be confused with bolting, i.e., stem elongation with visible flowering structures -- may occur because:

- The crop was planted too early
- The crop was seeded at higher-than-optimal plant populations
- Excessive soil fertility is present (particularly nitrogen)
- An unusually warm fall persists
- Selection of a poorly adapted cultivar
- A combination of any of these factors

For example, closely spaced and crowded canola plants increase early plant-to-plant competition for light. This “reaching” for light may lead to an extension of the growing point above the soil surface. Any time the growing point (rosette) is elevated, the chances for winterkill are increased because overwintering plant parts are in an unprotected position above the soil surface.

Because soil moisture was plentiful, winter canola breeding nurseries near Manhattan, KS, were seeded on the early side of the planting window on September 13. The warm temperatures that followed planting allowed the crop to attain more above-ground biomass than desired. Figure 4 shows a leaf canopy measuring between 20-24”. Looking below the canopy, some varieties prone to fall stem elongation are showing a growing point about 8” above the soil surface (Figure 5, left). However, other varieties that are not prone to fall stem elongation are showing a growing point at the soil surface (Figure 5, right). The varieties with the elevated growing point may succumb to winterkill if bitterly cold temperatures arrive. The canola breeding program actively selects against this type of growth habit, so having this selection pressure should be beneficial for screening out unwanted materials. Also, a very warm fall, with little cold weather to slow growth, was another factor leading to excessive growth.



**Figure 4. Winter canola breeding nursery at Agronomy North Farm, planted on September 13, 2025. Photo by Mike Stamm, K-State Department of Agronomy.**



**Figure 5. On the left, the growing point is extended 8" above the soil surface. On the right, the growing point is anchored at the soil surface. Photos by Mike Stamm, K-State Department of Agronomy.**

### **Effect of canola size on winter survival**

Canola overwinters and is the most tolerant of cold temperatures in the rosette growth stage. At this stage, the crown develops at the soil surface with larger, older leaves at the base and smaller, newer leaves at the center. The stem thickens, but its length remains unchanged. For the greatest winter survival, a winter canola plant needs 5 to 8 true leaves, 6 to 12 inches of fall growth, a root collar diameter of  $\frac{1}{4}$  to  $\frac{1}{2}$  inch, and an extensive root system. Hardened winter canola can withstand temperatures below 0°F for short periods of time.

On the other hand, canola that has too much top growth (typically 20 inches or more) can succumb to winterkill for a number of reasons, including overuse of available soil water and nutrients, stem elongation above the soil surface, and physical damage to the unprotected crown as winter temperatures arrive.

How the crop will ultimately overwinter depends upon numerous factors, but acclimating temperatures (near freezing temperatures with a few harder freezes) will be important to prepare the crop for the coldest winter temperatures. In addition, better survival is often observed when fall temperatures decline gradually, rather than rapidly, before winter fully arrives.

For additional information on canola production, please refer to the recently revised "Great Plains Canola Production Handbook" available through K-State Research and Extension.

Kansas State University Department of Agronomy

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[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)

<https://www.bookstore.ksre.ksu.edu/pubs/MF2734.pdf>

For more information about canola growth and development stages, please consult the K-State Canola Growth and Development poster: <https://www.bookstore.ksre.ksu.edu/pubs/MF3236.pdf>

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## 2. The Armyworm Lineup: Who's Feeding in Your Field?

Armyworms are a recurring pest issue across Kansas, but several different species fall under the “armyworm” umbrella. Each species varies in its host plants, seasonal activity, and whether it overwinters in the state (Table 1). This article provides an overview of the major species of concern, with emphasis on the **Fall Armyworm** and **Armyworm**, which were the primary issues for Kansas producers in 2025. A brief summary of the **Army Cutworm**, which is *not* a true armyworm, is also included.

**Table 1. Armyworm species that can be found in Kansas.**

| Common Name                     | Primary Crops/Hosts         | Overwinters in Kansas? |
|---------------------------------|-----------------------------|------------------------|
| <b>Armyworm (True armyworm)</b> | Broad range                 | Yes                    |
| <b>Beet Armyworm</b>            | Mainly alfalfa              | Yes                    |
| <b>Fall Armyworm</b>            | Very wide range             | No                     |
| <b>Wheathead Armyworm</b>       | Wheat only                  | Yes                    |
| <b>Yellowstriped Armyworm</b>   | Mainly alfalfa and soybeans | No                     |
| <b>Army Cutworm*</b>            | Wheat, alfalfa, rangeland   | Yes                    |

\* Army Cutworm is not a true armyworm, but can appear in large numbers.

### Major Concerns in 2025

The two species that caused the greatest concern to Kansas producers in 2025 were:

- **Fall Armyworm**
- **Armyworm (True Armyworm)**

Detailed summaries for each species follow.

### FALL ARMYWORM

#### Key Characteristics

- **Generations:** 2-3 per year in Kansas
- **Overwintering:** Do not overwinter in Kansas. Moths migrate in during the spring and begin depositing eggs.
- **Host Range:** Very wide. They feed on grasses and broadleaf plants; nearly any green plant can be affected.
- **Seasonal Movement:** Typically migrate south again in October
- **Monitoring:**
  - Pheromone traps are available for adult Fall armyworm moths.
  - Important note: Trap catches indicate when moths are flying, NOT how many larvae are present or feeding in the fields.

#### Identification



**Figure 1. Adult Fall Armyworm. Photo by K-State Entomology.**



**Figure 2. Fall Armyworm Larva. Note the characteristic four dark spots on the last abdominal segment. Photo by K-State Entomology.**

## **ARMYWORM**

### **Key Characteristics**

- **Generations:** 2–3 per year in Kansas
- **Overwintering:** Yes. Overwinter in Kansas. No-till or reduced-till systems may favor overwintering survival.
- **Host Range:** Primarily grasses. Examples: wheat, brome, turf/lawns including golf courses, sorghum, and corn.
- **Biological Control:** Historically, parasitoids (especially tachinid flies and small parasitic wasps) helped suppress armyworm populations, but few have been observed in the past 3 years.

### **Identification**



**Figure 3. Adult Armyworm. Photo by K-State Entomology.**



**Figure 4. Armyworm larva. Photo by K-State Entomology.**



**Figure 5. Armyworm larvae collected from wheat in Dickenson County on Nov. 16, 2016. Photo by K-State Entomology.**



**Figure 6. Armyworm feeding damage. Photos by K-State Entomology.**



**Figure 7. Typical Armyworm damage in Saline County on Nov. 15, 2022. Photo by Jay Wisbey, K-State Extension.**

**Table 2. Insecticide efficacy trial for Armyworms in brome in 2021.**

| Treatment       | Rate         | Total worms/ft <sup>2</sup> /4 reps |           |           |
|-----------------|--------------|-------------------------------------|-----------|-----------|
|                 |              | Sept. 19                            | Sept. 26  | Oct. 3    |
|                 |              | (7 days)                            | (14 days) | (21 days) |
| Fastac CS       | 2.4 fl. oz/a | 0                                   | 1         | 0         |
| Besiege XL      | 8.0 fl. oz/a | 0                                   | 2         | 0         |
| Steward         | 8.0 fl. oz/a | 0                                   | 2         | 0         |
| Grizzly Z       | 2.5 fl. oz/a | 0                                   | 0         | 0         |
| Lorsban 4E      | 1.5 pint/a   | 3                                   | 3         | 0         |
| Check (control) | -            | 25                                  | 26        | 0         |
| Check (control) | -            | 18                                  | 20        | 0         |

### **ARMY CUTWORM (not a true Armyworm)**

#### **Biology and Seasonal Behavior**

- Adult moths (“miller moths”) migrate from the Rocky Mountains in early fall and deposit eggs into the soil.
- Larvae hatch in the fall, feed until cold weather, and overwinter as partly grown larvae.
- Feeding may resume anytime temperatures exceed 50°F, even during winter warm spells.
- Primary damage occurs in early spring when several consecutive days exceed 50–60°F.

#### **Damage**

Army cutworms can severely thin or eliminate stands of wheat, alfalfa, and rangeland grasses. Army cutworms were present in large numbers in 2020 and decimated areas of wheat fields and alfalfa fields. However, this was not the case in 2021, and only a few were reported in 2022. Army cutworms develop into “miller” moths (Figure 8), which were a nuisance in spring 2024 and a smaller nuisance in spring 2025.

Turkeys often feed heavily on army cutworm larvae, sometimes with crops full of larvae (Figure 11).



**Figure 8. Adult Army cutworm or “miller moth”. Photo by K-State Entomology.**



**Figure 9. Crop damage from Army cutworm. Photo by K-State Entomology.**



**Figure 10. Army cutworm larva. Photo by K-State Entomology.**



**Figure 11. Turkey crop after feeding on army cutworm larvae in a wheat field. Photo by K-State Entomology.**

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### 3. Share Your Input: Digital Ag and AI Survey for Farmers

Are you a Kansas farmer working in row crops, specialty crops, or livestock/ranching? We invite you to share your perspective on Digital Agriculture and Artificial Intelligence (AI) in farming systems by completing a brief survey.

Your survey responses will help identify opportunities, challenges, and resource needs across Kansas as these technologies continue to evolve.

The information collected in this survey is strictly confidential and will be used solely for academic and educational purposes. All responses are anonymous and will not be linked to any individual. We appreciate your participation and collaboration.

The survey takes less than 10 minutes to complete and is open to all producers and growers in Kansas.

Scan the QR code in the flyer below or click the link below to participate:

[https://kstate.qualtrics.com/jfe/form/SV\\_bwoxVYFC5t10Wge?Q\\_CHL=qr](https://kstate.qualtrics.com/jfe/form/SV_bwoxVYFC5t10Wge?Q_CHL=qr)

# ATTENTION FARMERS

## Survey Participants Needed

**Inclusive  
Criteria**

**Anonymous  
Responses**

**10-15 Minutes  
to Complete**



Help us discover the needs in Kansas Digital Ag & AI

If any of the following apply to you,  
you qualify to take our survey:

- Row crop production
- Specialty crop production
- Livestock ranching/operation

**Scan Here**



[https://kstate.qualtrics.com/jfe/form/  
SV\\_bwoxVYFC5t10Wge](https://kstate.qualtrics.com/jfe/form/SV_bwoxVYFC5t10Wge)

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#### 4. Sorghum Connection Launches Second Year of Winter Educational Series

The Sorghum Connection Series, a collaboration between the Kansas Grain Sorghum Commission (KGSC), K-State Research & Extension, and the K-State Department of Plant Pathology, announces its second year of a comprehensive winter educational series focused on enhancing the profitability of sorghum producers across the state.

Following this year's field day events, which welcomed over 120 growers, Sorghum Connection offers an additional series of multiple one-day events across Central and Western Kansas. The events are scheduled for:

- **December 3** at the South Hutchinson Community Building in Hutchinson
- **December 4** at the Buffalo Bill Cultural Center in Oakley
- **December 5** at the Hy-Plains Feedyard in Montezuma

Each event will begin with registration at 9:30 a.m. and will conclude at 2:30 p.m.

Attendees will receive valuable data-driven information from industry leaders from K-State, the United Sorghum Checkoff Program, and many others on key topics for both grain and forage sorghum, including, but not limited to:

- Effectively managing forage sorghum in water-limited silage
- Enhancing sorghum digestibility for cattle
- Integrated weed management
- Strategies for optimum yield and profitability

The program also looks to the future of the sorghum crop system, covering advancements such as the application of spray drones in precision agriculture and highlighting breakthroughs in farmer-directed crop improvement.

There is no cost to attend; however, an RSVP is required. To register or learn more about these events, visit [www.ksgrainsorghum.org/sorghum-connection](http://www.ksgrainsorghum.org/sorghum-connection).



# 2025 SORGHUM CONNECTION WINTER SERIES

Mark your calendars for local winter summits aimed to bring multi-disciplinary, data-driven information to Kansas sorghum producers to help improve on-farm productivity and profitability.



**WEDNESDAY, DECEMBER 3 | HUTCHINSON**  
South Hutchinson Community Center  
101 W. Ave. C, South Hutchinson, KS, 67505

**THURSDAY, DECEMBER 4 | OAKLEY**  
Buffalo Bill Cultural Center  
3083 US-83, Oakley, KS 67748

**FRIDAY, DECEMBER 5 | MONTEZUMA**  
Hy-Plains Feedyard  
7505 US-56, Montezuma, KS, 67867



## REGISTER HERE



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