

PAWNEE COUNTY EXTENSION AG NEWS

Vol I Issue IV

July 2016

Grub Control in Lawns

If you plan on using a grub preventative on your lawn, the first half of July is a good target date for most products. Preventatives are normally used on areas that have had a history of grub problems.

Traditional grub insecticides such as Dylox or carbaryl (Sevin) are normally applied in late July after grubs are present or as a rescue treatment once damage is seen. Products that contain Merit (imidacloprid) are considered grub preventers. Actually, these products do not prevent grubs, but rather kill grubs when they are quite small, and long before they cause damage. Merit is safer to use around pets and humans than traditional grub killers. Merit can be found in Bayer's Season-Long Grub Control, Grub No-More, and Grub Free Zone.

Another grub preventer with the trade name GrubEx contains chlorantraniliprole. Though this product is very effective, it is less water soluble than imidacloprid. It should be applied earlier, preferably April or May, but applications through June should still be effective. Remember, all grub products should be watered in soon after application. (Ward Upham)

"Here's how I'm going to beat you. I'm going to outwork you. That's it. That's all there is to it."

- Pat Summitt



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Pawnee County Wheat Plot Variety Tour

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*M= Most Resistant, MR= Moderately Resistant, MS= Moderately Susceptible, S= Susceptible,
R= Resistant, I= Intermediate*

<u>Variety Description</u>	<u>Barley Yellow Dwarf</u>	<u>Hessian Fly</u>	<u>Leaf Rust</u>	<u>Stripe Rust</u>	<u>Wheat Streak Mosaic</u>	<u>Maturity</u>	<u>Winterhardiness</u>
BRAWL CL+ Developed by: Colorado State University Pedigree: Above, Canadian Clearfield Year of Release: 2011	MS	S	I	MS	S	Medium Early	N/A
BYRD Developed by: Colorado State University Pedigree: TAM 112, Ike, Halt Year of Release: 2011	MS	S	MS	S	MS	Medium	N/A
DOUBLESTOP CL+ Developed by: Oklahoma State University Pedigree: Mason, Jagger, 2174, TAM 110, Intrada Year of Release: 2013	MS	I	I	I	MS	Medium Late	Very Good
KANMARK Developed by: Kansas State University Pedigree: CUMMYT, WestBred line, Karl 92 Year of Release: 2014	MS	S	R	R	MS	Medium	Very Good
LCS Mint Developed by: Colorado State University Pedigree: N/A Year of Release: 2012	MS	S	S	I	I	Medium	Average
LCS Wizard Developed by: Limagrain Cereal Seeds (LCS) Pedigree: Pioneer germplasm Year of Release: 2013	I	R	MS	S	S	Medium	Below Aver- age
SY Monument Developed by: AgriPro Pedigree: AgriPro experimentals Year of Release: 2014	I	S	MR	R	MS	Medium Late	Very Good
SY Sunrise Developed by: AgriPro Pedigree: CDC Falcon, experimentals Year of Release: 2015	I	S	I	MR	I	Medium Late	Good
T158 Developed by: Limagrain Cereal Seeds (LCS) Pedigree: T81, KS93U206 exp. Year of Release: 2009	MS	MS	MS	S	I	Medium Early	Excellent
WB4458 Developed by: WestBred Pedigree: Overley, WestBred exp. Year of Release: 2013	I	MS	I	I	MS	Medium	Very Good
WB CEDAR Developed by: WestBred Pedigree: TAM 302, exp. with 2180 Year of Release: 2011	MS	MS	MR	MR	MS	Early	Good

Wheat Plot Variety Tour Results

A special thank you to John Converse and Scott Loomis for supplying the plot!

Row	Variety	Moisture	Tstwgth	Weight	Plot Length	Corrected	
						Yield to 12%	Place
1	Brawl CL	10.5	61.3	1365	296	92.99	2nd
2	Byrd	10.7	60.1	1350	296	91.97	
3	Cedar	10.5	61.3	1195	296	81.42	
4	Double Stop CL	10.4	62.8	1210	296	82.44	
5	Kan Mark	10.2	61.6	1290	296	87.88	
6	Mint	10.4	61.3	1375	296	93.68	1st
7	SY Monument	10.2	60.5	1240	296	84.48	
8	SY Sinrise	10.1	61.2	1255	296	85.50	
9	Wizard	10.2	60.5	1265	296	86.18	
10	T 158	10.1	61.8	1340	296	91.29	3rd
11	WB 4458	10.2	60.4	1210	296	82.44	

Bagworms are Back!

It is the time of year you have all been waiting for, that is, dealing with that “infamous” of insect pests known as the bagworm (*Thyridopteryx ephemeraeformis*). Throughout Kansas, bagworm eggs have hatched and the young caterpillars (‘munching machines’) are out-and-about feeding on both broadleaf and evergreen trees and shrubs. Bagworms were first considered a pest of conifers but over the years they have expanded their host range to include a number of broadleaf plants, including: rose, honeylocust, and flowering plum. So, what is the best way to deal with bagworm caterpillars and thus prevent them from causing damage? Hand-picking any small caterpillars (along with their accompanying bag) and placing them into a container of soapy water will kill them directly. This practice, if feasible, will quickly remove populations before they can cause substantial plant damage. I recommend that everyone should consider having a weekend “bagworm hand-picking party.”

For those less interested in hand-picking, there are a number of insecticides labeled for use against bagworms including those with the following active ingredients (trade name in parentheses): acephate (Orthene), *Bacillus thuringiensis* subsp. *kurstaki* (Dipel/Thuricide), cyfluthrin (Tempo), lambda-cyhalothrin (Scimitar), trichlorfon (Dylox), indoxacarb (Provaunt), chlorantraniliprole (Acelepryn), and spinosad (Conserve). Many of these active ingredients are commercially available and sold under different trade names or as generic products. However, several insecticides may not be directly available to homeowners. The key to dealing with bagworms when using insecticides is to apply early and frequently enough in order to kill the highly susceptible young caterpillars that are feeding aggressively on plant foliage.

Older caterpillars that develop later in the season, in the bags, are typically more difficult to kill with insecticides. In addition, females feed less as they prepare for reproduction; thus, reducing their susceptibility to spray applications and any residue. The bacterium *Bacillus thuringiensis* subsp. *kurstaki* is active on young caterpillars; however, the active ingredient must be consumed to be effective, so thorough coverage of all plant parts and frequent applications are required to avoid having to deal with later life stages.

This compound is sensitive to ultra-violet light degradation and rainfall, which reduces residual activity. Spinosad is the active ingredient in a number of homeowner products, including: Borer, Bagworm, Tent Caterpillar & Leafminer Spray; Captain Jack’s DeadBug Brew; and Monterey Garden Insect Spray. These products work by contact and ingestion (stomach poison) although they are most effective when ingested and can be used against older or larger bagworm caterpillars.

Cyfluthrin, lambda-cyhalothrin, trichlorfon, chlorantraniliprole, and indoxacarb may be used against both the young and the older caterpillars. However, thorough coverage of a plant parts, especially the tops of trees and shrubs, where bagworms commonly start feeding, and frequent applications are required. The reason why multiple applications will be needed when bagworms are first detected is because bagworms “blow in” (called ‘ballooning’) from neighboring plants. If left unchecked, bagworms can cause significant damage, thus ruining the aesthetic quality of plants. In addition, they may actually kill plants, especially evergreens since they do not usually produce another flush of growth, and newly transplanted small plants.

(Raymond Cloyd)

The Time to Make Decisions for Fungicide Management of Gray Leaf Spot is Rapidly Approaching

Tasseling has already begun in southeast Kansas and a few early planted fields in the south central part of the state. Over the next few weeks, corn in the rest of the state will be at the critical juncture for making fungicide application decisions for gray leaf spot management. Gray leaf spot has already been found on corn this year in Pottawatomie and Harvey counties when the corn was only in the V7 – V8 stage of development. In Harvey County, the levels were well above what you would expect to find at that stage of development.

Years of fungicide application research clearly demonstrates that the single best time to apply a fungicide to corn for gray leaf spot control is from VT to R1. A single application at V7 – V8 will not hold up against late season pressure and those who choose to put a fungicide down with the last herbicide treatment will most likely have to apply second cover at VT – R1 if there is any gray leaf spot pressure at all.

University fungicide trials also reveal that final disease severity plays a critical role in the magnitude and consistency of yield response to a foliar fungicide application. The tricky part is being able to predict before the VT to R1 stages what the disease pressure will be several weeks later. To make such a prediction, you need to consider “disease risk factors” and to scout for disease.

Disease risk factors include:

Susceptibility level of corn hybrid. Seed companies typically provide information on the susceptibility of their hybrids to gray leaf spot in their catalogs. In general, hybrids that are more susceptible to fungal foliar diseases will have a greater response to a foliar fungicide (if disease pressure is high enough).

Previous crop. Because gray leaf spot survives in corn residue, the risk of disease increases when corn is planted back into a field that was in corn the previous year.

Weather. Rainy and/or humid weather generally is most favorable to gray leaf spot. In growing seasons when these conditions prevail, the risk for disease development increases.

Field history. Some field locations may have a history of high foliar disease severity. Fields in river bottoms or low areas or surrounded by trees may be more prone to having gray leaf spot.

Begin scouting for gray leaf spot in corn about two weeks before expected tassel emergence. Gray leaf spot is characterized by rectangular lesions that are 1-2” in length and cover the entire area between the leaf veins. Early lesions are small, necrotic spots with yellow halos that gradually expand to full-sized lesions. Lesions are usually tan in color but may turn gray during foggy or rainy conditions. The key diagnostic feature is that the lesions are usually very rectangular in shape.

Current disease management guidelines suggest the following criteria for considering an application of foliar fungicide: For susceptible hybrids (those with the lowest rating within a company’s line-up): If disease symptoms are present on the third leaf below the ear or higher on 50 percent of the plants examined.

For intermediate hybrids (those with an average rating within a company’s line-up): If disease symptoms are present on the third leaf below the ear or higher on 50 percent of the plants examined, if the field is in an area with a history of foliar disease problems, if the previous crop was corn, if there is 35 percent or more surface residue, and if the weather is warm and humid.

For resistant hybrids (those with the best rating within a company’s line-up): Fungicide applications generally are not recommended.

According to the data from Illinois corn fungicide trials, if at least 5 percent of the ear leaf area is affected by disease at the end of the season, a foliar fungicide applied between VT and R1 would likely have been beneficial. Using the disease risk factors and scouting observations collected just before tassel emergence will help you predict how severe disease may be several weeks after the VT to R1 stages, and help you decide whether to apply a foliar fungicide.

Doug Jardine, Plant Pathology

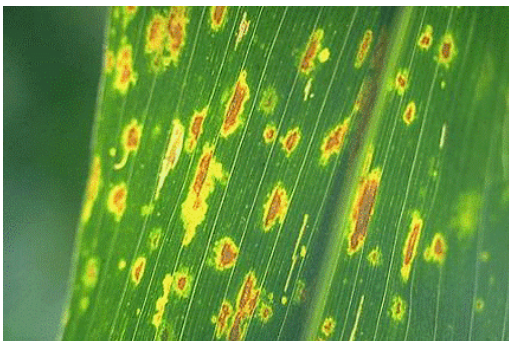


Figure 1. Early development of gray leaf spot lesions showing a distinct yellow halo. Photo courtesy of Doug Jardine, K-State Research and Extension.



Figure 2. Gray leaf spot on V7 corn in Harvey County, mid-June 2016. Photo by Doug Jardine, K-State Research and Extension.

Agricultural Mobile Apps– Part 3

The KSUCROPS Crop Production team and K-State Department of Agronomy is compiling lists of useful mobile apps. This list provides a review and updates of some of the current apps available. These apps can often help you make quick decision in the field from planting to harvest operations, however please be aware that specific information may vary depending on the soil types, yield potential, and environments.

NOTE: These apps are all available as of the time this article is published. Alterations or changes in availability could occur, affecting the ability to access these apps. For a more complete list and direct links to download these apps will be available at <http://www.pawnee.k-state.edu/crops-livestock/index.html>.

For this series of articles, we have grouped Ag-Apps into the following 10 classifications:

ID Apps: For identification purposes (weeds, insects, diseases, and nutrients)

CALC Apps: For calculating purposes (nutrient removal calculations, tank mixes, volume to spray, etc.)

SCOUT Apps: For scouting purposes or for geo-positioning (soil sampling, recording notes, soil types, etc.).

ECON Apps: For checking grain prices, market evolutions, fertilizer price trends, news and finances.

FIELD GUIDE Apps: For diagnosing crop production issues in the field, primarily related to field guides (crop management: insect, disease, weed, and more).

LIVESTOCK Apps: Apps related to the animal side, nutrition, health, and information on markets.

IRRIGATION Apps: Apps related to field crop irrigation and water application.


MACHINERY Apps: Apps for associated with agricultural equipment preparation, inventory, providing information of the machine.



GAG Apps: GAG (general Ag-Apps) for general use, weather-related, for meetings, for reading magazines, among several other Apps' properties.

NON-AG Apps: For general use from e-readers to calculators, email, calendar, picture editing, and more.

MACHINERY APPS


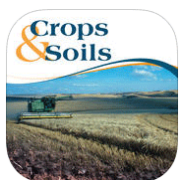

(ag equipment preparation, inventory, etc.)

Name of App and Source	Brief Description and cost	Available Downloads
Machinery Sizing  K-State Research and Extension	Quickly estimate tractor horsepower needed to pull various implements. Select ground and soil conditions, tractor type, pulling speed, working depth, and size of the implement. FREE	Android




Name of App and Source	Brief Description and cost	Available Downloads
<p>TractorHouse</p>  <p>Sandhills Publishing</p>	<p>This app features thousands of listings from hundreds of dealers through North America. It lets you drill down instantly to the equipment category, make, and model.</p> <p>FREE</p>	<p>iOS</p> <p>Android</p>
<p>AgCommand</p>  <p>AGCO Corporation</p>	<p>This app allows you to monitor your fleet from anywhere, at any time.</p> <p>FREE</p>	<p>iOS</p>

GENERAL AG APPS

(for general use, weather-related, meetings, etc.)

Name of App and Source	Brief Description and cost	Available Downloads
<p>Vrain</p>  <p>Visualnacet S.L.</p>	<p>Vrain is a useful app for providing the weather forecast and accumulated rainfall collected in your field.</p> <p>FREE</p>	<p>iOS</p>
<p>Crops & Soils magazine</p>  <p>Alliance of Crop Soil & Environmental Sci. Soc., Inc.</p>	<p>This app provides a simple view of the “Crops & Soils” magazine for certified crop advisers, agronomists, and soil scientists working in the agricultural discipline.</p> <p>FREE</p>	<p>iOS</p>
<p>Pioneer GrowingPoint</p>  <p>DuPont Pioneer</p>	<p>This app provides agronomy information in a synthesized approach. You can access hundreds of agronomy articles and photos from DuPont Pioneer.</p> <p>FREE</p>	<p>iOS</p> <p>Android</p>

(general use, calculators, calendars, etc.)

Name of App and Source	Brief Description and cost	Available Downloads
Evernote 	With this app write notes, checklists, and research; clip from anywhere on the web. Check PDF documents and edit, highlight the text. FREE	iOS Android
CamScanner  INTSIG Information Co., Ltd University of Nebraska-Lincoln	This app allows you to scan any document, transfer text from scanned images to documents, and more. FREE	iOS Android
Dropbox 	Dropbox is the place for your photos, docs, videos, and other files. Files you keep in Dropbox are safely backed up and you can get to them from all your devices. FREE	iOS Android

Kansas Beef Facts

Source: Kansas Beef Council, National Ag Statistics, & KDA

- ◆ Kansas ranked third nationally with 6.25 million cattle on ranches and in feedyards as of January 1, 2016. That's over twice the state's human population of more than 2.9 million.
- ◆ Cattle and calves represented 54.1% of the 2014 Kansas agricultural cash receipts.
- ◆ Kansas ranks second nationwide in commercial cattle processed with 5.9 million head in 2014.
- ◆ Meat packing and prepared meat products manufacturing make up the largest share of the food processing industry in the state. This industry provides employment for over 18,799 people in Kansas.
- ◆ Kansas ranks fourth in hides and skins exported from the U.S., totaling \$285.9 million in 2013.
- ◆ Kansas has 46 million acres of farm ground; however, not all of this land can be used to grow crops. Cattle are the ideal mechanism for efficiently utilizing grasses and plants growing on the 15.5 million acres of Kansas pastureland. These acres are not suited for the production of cultivated crops and would be wasted if it were not for ruminants, such as cattle, turning these resources into essential protein and nutrients for human use.

Because of the excessively wet weather in May, among other reasons, many fields of wheat stubble in Kansas have rather large broadleaf and grassy weeds actively growing at this time. Also, where there was extensive hail damage, weeds may be growing quickly now in bare areas of the fields. These weeds are utilizing moisture and nutrients that would be available for a subsequent crop. It is a good idea to control these weeds while there is moisture and active growth, and before they set seed.

Kochia and Russian thistle are daylength sensitive and will begin to flower toward the end of July and into August, thus will need to be controlled before then. Controlling kochia and Russian thistle by mid-July is very important to prevent seed production.

Weeds growing now in wheat stubble fields, without crop competition, set ample seed -- which will result in weed problems for the following crops. It is especially important to prevent seed production from happening on fields that will be planted to crops with limited options for weed control, such as grain sorghum, sunflower, or annual forages. It is especially difficult to control broadleaf weeds in sunflower and grassy weeds in sorghum or annual forages when the weeds emerge after crop emergence. Preventing weed seed production ahead of these crops is essential. Seed of some weed species can remain viable for several years, so allowing weeds to produce seed can create weed problems for multiple years.

If the field will be planted to Roundup Ready corn or soybeans, producers may decide they can just wait and not control the weeds, allowing weed seeds to form and assuming the weeds that emerge next season can be controlled with a postemergence application of glyphosate in the corn or soybeans. However, with the increasing concerns over the development of glyphosate-resistant weeds, kochia, Palmer amaranth, and waterhemp, it would be far better to control these weeds now in wheat stubble. That way, herbicides with a different mode of action can be tank-mixed with glyphosate, or burndown herbicides other than glyphosate may be used to ensure adequate control of glyphosate-resistant weeds.

To control weeds in wheat stubble fields, producers should start by applying the full labeled rate of glyphosate with the proper rate of ammonium sulfate additive. As mentioned, it is also a good idea to add 2,4-D or dicamba (unless there is cotton or other susceptible crops in the area) to the glyphosate. Do not apply growth regulator herbicides around cotton. Tank mixes of glyphosate and either 2,4-D or dicamba will help control weeds that are difficult to control with glyphosate alone, and will help reduce the chances of developing glyphosate-resistant weed populations.

Often tankmixes of dicamba or 2,4-D with glyphosate may not perform well if pigweed populations are glyphosate-resistant or if the weeds are growing under the kind of dry conditions we can experience in Kansas. If weeds are glyphosate-resistant or growing under drought stress, a tankmix of Gramoxone with atrazine or metribuzin (triazines are synergistic with Gramoxone), or Gramoxone with Sharpen, have been a more effective treatment than either a glyphosate/dicamba or glyphosate/2,4-D tankmix.

If wheat is to be planted this fall, **do not** use atrazine or metribuzin in the tankmix. We observed significant injury to wheat in the spring of 2015 following a July 2014 application of 3/8 lb ai metribuzin tankmixed with Gramoxone (Figure 1). Perhaps utilizing Sharpen would be a safer and better option if the field is to be returned to wheat. Sharpen can be used in other tank mixtures and could help control glyphosate-resistant kochia.

Several have asked about the addition of atrazine for residual weed control in fallow. Although atrazine provides residual control of weeds, it is best applied later in the fall (November). At this time of year, atrazine residual is quite short and will not provide adequate control of fall-emerged weeds/winter annuals. An application of atrazine needs to be made in the fall (mid-October through November), depending on the weeds being targeted. Also, keep in mind that atrazine antagonizes glyphosate -- just the opposite of the synergistic effect of atrazine and Gramoxone. Do not apply atrazine with reduced rates of glyphosate.

Curtis Thompson, Extension Agronomy State Leader and Weed Management Specialist

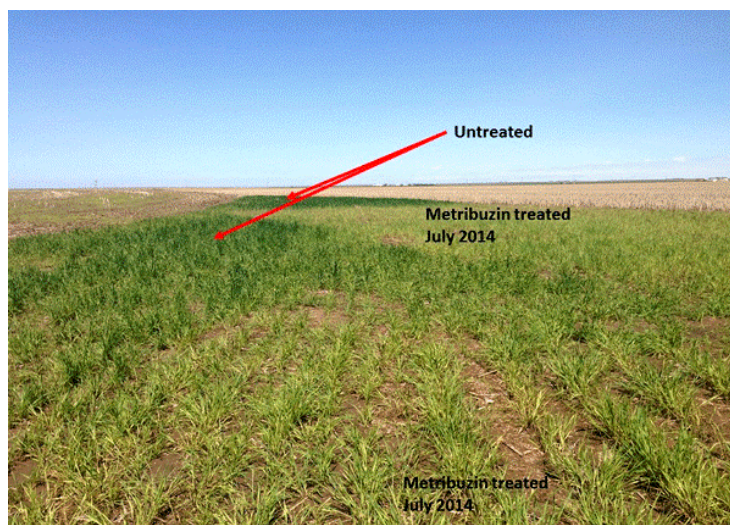


Figure 1. Metribuzin applied with Gramoxone on fallow July 2014. Wheat planted October 2014 and injury observed only during the spring (untreated areas are greener). Photo by Curtis Thompson, K-State Research and Extension.

Free publications available in the office

-2016 Chemical Weed Control

-2015 Kansas Performance Tests with Grain Sorghum Hybrids

-2015 Kansas Performance Tests with Corn Hybrids

-2015 Kansas Performance Tests with Winter Wheat Varieties

-2015 Kansas Performance Tests with Soybean Varieties

-Kansas Wheat Commission 2015 Recipe Book



Calendar of Events

July

12th: Excel Spreadsheet Workshop– budgeting/ payments/ economics, LaCrosse, RSVP by July 8 to 785-222-2615

27-30th: Pawnee County Fair

August

2-4th: Kansas Mid & Short Grass Range School, Scott County, register at KGLC.org or call 785-452-0780 by July 22nd

15th or 16th (tentatively): Kansas Livestock Association Field Day, Larned, visit KLA.org once official

18-19th: Risk & Profit Conference, Manhattan, Pre-registration deadline is Aug 12th

30th: Anaplasmosis and Johne's Disease Educational Meeting with Dr. Gregg Hanzlicek, Larned

September

9-18th: Kansas State Fair

October

4th: Ag Lenders Conference, Garden City, Pre-registration deadline is Sept 30th

5th: Ag Lender Conference, Manhattan, Pre-registration deadline is Sept 30th

Bovine Disease Update

Dr. Gregg Hanzlicek (KSU Veterinary Diagnostic Laboratory) will be visiting Larned on Tuesday, August 30th to discuss current topics of disease in cattle. This will include anaplasmosis and Johne's disease. Please thank the following sponsors for providing the dinner at 6:30 PM: Bayer, Temple Tag, Zoetis, Boehringer Ingelheim, SarTec. This is a cooperative meeting between the Larned Veterinary Clinic and Pawnee County Extension. Information will follow regarding a RSVP date in August, but it is never too soon to reserve your seat!

The Extension Office is open from 8:30 a.m. to 12:00 noon and 1:00-5:00 p.m. The office will “normally” be closed over the noon hour. However, we realize these hours may not coincide with everyone’s schedules. Give us a call and we will do our best to work with your schedule.

Sincerely,
Shannon Rogge
County Extension Agent,
Agriculture and Natural Resources

Kansas State University Agricultural Experiment Station and Cooperative Extension Service is committed to making its services, activities, and programs accessible to all participants. If you have special requirements due to a physical, vision, or hearing disability, or dietary restriction, please contact the Pawnee County Extension Office at 620-285-6901 or pn@ksre.ksu.edu. K-State Research and Extension is an equal opportunity Employer.

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