K-STATE Research and Extension

Pests to Watch Out for in 2026

Anthony Zukoff
Southwest Research and Extension

Knowledge for Life

Kansas Insect Trapping Network

Fall Armyworm

Periodic outbreaks; last one in 2021, 2025 was another KS challenge

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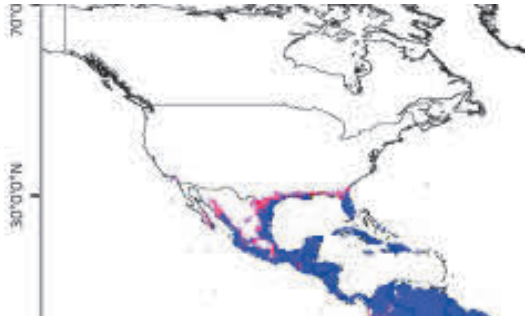
Fall Armyworm

Migratory and cannot overwinter in KS



Time of arrival and population size will vary each year

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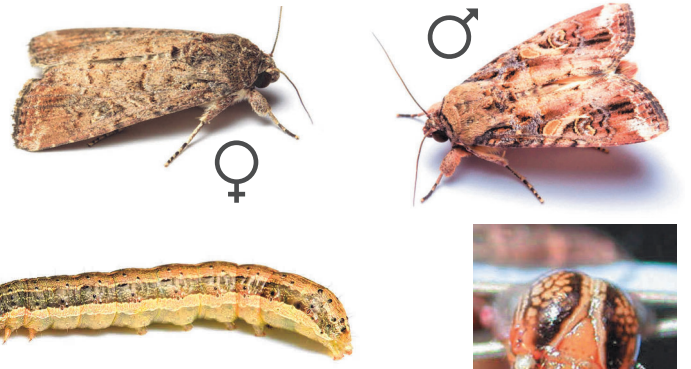

Thickest stripe dark, 4 dark spots at end of abdomen

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Agronomy eUpdates

November 20th, 2025 : Issue 1081 < How Are Winter Canola... Share Your Input:... > Archive Contact

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

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

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

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

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Credit Dr. Jeff Whitworth

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Question 1.

Fall Armyworm can overwinter in Kansas.

True

False

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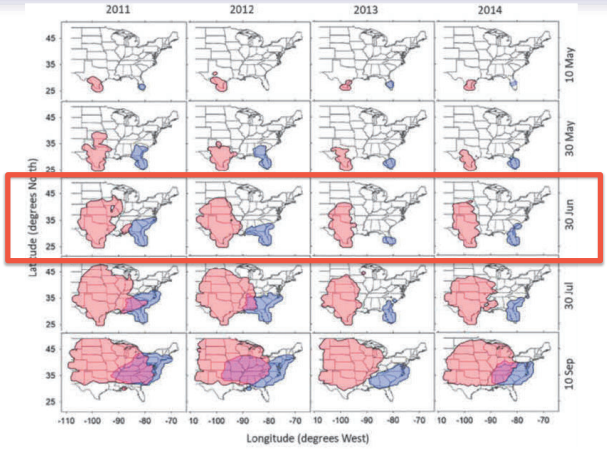
Fall Armyworm



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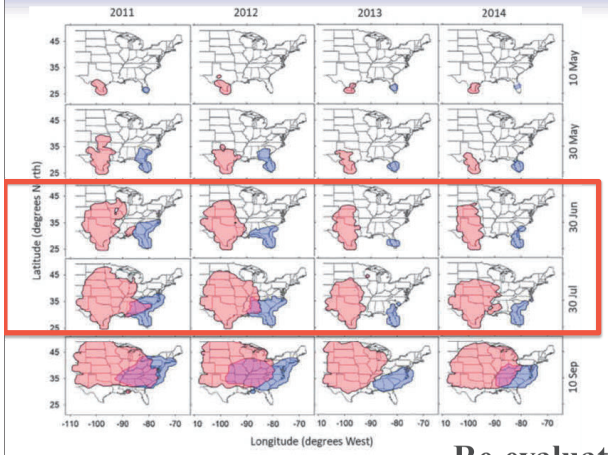
Change on the horizon?



Record number flights in Texas several years in a row

- Reduced Bt efficacy
- Increase in non Bt acres

Weather patterns may be shifting arrival to KS – getting later

Re-evaluate what is at risk and when

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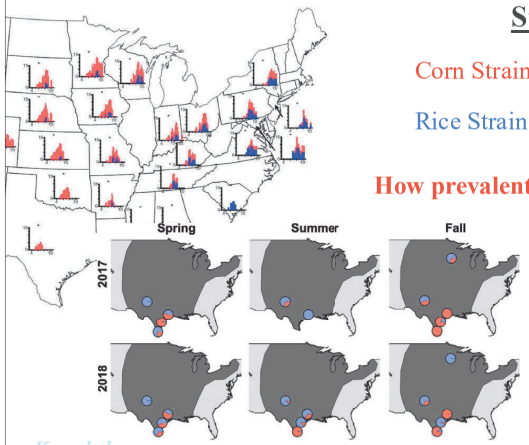
Research Verifies Distinct "Strains"



Strain Matters!

Corn Strain: prefers corn, sorghum, cotton

Rice Strain: prefers hay, pastures, lawns

How prevalent are mixed infestations in the great plains?

If the rice strain becomes more prevalent (driven by changing weather patterns), KS pastures and hay may be at increased risk later in the season

Fall Armyworm

2-3 generations, can be significant foliar pest

Fall Armyworm

Ear drop and lodging from shank/stalk boring

34% yield loss in areas with no control

Fall Armyworm

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Thresholds

Infestations: late summer to early fall

1-2 worms/sq. ft. can destroy seedling alfalfa

10-15 worms/sq. ft. can destroy 12- 14 in. alfalfa

Fields, pastures, lawns:

3 or more worms/sq. ft.

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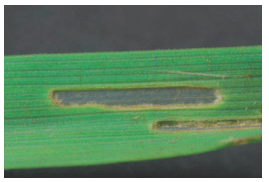
Thresholds



Windowpane Injury

Infestations: late summer to early fall

Early-planted wheat at risk. Scout frequently after emergence!

Fields with **25-30 percent of plants with windowpane injury** should be scouted daily.

Treat immediately if stand establishment appears threatened.

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Thresholds

Sorghum and Corn

Leaf damage not usually a concern

Consider treatment if 75 percent of plants show fresh damage AND there are 1-2 larvae per plant.

Sorghum

5 percent yield loss per worm in milo heads between bloom and milk stage

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Fall Armyworm Management Options**

Insecticide	Rate
Alpha-cypermethrin (Fastac CS)	1.8 to 3.8 fl. oz./acre
Beta-cyfluthrin (Baythroid XL)	0.010 to 0.022 lb. a.i./acre (1.3 to 2.8 fl. oz.)
Chlorantraniliprole (Vantacor)	0.047 to 0.098 lb. a.i./acre (1.2 to 2.5 fl. oz.)
Deltamethrin (Delta Gold)	0.015 to 0.022 lb. a.i./acre (1.3 to 1.9 fl. oz.)
Fawligen	0.5 to 2.0 fl. oz./acre
Gamma-cyhalothrin (Proaxis)	0.01 to 0.015 lb. a.i./acre (2.56 to 3.84 fl. oz.)
Lambda-cyhalothrin (numerous products)	0.02 to 0.03 lb. a.i./acre
Methomyl (Lannate)	0.225 to 0.45 lb. a.i./acre
Metoxyfenozide (Intrepid 2F)	0.06 to 0.19 lb. a.i./acre (4 to 12 fl. oz.)
Spinosad (Blackhawk)	0.038 to 0.075 lb. a.i./acre (1.7 to 3.3 fl. oz.)
Zeta-cypermethrin (Mustang MAXX, Respect EC)	0.011 to 0.025 lb. a.i./acre (1.76 to 4.0 fl. oz.)

Plenty of management options out there

Scouting early and often is critical to achieving control no matter what is used!

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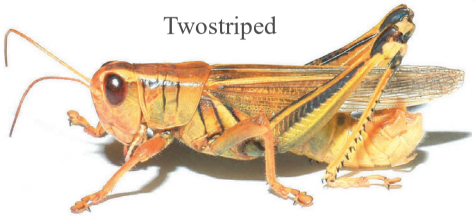
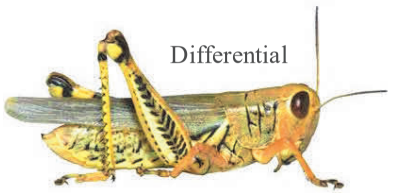
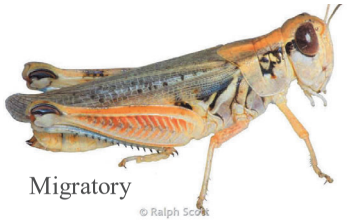
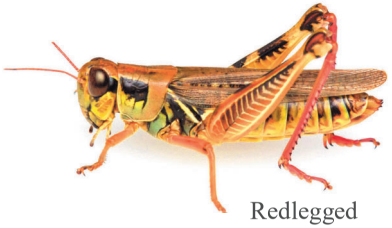
Grasshoppers









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Grasshoppers

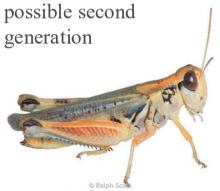
Why are grasshoppers ALWAYS present?

1. Overlap of species' life cycles
2. Duration of egg hatch varies by species (2 to 8 weeks)
3. Time as nymph between 40 and 55 days

Emerges very early over 4 to 6 weeks

Twostriped

3 to 6 week emergence, possible second generation



Migratory

2 week emergence. Fast, synchronous development

Differential

7 to 8 week emergence, nymphs until frost

Redlegged

Spring **Early-Mid Summer**

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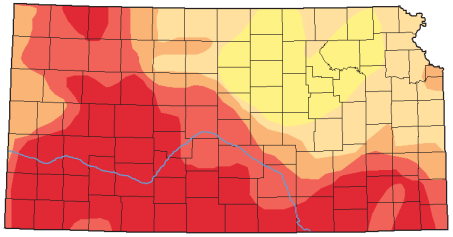
Grasshoppers and Drought

Why do droughts and grasshoppers seem to go hand-in-hand?



Warm spring weather:
1. Better egg hatch
2. More nymphs survive to adulthood

Warm, prolonged fall:
1. Longer adult activity
2. More eggs laid in the landscape

This pattern repeating results in higher populations year-to-year, eventually becoming an outbreak of undetermined length usually overlapping with serious drought conditions

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Grasshoppers and Drought

Weather impacts egg/nymph survival, but also…

Warm, wet spring/fall weather:
Potential for more weeds
Grasshopper Buffet!

Many forbs promote:
1. Higher nymph survival
2. Faster growth
3. Larger adults
4. Increased egg production

Adequate food/conditions can turn a 3/sq yard year into a 30/sq yard year the next!

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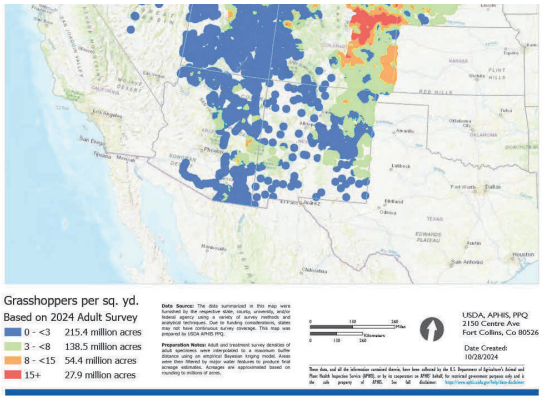
Grasshoppers and 2026

Personal observations end of 2025 around western KS:

notable numbers in areas with weedy forbs, adults active in wheat late October

Spring weather will be important



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Grasshopper Thresholds

or more per square yard

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Question 2.

Grasshopper eggs hatch better during a:

A. Cool, wet spring
B. Warm, dry spring
C. Weather does not matter

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Brown Wheat Mite

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Brown Wheat Mite

Dryland and continuous wheat favor outbreaks

Eggs hatch in the fall, mite activity peaks in early Spring

Active during the day on all leaf surfaces

No webbing, very mobile mites!

Outbreak potential high: all mites are female (up to 90 eggs in 3 weeks, before diapausing eggs)

Brown Wheat Mite Damage

Don't confuse with drought stress

Tip die-back, "scorching"

Stippling

Brown Wheat Mite Control

Trade Name	Chemical Name	Mode of Action Class	Purpose	Rate
Dimethoate	*Dimethoate*	1B	Control	.3-.5 pint/A (.16-.25 lb a.i./A
Besiege	*Lambda-cyhalothrin and chlorantraniliprole*	3A+28	Suppression	10 fl.oz/A
Proaxis	*Gamma-cyhalothrin*	3A	Suppression	3.84 fl.oz/A (.015 lb a.i./A)
Silencer	*Lambda-cyhalothrin*	3A	Suppression	3.84 fl.oz/A (.03 lb a.i./A)
Warrior II with Zeon Technology	*Lambda-cyhalothrin*	3A	Suppression	1.92 fl.oz/A (.03 lb a.i./A)

Threshold not well defined, accurate adult counts difficult

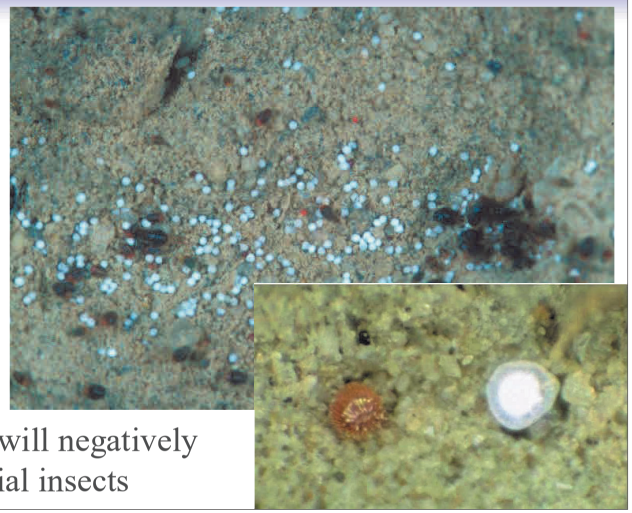
"Several hundred" per foot of row

Chlorpyrifos is again usable

Brown Wheat Mite

To treat or not?

1. Soaking rain forecast?
2. Still early in spring?
3. Do overwintering eggs dominate the field?



**Treatments will negatively impact beneficial insects

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Western Bean Cutworm

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Western Bean Cutworm

Caterpillars enter through silks or chew into ear sheath

- 1 caterpillar/ear is ~4 bushel/acre loss
- Multiple caterpillars/ear can cause 30-40% yield loss
- Mixed infestations with CEW do occur

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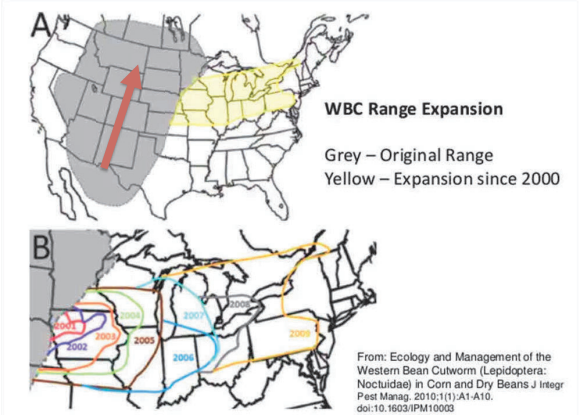
Western Bean Cutworm



WBC Range Expansion

Grey – Original Range
Yellow – Expansion since 2000

From: Ecology and Management of the Western Bean Cutworm (Lepidoptera: Noctuidae) in Corn and Dry Beans J Integr Pest Manag. 2010;1(1):A1-A10. doi:10.1603/IPM10003

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Western Bean Cutworm

1 generation

Scout leaves on upper 1/3 just before/as silks begin to emerge until they turn brown

5-8% plants with eggs or small larvae justifies treatment when field is 95%tasseled

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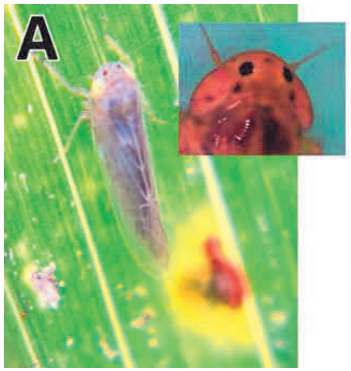
Corn Leafhopper Identification



Magnification required

Recognizing CLH

- "splinter-like" body
- ~1/8" long at maturity
- Tan/yellow, nymphs can be darker
- **2 dark spots between eyes**

*KS specimens will be molecularly ID'd

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Leafhoppers: What are they??

Leafhoppers as agricultural pests is nothing new

Potato leafhopper – significant damage to alfalfa production in KS some years

Beet leafhopper- widespread pest of many produce commodities

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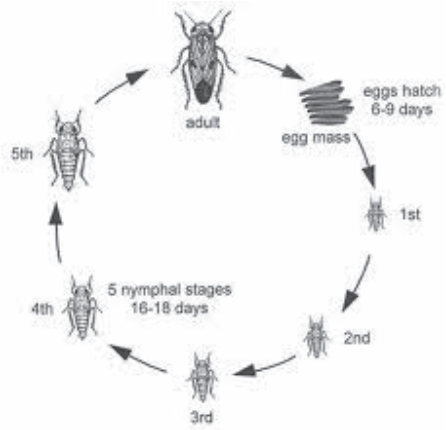
Leafhopper Life Cycle



Incomplete Metamorphosis

- Eggs are laid in the leaves of the host
- Immature leafhoppers resemble adults, but lack wings
- Shed skins as they grow through 5 instars
- All stages cause damage

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Leafhopper Damage

Piercing-sucking Mouthparts

- Liquid diets, plant juices or insect juices
- Beak delivers saliva to aid in digestion/uptake of materials

"Hopper burn"

- Cells destroyed/necrotize
- Photosynthesis reduced
- Young plants die

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Leafhopper Damage

"Honeydew" and Sooty Mold

- Feeding results in excretion of shiny, sticky, sugary waste
- Sooty mold growth prevents photosynthesis
- Many other insects attracted to honeydew – SCOUTING TIP

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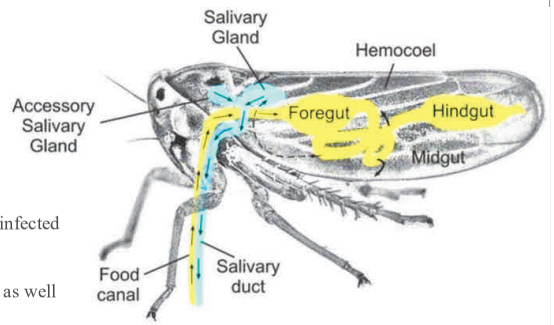
Leafhopper Damage

The most significant risk from some leafhoppers…..

Disease transmission

- Pathogens delivered into plant tissue through saliva of infected leafhoppers
- ~55 plant viruses known to be vectored by leafhoppers as well as various bacteria



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Question 3.

The biggest risk posed by corn leaf hopper is:

A. Hopper burn
B. Sooty mildew
C. Disease transmission

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Corn Leafhopper Identification

Behavior

- Prefer undersides of leaves/shaded areas
- Easily blends in
- Very skittish at slight disturbance
- Often first noticed as white flecks in air as plants are disturbed

Corn leaf midrib for scale

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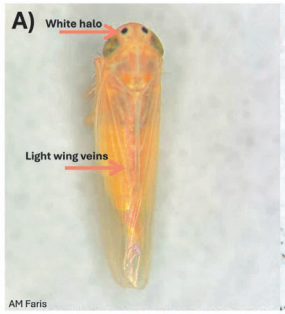
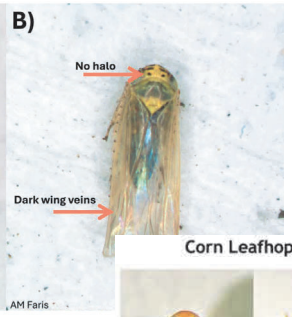
A Common Look-alike

Aster leaf hopper





Corn Leafhopper

Aster Leafhopper

Magnification required

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Management Options

How to deal with this potential new pest?

Kansas has no formally tested management recommendations, but based on other regions' experiences:

1. Resistant Varieties? Research needed, anecdotal evidence
2. Plant as early as possible. Infection after V8 less concerning
3. Insecticides? Southern latitudes suggest use during emergence through V8. Multiple waves, multiple applications.
4. Control alternate hosts: volunteer corn (reproduction host), johnson grass (weedy overwintering host)

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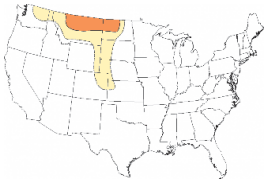
Wheat Stem Sawfly



Native wasp that usually targeted native grasses

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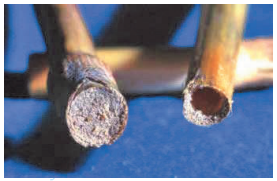
Wheat Stem Sawfly



Stem girdling by larvae that overwinter

Unexplained lodging?
Let us know!

Wheat Stem Sawfly

Control Options?

1. Tillage/fire – minimally effective, not for severe infestations
2. Increasing distance between infested fields and new plantings
3. Planting date: early/later may avoid peak sawfly adult activity
4. Variety Selection! Solid/semi-solid stems

Chemical control not recommended. Larvae are protected and adults emerge over a period of weeks.

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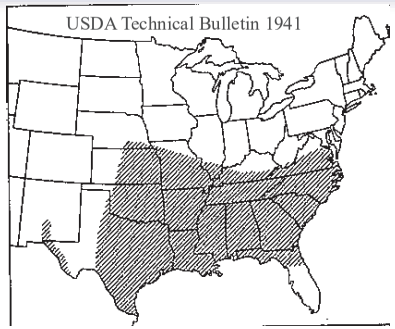
Sorghum Midge

Sorghum Midge



Historically considered infrequent pest of southeast KS

Beginning around 2017-significant, sporadic outbreaks in southwest KS (likely has been an issue for longer; cryptic)

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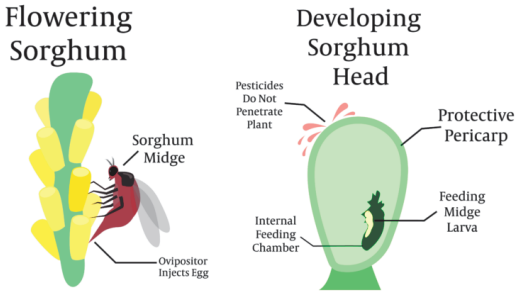
Sorghum Midge



Females can lay up to 100 eggs, live 24-48 hours

Males live only a few hours

Egg to adult in 10-18 days

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Sorghum Midge

Begin scouting (mid morning) as soon as sorghum begins flowering!

Once anthers are orange, they are already infested or safe

Daily scouting required

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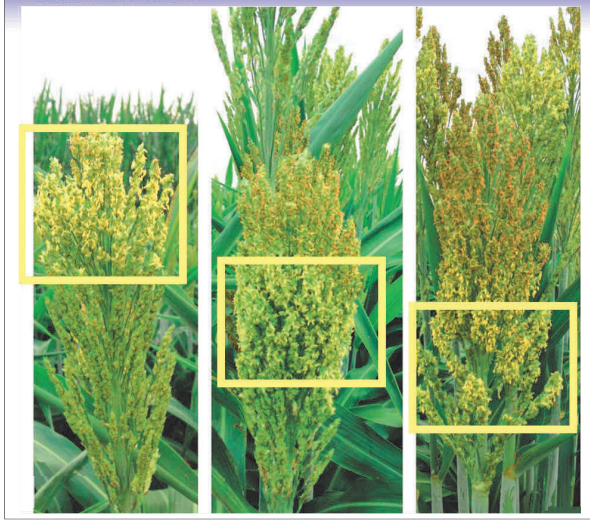
Sorghum Midge



Threshold

25-30% of heads are blooming and there is 1 or more midge per head

Follow up application may be needed 4-5 days later

Heads are at risk as blooms open from the top down

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Sorghum Midge

Control

Chemical:

Dimethoate, various pyrethroids
More than 1 application will be needed; can flair aphids.

Cultural:

- Control Johnson grass
- Plant uniformly and early!
- Generally, avoid flowering in mid-late August

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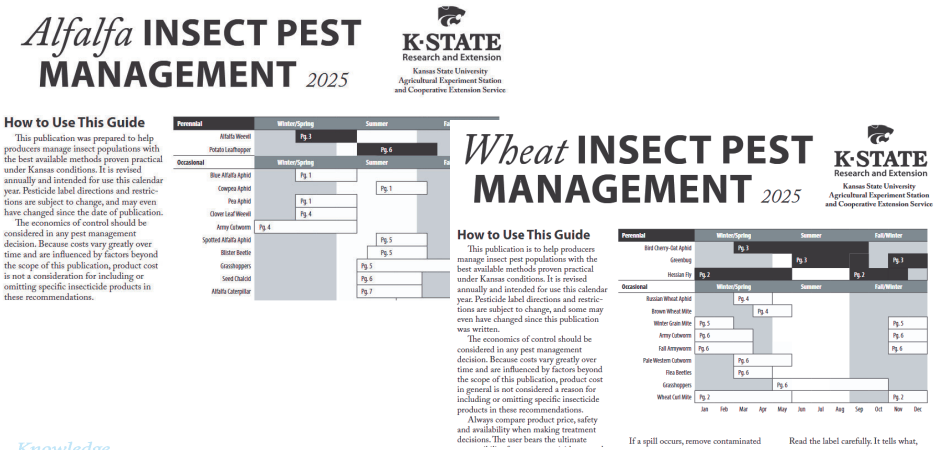

Alfalfa INSECT PEST MANAGEMENT 2025

K-STATE Research and Extension
Kansas State University Agricultural Experiment Station and Cooperative Extension Service

How to Use This Guide

This publication was prepared to help producers manage insect populations with the best available methods proven practical under Kansas conditions. It is revised annually and intended for use this calendar year. Pesticide label directions and restrictions are subject to change, and may even have changed since the date of publication.

The economics of control should be considered in any pest management decision. Because costs vary greatly over time and are influenced by factors beyond the scope of this publication, product cost is not a consideration for including or omitting specific insecticide products in these recommendations.

Wheat INSECT PEST MANAGEMENT 2025

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Always compare product price, safety and availability when making treatment decisions. The user bears the ultimate

If a spill occurs, remove contaminated

Read the label carefully. It tells what,

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What pests are bothering you?

Anthony Zukoff

Southwest Research
and Extension Center
Garden City, KS
620-275-9164
azukoff@ksu.edu
@westksbugs

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