

# Agriculture

## CENTRAL KANSAS EXTENSION DISTRICT NEWS

[centralkansas.ksu.edu](http://centralkansas.ksu.edu)

**August 2019**

### Upcoming Events

#### August

- 29 KSU Regional Farm Bill Meeting, Great Bend

#### September

- 3 Tallgrass Summer Mgmt. Tour, Eureka
- 6-8 Kansas Prescribed Fire School, Rock Springs
- 6-15 Kansas State Fair, Hutchinson
- 10 KSU Regional Farm Bill Meeting, Concordia
- 13 Ag Law & Agribusiness Symposium, Hutchinson
- 18 CKD Farm Bill Meeting, Minneapolis
- 19 KSU Beef Stocker Field Day, Manhattan
- 19 CKD Farm Bill Meeting, Salina

#### October

- 9 KSU Ag Lenders Conference, Manhattan
- 31 Kansas Crop Insurance Workshop, Salina

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Research and Extension

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### 20<sup>th</sup> Annual KSU Beef Stocker Field Day

Date: Thursday, September 19  
 Time: 9:30 AM  
 Location: K-State Beef Stocker Unit  
 4330 Marlatt Ave, Manhattan, KS



The 20<sup>th</sup> annual Beef Stocker Field Day starts with registration and coffee at 9:30 a.m. and the program at 10:15 a.m. Attendees will have a chance to win door prizes, including a fishing trip, ATV sprayers and more. Topics for this year's agenda include:

**Beef Cattle Market Outlook** - Glynn Tonsor, KSU Agricultural Economist

**Changing Industry Structure is Forging a Closer Relationship Between Grow Yards and Feeders** - Don Close, Rabo AgriFinance

**Internal Parasite Management** - David Pugh, Southern Traxx Veterinary

**Humane Euthanasia Practices** - AJ Tarpoff, KSU Extension Beef Veterinarian

**BeefBasis: Better Information for Better Marketing Decisions** - Brett Cosby, Custom Ag Solutions

**Health Management of High Risk Calves** - Dan Thomson, KSU College of Veterinary Medicine

**Panel Discussion: Beef Parasite Control**

Niman Ranch will provide a CAB Natural prime ribeye lunch and the day will conclude with the popular "Cutting Bull's Lament" featuring prairie oysters and Call Hall ice cream.

This year's event is sponsored by Bayer Animal Health. The pre-registration fee is \$25, if paid by Tuesday, September 10. More information and online registration is available at [www.ksubeef.org](http://www.ksubeef.org). Registration forms are also available at both CKD Extension Offices.

## Farm Bill Update Meetings

The 2018 Farm Bill was passed back in December. Though it has much in common with the previous bill, there are some significant differences.

There are several in-depth meetings being held across the state to cover the new provisions of the programs, economics to consider when making a decision, SCO, changes in crop insurance and the new selection tool for producers to use.

To find dates and locations, go to: <http://agmanager.info/events/k-state-2018-farm-bill-meetings>

Local county-specific sessions are scheduled for the Central Kansas District as follows:

### Ottawa County

Date: Wednesday, September 18  
Time: 9:00 AM  
Location: Ottawa County Courthouse  
Basement Meeting Room  
307 N Concord, Minneapolis

### Saline County

Date: Thursday, September 19  
Time: 7:00 PM  
Location: KSU Polytechnic Campus  
College Center Conf. Room  
2310 Centennial, Salina

These are also free to producers and you can attend either or both of the sessions, even if it's not your administrative county.

For more information, please contact your local FSA office or either of the CKD Extension Offices.

## “Coffee Shop” Talks: Forage Testing

Date: Tuesday, September 24

Morning: 9:00 AM  
RFD #2 Fire Station  
697 E. Mentor Rd. Mentor

Afternoon: 1:00 PM  
Ottawa County Courthouse  
307 N. Concord, Minneapolis

Ever wonder how accurate the results are when you send in a sample of hay or silage? Do you really understand what all the jargon on that sheet of paper means or how to use the information you get back?

Join us for one or both “coffee shop” talks that will answer these questions and many others.

Topics of discussion:

- Why even sample forages at all?
- Using proper sampling protocols
- What test(s) should I order?
- Comparison of Wet-Chemistry vs. NIRS
- How to interpret and use your results

Presenters:

- Cade Rensink, CKD Livestock Production Agent
- Dr. Justin Waggoner, KSRE Beef Systems Specialist

Meetings are free to attend, but we ask that you please **let us know if you're planning to come by Friday, September 20.**

To register or for more information, call (785) 392-2147 or email [crensink@ksu.edu](mailto:crensink@ksu.edu).



## Dealing with wet hay: Part 1

The vast majority of alfalfa growers in the district suffered some rain damage to hay this summer, especially in the first two cuttings. Even our brome and prairie hay producers have had to deal with delayed harvest and wet windrows recently. It's no secret that it's been tough to get harvested forages put up correctly this year. So, as we get closer to fall, we need to be mindful of several items as they relate to hay handling, quality and animal response. Over the next few months, we'll talk about some things to consider as we start utilizing our varied hay supplies as the growing season comes to an end.

To back up for a moment, a number of growers called in this year wanting to know just how much rain affects mowed hay. As a rule of thumb, one inch of rain typically leaches 10% of the nutrients out of hay. High quality hay has higher losses than low quality because it contains more soluble nutrients. Rain also causes leaf shatter. This may be as low as 5% of the yield, but hay turned after being rained on may lose up to 15% from leaf shatter.

There were many strategies employed this year in an attempt to minimize rain damage; all involved reducing field exposure time. Encouraging rapid dry down was one meth-

od. Practices like spreading out windrows as wide as possible, chemical or mechanical conditioning, and timely raking helped reduce field exposure anywhere from one-half to two days.

Another effective strategy was harvesting at higher moisture levels. Chopping the first cutting of alfalfa (which was actually two cuttings in one) for silage was done in several locations across the district to reduce weather risks. I even saw a few wrap high-moisture alfalfa as bale silage. A final strategy was to use protectants to bale alfalfa at a slightly higher than normal moisture content. Materials used include preservatives like propionic acid and acetic acid as well as hay inoculants. These materials were used to reduce mold formation and heat damage of alfalfa baled just slightly wetter than normal. This sometimes saved as much as a full day of drying time.

I tell you all of this to say that, even though we've had good tonnage this year, hay quality may not be as high as desired either because of nutrient loss, stage of maturity at harvest and/or because of other reasons such as mold formation. It will be very important to test our forages this year to make sure we have the appropriate feeds to deliver to our livestock as their nutrient demand and stage of production changes.

Next month, we'll look at what we should consider testing for in terms of nutrient composition and, potentially, mold.

Cade Rensink, Livestock Production Agent

## Scouting soybeans for insect pests

Soybean fields are reaching that critical point of development as they progress through the reproductive stages. This time of year the insects can develop in large populations, with a wide diversity. Determining when those insects need to be controlled by an insecticide can be difficult. This article is a brief guide to help you define the damage you are seeing and determine when it is the correct time to treat.

First off you need to determine what insect or multiple insect species is causing the damage. Some people will use sweep nets to catch bugs by brushing the net across the plant in a sweeping motion. The nice thing about a sweep net is you have captured the insect which allows you to get a good look at the insects.

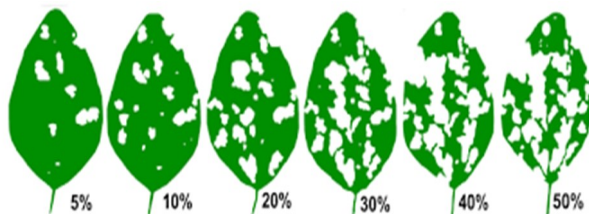
While a sweep net is good for identifying insects it is not a good tool to quantify how many insects are present. To calculate population numbers take a small area of a row and hit the plants multiple times to knock the insects off the plant. Then you can determine how many insects you are dealing with over that area. Some people lay down a white cloth between the rows to make the insects stand out. You will need to sample multiple times in various locations to determine the population across the whole field, as insects do not tend to be uniformly dispersed.

The size of an insect is an indicator of the stage of development. Small worms present will take longer to cycle out versus larger ones that have already completed much of its life cycle. Most of the feeding an insect does will occur later in its development.

It is also significant to note when you see dead worms. In some species like green cloverworm, a fungus can set in, sometimes controlling the population before treatment is warranted.

Walking the field, you are most likely to find several species of insects. How do we determine if a treatment is justified? It all comes down to a judgment call based on what insect population is currently there, where on the plant they are feeding, and how much damage has already occurred. It is the cumulative effect of the entire insect population in the soybean field to estimate the loss of yield.

The thresholds for treating depends on species but many include both insect populations as well as the damage present on the crop. Determining damage is quite deceiving when you are talking about defoliation. A soybean plant can lose a very large amount of leaf tissue before it becomes detrimental to the production. Prior to reproductive stages a soybean can withstand up to 30% leaf-feeding before treatment is justified. Now that soybeans have entered reproductive stages of growth a leaf loss of 20% is treatment threshold because plants are producing less vegetative tissue and putting energy into producing pods.



When feeding on the pods begin the timing becomes critical, at that point the insect is directly influencing yield. One pod per plant is the standard threshold people use. To figure the loss of your field with this calculation. 1 pod per plant cost of a field with 100000 plants, 2.5 seeds/pod, 3000 seed/# and soybean price.

$1 \text{ pod/plant} \times 100000 \text{ plants/ac} \times 2.5 \text{ seeds per pod} = 250000 \text{ seeds}$   
 $250000 \text{ seeds} / 3000 \text{ seeds/\#} = 83.34\#/\text{ac}$   
 $83.34\#/\text{ac} \text{ or } 1.39\text{Bu/ac} \times \$7.84/\text{bu} = \$10.90$   
an acre loss. You can change the numbers to fit your field and the fluctuating price.

**Bean Leaf Beetle** is a 1/4 inch Red to light tan beetle similar to a lady beetle with six spots black spots on their back. Most years require 50 beetles per foot of row to cause too much defoliation though also can feed on pods early in development.

**Thistle Caterpillar**, the larval form of the painted lady butterfly, a brown to black with yellow stripe caterpillar has spiny hairs across the body. Thistle caterpillars will cause webbing of leaves where they seem to take refuge as they eat and then pupate. Treatment is recommended if the defoliation will exceed 30% during soybean vegetative growth and 20% during soybean reproductive stages.

**Garden Webworm**, a green worm normally with noticeable stripes and 3 dark spots on the side of each segment of its body. Causes webbing at the top of the plant and matures about 1-inch long. Treatments are warranted when the defoliation is 20% during reproductive stages of growth.

Garden Webworms have been out in very high numbers this year, particularly in wheat stubble fields where they have completely skeletonized whole fields of pigweeds. I know of several instances of webworms in soybeans being targeted and had to be treated.

**Green Cloverworm**, a light green worm with three pairs of stripes, it has three leg pairs in the middle of the body with a pair of legs at the end of the body. The easiest way to identify them is how they really wiggle when disturbed. Thresholds of green cloverworm are high 10-12 per foot of row and 30% defoliation soybean plants as they tend to just feed on leaf tissue.

**Soybean Podworm (corn earworm or sorghum head worm)** Generally they

are light brown in corn though most podworms I have found in soybeans are light green in color. The head tends to be tan in color with alternating light and dark stripes running the length of the body and spots. Microspines or small hairs can be seen on mature larva is a distinct characteristic that is not seen on other worm species.

Podworm as the name suggests feed on pods as well as leaves making the threshold less. 1 worm per foot of row is the threshold. I have not found podworm in soybeans yet this year though should be on the lookout as they have been present the last few years and earlier generations in corn are thick this year.

**Stinkbugs** are generally green or brown large shield-shaped insect with sucking mouthparts. Stink bugs can cause shrunken or deformed seeds from feeding on pods in early in development as they are tender and moist. Treatment levels are reached when you find 10 bugs in 30 feet of row.

**Soybean Aphid** is a yellowish aphid that can populate in large numbers very fast with the correct environment. The environment that they prefer is around 80-degree F which has limited their development in most years. Though soybeans aphids have been found in Kansas every year since 2002 only a few times have the conditions been conducive enough to warrant spraying. Soybeans aphids have been found in Riley county this year.

**Other Species** like grasshopper, woollybear caterpillar, and yellow striped armyworm can also be found though I have not witnessed large populations recently.

Additional resources to identify insect pests

you can go to the KSU entomology web page. The second is a link you can find from the entomology web page with insecticide information, and the last link to purchase an excellent book for reference Crop Insects of Kansas put out by the department of entomology:

\$11.40

<https://entomology.k-state.edu/extension/insect-information/crop-pests>

<https://www.bookstore.ksre.ksu.edu/pubs/MF743.pdf>

<https://www.bookstore.ksre.ksu.edu/Item.aspx?catId=236&pubId=13159>

Jay Wisbey, Crop Production Agent

## Timing silage harvest

We're now well into August and that means silage harvest is drawing near (as long as the ground will hold). Corn and sorghum development and maturity is highly variable this year due to all the problems with spring rains. If you always chop silage on about the same date, how will that affect your silage?

Harvest timing is critical for success and needs to be based on moisture content of the silage. Silage chopped too early and wetter than 70% moisture can run or seep and it often produces a sour, less palatable fermentation.

Conversely, dry silage is difficult to pack adequately to force out air. This silage heats, energy and protein digestibility declines, and spoilage increases. If your silage usually steams during winter, it was probably too dry when chopped.

Many corn hybrids are 60 to 65% moisture after kernels dent and reach one-half to three-quarters milkline. This guide isn't perfect for all hybrids, though, so check your fields independently.

Research at K-State has established that harvesting sorghums in the mid- to late dough stage of

kernel development optimized both silage yield and nutritive value. Others recommend to harvest at the soft-dough stage. Whichever you choose, it's important to know that sorghum kernels, like corn, become increasingly hard and less digestible as the plant matures.

Generally, it is more difficult to judge proper plant moisture based on grain stage of maturity with sorghum silage than corn. A good way to handle timing of sorghum silage is to begin cutting when 80% or more heading has occurred and 50% of the grain reaches soft-dough stage.

It may be tempting to delay harvest while waiting for whole-plant moisture levels to drop, but that is usually a mistake. Any advantage gained by lower moisture content will be offset by less digestible grain. In fact, it's generally a better idea to harvest your sorghum silage a little early rather than a little late.

On average, once the milkline begins to move, corn silage dries down at a rate of 0.5% to 0.6% per day. Sorghum is a tad slower. Dry down is entirely dependent on the weather, though. Rain and cool temperatures can slow the pace while hot, dry weather may be as much as 1% per day.

If you find yourself in a tricky situation or just want to make better silage, a little help from inoculants can improve things. While there is no clear, consistent way to predict when inoculants will be most effective, typically, inoculation hastens the fermentation process, reduces face spoilage and can save you about 5% in storage losses.

Inoculants consistently improve wet silage, especially sorghums. If you start chopping early enough to prevent silage from being too dry at the end, inoculants should help.

By taking all of this into consideration and chopping your silage at the proper time this year, the outcome will be better feed and better profits.

Cade Rensink, Livestock Agent



**2019 Central Kansas Extension District  
Wheat Variety Plots**

Brand	Variety	Tim & Ryan Myers Minneapolis, KS				Vaughn Isaacson & Sons Mentor, KS	
		Bu/Acre	% of Avg	Tst Wgt	Protein	Bu/Acre	% of Avg
		Planted: October 1, 2018				Planted: November 2, 2018	
AGSECO	AG Icon	82	99%	56.7	13.4	47	119%
AGSECO	Ag Galliant	76	92%	60.1	12.3	38	97%
Limagrain	LCS Chrome	90	109%	59.0	13.6	44	112%
Limagrain	LCS Mint	74	90%	58.9	12.7	34	85%
Limagrain	T158					33	85%
OGI	Double Stop CL+	71	86%	60.8	14.6	44	113%
OGI	Gallagher	72	87%	57.3	13.5	33	83%
Syngenta	SY Benefit	90	109%	59.8	12.4	44	112%
Syngenta	Bob Dole	86	104%	59.6	13.8	48	122%
Syngenta	SY Flint	79	95%	59.8	13.4		0%
Syngenta	SY Grit	80	97%	55.7	13.7	34	86%
Syngenta	SY Monument	79	96%	57.6	13.1	32	81%
Syngenta	SY Wolf	82	99%	59.6	13.6		0%
WestBred	WB 4269	80	97%	60.6	12.4	32	82%
WestBred	WB 4303	94	114%	56.2	12.9	46	117%
WestBred	WB 4418	89	108%	59.4	12.5	52	133%
WestBred	WB 4458	97	118%	59.4	13.1		0%
WestBred	Grainfield	76	92%	57.5	12.9	34	85%
Wildcat Genetics	Larry	72	88%	55.2	13.6	31	78%
Wildcat Genetics	Zenda	94	114%	60.8	12.6	43	110%
	Zenda #2	87	106%	60.8	12.6		0%
Plot Average		83				39	
	Previous Crop and Tillage System	Conventional Till Wheat after wheat 2yrs after alfalfa				Conventional Till Wheat after Soybeans	
	Fertilizer	Starter 30-20-0 Preplant 50 lbs N Top-dressed				Starter 40-20-0 Preplant 40 lbs N Top-dressed	
	Seeding Rate	75 lbs/acre				72 lbs/acre	
	Foliar Fungicide	No Fungicide				No Fungicide	

\* All yields adjusted to 12.5% moisture.

\* The results presented here are from unreplicated demonstration plots.

\* For replicated research plot results, producers will want to study the 2019 K-State Winter Wheat Performance Test website located at:

<https://www.agronomy.k-state.edu/services/crop-performance-tests/winter-wheat/index.html>

\* **Special thanks to:** Vaughn Isaacson and Sons, Tim and Ryan Myers for planting and harvesting plots.



Central Kansas  
District

**Jay Wisbey, Crop Production Agent**  
2218 Scanlan Ave.  
Salina, KS 67401  
Phone: 785-309-5850  
Email: [jwisbey@ksu.edu](mailto:jwisbey@ksu.edu)

**Central Kansas Extension District  
Salina Office**

K-State Polytechnic  
2218 Scanlan Ave  
Salina, KS 67401-8196

Address Service Requested

The enclosed material is for your information. If we can be of further assistance, feel free to call or drop by the Extension Office.

Sincerely,



**Jay Wisbey**  
District Extension Agent  
Crop Production  
jwisbey@ksu.edu

**Salina Office**  
K-State Polytechnic  
2218 Scanlan Ave.  
Salina, KS 67401-8196  
785-309-5850  
Fax: 785-309-5851



**Cade B. Rensink, MS, PAS**  
District Extension Agent  
Livestock Production  
crensink@ksu.edu

**Minneapolis Office**  
307 N. Concord, Suite 190  
Minneapolis, KS 67467  
785-392-2147  
Fax: 785-392-3605