



AGRICULTURE

Thomas M. Maxwell
District Extension Agent
Crop Production

Anthony N. Ruiz
District Extension Agent
Livestock Production

CENTRAL KANSAS EXTENSION DISTRICT #3

AUGUST 2016

Soybean Weed Control Tour in southeast Ottawa County

Thursday, August 11th, 2016
9:00 a.m. - 11:00 a.m.

Soybean producers continue to seek answers to controlling weeds in soybeans especially glyphosate resistant pigweeds. Focus of this tour will be to discuss some different herbicide modes of action and the management of problem weeds in soybeans.

9:00 a.m. Tom Brenneman field - We will meet 8 mile east of Bennington on Hwy 18, 2 miles north on 260th Rd., then 1/8 mile east on Granite Rd. This field is planted to RUR soybeans no-till following milo. Herbicide applications on this field include an early spring burn down along with a pre-emergence herbicide, a burndown ahead of planting with glyphosate +2,4,D, a pre-emergence herbicide tank mix applied after planting and then a post emergence herbicide application. Weed pressure in this field is pigweed, marestail and velvetleaf.

10:00 a.m. Tom & Tommy Barrett Farm - located at 2470 Arrowhead Rd., Niles, KS which is about 1/4 mile west of Niles. This field is planted to Liberty Link soybeans no-till planted after wheat/dbl crop soybeans and was treated with pre-emergence herbicides as well as Liberty herbicide.

Speakers:

- Dallas Peterson, K-State Extension weeds specialist
- Chemical and seed industry representatives
- Cooperating farmers

Everyone is welcome to attend, no RSVP is needed. Refreshments provided by Wilbur-Ellis and Stine Seed. For more information contact Tom Maxwell

at 785-309-5850.

K-State Planter School

August 15th, 2016
Stanley Stout Center
Kansas State University
9:00 a.m. - 2:00 p.m.

Sponsored By: Biological and Agricultural
Engineering, Kansas State
University

Speakers include:

- *Paul Jasa, Extension Engineer, UNL
- *Mitch Ostgren, Precision Planting
- *Justin Atwood, LandMark Implements
- *Matt Wolters, SureFire Ag Systems
- *Dietrich Kasten, Kasten Farms Inc.
- *Brian Sutton, Air Scout
- *Joe Luck, Extension Engineer, UNL
- *K-State Research and Extension and
K-State Precision Ag

Registration: Free for KARTA Members and \$25 for everyone else. Includes lunch and refreshments. Register online at: <http://www.karta-online.org/>

K-State Yield Monitor School

August 16th, 2016
Stanley Stout Center,
Kansas State University
9:00 a.m. - 2:00 p.m.

Speakers include:

- *K-State Research and Extension, and K-State Precision Ag - Lucas Haag, Terry Griffin, Ignacio Ciampitti, and Ajay Sharda
- *Brian Sorbe/Jared Ochs, Topcon Precision Technologies

*Denton Farmer, AgLeader Technologies

Registration: Free for KARTA Members and \$25 for everyone else. Includes lunch and refreshments.

Register online at: <http://www.karta-online.org/>

2016 K-State Risk & Profit Conference

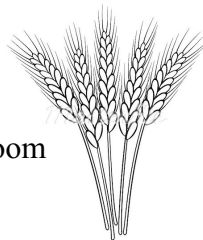
“The Farm Financial Situation: Navigating a Struggling Ag Economy”
August 18-19, 2016
K-State Alumni Center
Manhattan, KS

For the conference brochure and to register on-line:
http://www.agmanager.info/events/risk_profit/2016/

For more information, contact Rich Llewelyn at the phone or email below:
Phone: 785-532-1504 Email: rwl@ksu.edu

Pre-plant Wheat Meeting at Salina Tuesday, August 23rd, 2016

American Ag Credit basement mtg. room
925 W. Magnolia Rd.
Salina, Ks



Start time:

6:00 p.m. Sharp - Pulled pork sandwich meal
courtesy of the following sponsors:

- | | |
|---------------------------|------------------------|
| *Phillips Seed Farms Inc. | *Crop Service Center |
| *WestBred | *River Hills Seed |
| *Olson Seed Farm | *Everhart Precision Ag |

Speakers:

- Aaron Harries - Kansas Wheat Commission
- Romulo Lollato - K-State Extension wheat specialist
- Dorivar Ruiz-Diaz - K-State Extension soil fertility specialist

Topics:

- *Variety selection and results of K-State performance tests
- *Intensive wheat management
- *Managing wheat planted after fall crops - varieties, seeding rates, fertility, etc
- *Fertility management
- *Update on the Kansas Wheat Innovation Center and wheat research and promotion in Kansas

There is no cost to attend, but **please register for the sponsored meal by Friday, August 19th** by calling either CKD Extension office at Salina 785-309-5850 or Minneapolis 785-392-2147 or e-mail Tom Maxwell at tmaxwell@ksu.edu.

Volunteer wheat control: An important step in protecting the wheat crop

Volunteer wheat within a half-mile of a field that will be planted to wheat should be completely dead at least two weeks before wheat planting. This will help control wheat curl mites, Hessian fly, and greenbugs in the fall.

The most important threat from volunteer wheat is the wheat streak mosaic virus complex. These virus diseases cause stunting and yellow streaking on the leaves. In most cases, infection can be traced to a nearby field of volunteer wheat, although there are other hosts, such as corn, millet, and many annual grasses, such as yellow foxtail and prairie cupgrass. Control of volunteer is the main defense against the wheat streak virus complex.

The most important reasons to control volunteer wheat are:

- Wheat curl mite/wheat streak mosaic virus
- Hessian fly
- Take-all
- Bird cherry oat aphid/greenbug/barley yellow dwarf virus
- Chinch bug
- Reduce moisture loss

Destroying volunteer after the new wheat emerges is too late. Producers should leave enough time to have a second chance if control is incomplete. Tillage and herbicides are the two options available for volunteer control.

Tillage usually works best when plants are small and conditions are relatively dry.

If glyphosate is used too close to planting time, volunteer may stay green long enough to transmit diseases and insects to the new crop. It may take as long as one week following glyphosate application before the wheat will die, so that needs to be considered when timing the application to break the bridge for insects and diseases. The optimum time to treat with glyphosate is when most of the

volunteer has emerged and is healthy and actively growing. Glyphosate can effectively control volunteer wheat that has tillered.

Be a good neighbor, control your volunteer wheat.

Egg Air Cell Gauges Are Available

Say that five times fast. Recently, the Kansas Department of Agriculture held several egg grading courses throughout the state. Since those have wrapped up there was a surplus of egg air cell gauges. These nifty little plastic cards are designed to be used with an egg candle to determine if eggs are AA, A, or B quality. If you are interested in obtaining one of these handy tools to evaluate your own chicken's eggs or just to have on hand when you are grocery shopping please let either the Minneapolis or Salina office know. They do not cost anything except an addressed thank you card to:

Russell Plaschka
Kansas Dept. of Agriculture
Ag. Marketing/Workforce Development
1320 Research Park Drive
Manhattan, KS 66502

If you have questions or comments please feel free to call, email or stop by the office anytime.

Rooting For K-State's Team

Do you like college football? I surely do. It is my favorite sport to watch in person, on television, and to tune in on the radio. On August 26 the college football season will officially be underway. That get's me excited!!!

Already, I've been following news reports on my team. I've been reading articles about the new recruits, listening to sports talk shows discuss strategies, and have game days written in my calendar. I am pumped for this season!!!

As summer nears an end it is time to cheer on the K-State Team. K-State Research and Extension, KSRE, that is. Since last fall there have been several new additions, changes, and upgrades to KSRE. All are here to help raise the bar in producer knowledge. Below are some noteworthy updates on the KSRE

team.

Roster Changes

As with every team there is some fresh faces around the water cooler. A. J. Tarpoff, DVM, is the new Extension Beef Veterinarian. He is a K-State alum and is very eager to hit the ground running with beef producers across Kansas. Expect to see Dr. Tarpoff at fall and winter programs here in CKD.

Scores & Highlights

Growing up I loved watching Sportcenter on ESPN. They had all the scores and highlights from that day's games plus stories and events. It was every sports fan's dream. Unfortunately, Cowcenter is not a television channel. While some enterprising person works that idea out there are some options for livestock producers. K-State's Animal Science and Industry department launched an app. Anyone wanting to stay up to date on ASI events or information can do so with the app. It is available in the Google Play or Apple stores. Also, KSU Beef launched a YouTube channel. Currently, it has all the videos from this spring's K-State Anaplasmosis Symposium. In the future it will feature short videos about topics and issues Kansas cattle raisers face every day. Be sure to check it out and subscribe for updates.

Baseball is America's pastime. It is fun to watch and play. Sadly, very few folks who attend games, watch on television, or listen on the radio keep score. It is easy to know how many runs each team has, but it is difficult and requires much focus to keep a baseball scorecard. Scorecards go above walks, outs, strikes, and fouls. They tally fielding, hitting, and many other criteria. Statistics that can tell managers if a player is doing well or costing his team games. AgManager.info just got a facelift. This website managed by K-State's Agricultural Economics department has a WEALTH of economics, accounting, and budgeting tools, spreadsheets, and writings. With the changes document location and "user friendliness" are enhanced. Take some time and investigate the AgManager.info website. It can help take your operation from simply keeping score to filling out a scorecard.

Rout, Rout, Rout For The Home Team

We at KSRE are rooting for you. As extension agents and professionals we want you to succeed. As we begin hosting meetings, workshops, events,

and programs don't be afraid to add your two cents on topics and ideas you'd like to see. Most of the programs I've held have been the result of direct producer questions or conversations. Feel free to call, email, or stop by the office anytime to discuss subject matter and content. We can talk everything from cows to tailgating and swine to pigskins.

I Scream, You Scream, We All Scream for Nitrogen

Folks, I don't need to tell you how hot it is right now. I don't have to remind you nothing tastes as good on a hot August night as a nice, creamy bowl of ice cream. After a long, hard day of work and toil ice cream hits the spot! My personal favorite is chocolate chip cookie dough. I scream, you scream, we all scream for ice cream! Ice cream is like nitrogen. Really, it is. If you don't believe me, just keep reading.

Ice cream is delicious. Nothing new to any of us. Just like I need two scoops of chocolate chip cookie dough from a certain restaurant weekly, plants need nitrogen. Nitrogen, phosphorus, and potassium are macronutrients meaning plants need those three ingredients in the largest quantities. Just like I need ice cream in large quantities. Keep in mind that if you order too much ice cream at the restaurant, you may not be able to eat it all before it melts. The same is the case with applying too much fertilizer at once. It could leech off your field and into water sources creating an algal bloom that is toxic to livestock and deadly to fish.

Ice cream can be pricy. Take a stroll through your grocer's frozen foods aisle and you can see the range in ice cream prices. Some are bare bones milk, sugar, flavoring, and cream exposed to cold. Others have lavish ingredients like chocolate swirls, nuts, or fruits in decadent creamy goodness. Nitrogen fertilizer comes in a variety configurations from the stuff you can buy in a bag at your local hardware store to liquid ammonia. The price per pound of nitrogen varies tremendously. As livestock producers look to grow forage and animal feed keep a close eye on fertilizer cost and price it to yourself or customers accordingly.

Ice cream is not for everyone all the time. I doubt I fit this category, but others do. Some people are lactose intolerant. Ice cream, being a very dairy or

milk product, contains lactose. Therefore, it may be negative for them to eat ice cream. People who just strenuously exercised probably shouldn't eat ice cream immediately afterwards either. Here even milk would be a bad decision. Just like people, not all fields and crops need added nitrogen. Residual nitrogen levels in soils may be adequate to grow a desired amount of hay or cover crop. Forage sorghums are especially nitrogen efficiency. Tom Maxwell, CKD Crop Production Extension Agent, can help you design and implement a soil testing protocol.

Ice cream comes in different forms and types. Whether eating ice cream, frozen yogurt, custard, gelato, or something else it is all ice cream to me. Unfortunately, when livestock consume nitrogen it is not quite the same.

Amino acids, proteins, nitrites, nitrates, and urea all are routinely fed to animals and contain nitrogen. Ruminants are able to absorb amino acids directly. Amino acids are chains of mostly carbon, nitrogen, oxygen, and hydrogen. They serve as the building blocks of protein. Generally, a balanced diet will meet a ruminant's amino acid needs. However, when feeding rations comprised predominately of specific feedstuffs such as distillers grain, amino acid content can become skewed causing shortages or an over abundance which can lead to problems.

Protein is typically the first ingredient one considers when purchasing feeds. Protein along with energy are often the two limiting factors in livestock production. Depending on where feeds are tested, crude protein percentage may be calculated with a multiplication of the quantity of nitrogen in a feedstuff multiplied by 6.25. Protein is necessary and safe to feed to livestock as long as it is fed at the appropriate level. Excessive protein is wasted and insufficient protein can lead to production losses.

Urea, also known as non-protein nitrogen, is a common ruminant feed ingredient that can replace a portion of a ration's protein. It contains approximately 46.7% nitrogen. Urea occurs naturally in many plants and animal end products. Once ingested urea is broken down into ammonia by the fermentation process. Here the ammonia is joined with products of carbohydrate fermentation to form amino acids and then proteins. Isn't ruminant digestion cool? Urea is safe for ruminants

with a fully functioning digestive system. Dry cows can consume up to 0.05 pounds of actual urea a day or approximately 0.14 pounds of protein equivalent. Lactating cows can handle about twice as much. Unweaned calves should not be fed urea or NPN as their rumen may not be fully functional yet. Horses should not be allowed to consume NPN. It can result in a rapid, fatal toxicity. Many commercially available protein tubs contain urea. Also, numerous livestock feeds may contain NPN. A ration's energy content directly impacts the quantity of NPN that can be utilized by an animal. Higher energy diets can safely utilize more urea than low energy diets. A cow grazing dormant native pastures can effectively digest less urea than a cow eating a silage based ration. If NPN is mixed inappropriately it can result in ammonia toxicity. Thorough mixing and measuring must be done to ensure a homogeneous ration. If you are concerned about the possibility of ammonia toxicity keep some vinegar around to drench animals exhibiting signs of uneasiness, tremors, excessive salivation, rapid breathing, incoordination, bloat and tetany. When fed in proper quantities and mixed correctly as part of a total nutrition program urea can help save on ruminant feed costs.

We've discussed how nitrogen is like ice cream and the various forms nitrogen takes in livestock forages and feeds. But where do these two ideas merge? As a livestock extension agent nitrate toxicity issues arise this time of year. Plants such as pearl millet, sorghum, corn stalks, sudan, oats, wheat, kochia, and pigweed will take up nitrogen from soil. During periods of adequate moisture and no stress these plants are safe to hay and graze. However, if dry periods strike or other stressors such as excessive grazing occur the plants may take up more nitrogen than they are able to utilize for growth. As animals consume forages or hay with excessive nitrate levels it is converted into nitrite. Once in the bloodstream nitrites convert hemoglobin into methemoglobin which is much less effective at carrying oxygen throughout the body. If blood reaches a point with excessive methemoglobin the animal dies of asphyxiation, or lack of oxygen to the body. Labored breathing, stumbling, trembling, or sudden death are common symptoms of nitrate poisoning, depending on how advanced the case. Upon review animals who suffer from nitrate toxicity often appear to have died in their tracks and will often have dark red blood.

Does your hay, feed, or silage have excessive nitrate levels? When in doubt, test it out. A simple forage test can determine nitrate check quantities in your feedstuffs. Sample bags can be picked up at the extension offices or if you'd like I can come out and help gather samples. Along with nitrate analysis a complete nutrition test can be ran on the same sample. As we edge closer to fall and winter knowing what you are supplementing your animals with can prevent overfeeding costs or underfeeding complications.

If you'd like to further discuss nitrogen in feedstuffs, cattle rations, or protein requirements please feel free to call, email, or stop by the office any time. If you want to have the feedstuff talk of your life, bring in some ice cream.

Understanding the Difference between Corn and Corn Distillers Grains as Energy Supplements for Pasture Cattle

By Karla H. Jenkins, UNL Cow/Calf, Range Management Specialist

The development of the ethanol industry throughout the plains in the past ten years has resulted in an abundant supply of distillers grains available for cattle feed. Additionally, a number of recent years recorded high corn prices. This has made distillers grains a very favorable supplement for pasture cattle.

However, there are regions where distillers grains are in limited supply and transportation expenses make acquiring distillers grains less favorable. Today, corn prices are lower than they have been in a number of years making corn, especially corn with lower transportation costs, very favorably priced for cattle producers.

Regardless of the commodities available, there are a couple of things producers should think about before purchasing supplement.

The first thing producers need to consider is the requirement of the cattle on the pasture. Mature, gestating, dry cows have a different requirement for protein and energy than lactating cows, and growing calves will have different needs from cows. The second thing producers need to know is the quality of the pasture being grazed. Cattle prices are

much lower this year than the last couple and producers are not going to want to spend money unnecessarily on supplement. Beef extension personnel can help producers calculate balanced supplement needs.

While corn can be an acceptable supplement, there are several differences that must be considered when substituting corn for distillers grain as a pasture supplement for grazing cattle.

One of the big differences between corn and corn distillers grains is the starch content. Corn is about 73% starch while corn distillers grains has only trace amounts of starch since it is used for the ethanol production. This is important because starch can have negative impacts on fiber digestion because it shifts the microbial population in the rumen away from fiber digesters. Obviously, if cattle are grazing grass they need to be able to effectively digest grass.

The total digestible nutrients (TDN), which is a measure of energy, is only 83% for corn when used in a roughage based diet. Distillers grains, which is high in digestible fiber and contains some corn oil has actually been determined to be 108% TDN in forage based diets. This may seem surprising, but the protein and oil in distillers grains is concentrated and both have more energy than starch. In forage based diets dry distillers has equal feeding value of the wet product (on a dry matter basis), but dry distillers may be easier to store.

If a high starch supplement, like corn, is fed with very low quality forage, supplemental protein is likely to be needed as well. While there are several protein commodities available, alfalfa hay can serve as a protein source in this situation very well.

Another difference between corn and corn distillers grains is the crude protein (CP) content. Corn is roughly 10% CP while distillers grains has 30% CP. Therefore, distillers grains is commonly used as a protein source and at times as an additional energy source. Corn is not a good protein source, particularly in low quality forage diets.

With cheaper corn prices, corn may be used as a pastures supplement, but may need to be fed in combination with a protein source. Producers need to evaluate the price of acquiring, storing, and

delivering supplements as well as the expected cattle performance to determine if supplementation is needed and what commodity choices make the most sense.

Calendar of Events

August

- 11 Soybean Weed Control Tour- SE Ottawa County
- 11-13 Kansas 4-H All Breeds Dairy Show, Salina
- 15 K-State Planter School, Manhattan
- 16 K-State Yield Monitor School, Manhattan
- 16 KLA Field Day, Junction City
- 18-19 K-State Risk and Profit Conference, Manhattan
- 23 Pre-plant Wheat Meeting, Salina

September

- 9-18 Kansas State Fair, Hutchinson
- 22 K-State Beef Stocker Day, Manhattan

October

- 5 Ag Lenders Conference, Manhattan
- 7 K-State Ranching Summit, Manhattan
- 7 ASI Family & Friends Reunion, Manhattan

November

- 2-3 Kansas Income Tax Institute, Salina

New Publications

- Wheat Variety Disease and Insect Ratings 2016
- 2016 Kansas Wheat Seed Book
- Seed Treatment Fungicides for Wheat Disease Management

2016 CKD-SALINE COUNTY WHEAT VARIETY PLOTS

Brand	Variety	Vaughn Isaacson & Sons Mentor, KS		Tom, Pat & Luke Ryan Solomon, KS		Karber Farms Gypsum, KS	
		Bu/Acre	% of Avg.	Bu/Acre	% of Avg.	Bu/Acre	% of Avg.
		Planted: Sept. 30, 2015		Planted: Oct. 9, 2015		Planted: Oct. 19, 2015	
Limagrain	Chrome	86	119%	90	112%	48	84%
Limagrain	Pistol	-----	-----	-----	-----	63	111%
Limagrain	Mint	67	93%	92	115%	63	111%
Limagrain	T-158	67	93%	86	111%	67	118%
OGL	Bentley	72	100%	71	89%	53	93%
OGL	Iba	67	93%	72	90%	-----	-----
OGL	DoublestopCL Plus	73	101%	82	102%	52	91%
OGL	Ruby Lee	-----	-----	73	91%	-----	-----
Westbred	Grainfield	76	106%	101	126%	58	102%
Westbred	Red Hawk	79	110%	72	90%	49	86%
Westbred	Winter Hawk	67	93%	81	101%	56	98%
Westbred	Armour	64	89%	69	86%	51	89%
Westbred	WB 4458	80	111%	75	94%	52	91%
Westbred	Cedar	72	100%	73	91%	51	89%
Wildcat Genetics	Everest	69	96%	72	90%	47	82%
Wildcat Genetics	Kan Mark	68	93%	80	100%	45	79%
Wildcat Genetics	1863	81	112%	91	114%	51	89%
Blends	Redhawk/4458/Grain field	-----	-----	-----	-----	53	93%
Blends	Cedar/SY Wolf/Grain field	-----	-----	-----	-----	58	102%
Plot Average		72	-----	80	-----	57	-----
	Previous Crop and Tillage System:	Conventional till wheat after wheat		Conventional till wheat after wheat		No till wheat after soybeans	
	Fertilizer:	40-30-0 broad cast starter 40 lbs. N topdress		60-0-0 pre-plant		12-42-0 starter 60 lbs. N topdress	
	Seeding Rate	72 lbs./acre		65 lbs./acre		85 lbs/acre	
	Foliar Fungicide	4 oz./acre Folicur		4 oz./acre Folicur		4 oz./acre Folicur	

All yields adjusted to 12.5% moisture.

The results presented here are from unreplicated demonstration plots.

For replicated research plot results farmers will want to study the 2016 K-State Wheat Performance Test Results available on the web at <http://www.agronomy.k-state.edu/services/crop-performance-tests/>.

Special Thanks to: Vaughn Isaacson and Sons; Tom, Pat and Luke Ryan; and Karber Farms, Paul and Robert Karber for planting and harvesting the plots.



Tom Maxwell, District Extension Agent, Crop Production
Central Kansas Extension District
300 W. Ash, PO Box 5040
Salina, KS 67402-5040 785-309-5850

**K-State Research and Extension
Central Kansas Extension District 3**

**Salina Office
300 W. Ash, Room 111
P. O. Box 5040
Salina, KS 67402-5040
www.centrankansas.ksu.edu**

Nonprofit Organization
U.S. POSTAGE
PAID
Permit #525
Manhattan, Kan. 66502

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,



**Thomas M. Maxwell
District Extension Agent
Crop Production
tmaxwell@ksu.edu**

**Central Kansas Extension District #3
Salina Office
300 West Ash, Room 111
P. O. Box 5040
Salina, KS 67401
785-309-5850 Fax: 785-309-5851**



**Anthony Ruiz
District Extension Agent
Livestock Production
anruiz@ksu.edu**

**Central Kansas Extension District #3
Minneapolis Office
Courthouse
307 N. Concord, Suite 190
Minneapolis, KS 67467-2140
785-392-2147 Fax: 785-392-3605**

K-State, County Extension Councils, Extension Districts, and U.S. Department of Agriculture Cooperating.
K-State Research and Extension is an equal opportunity provider and employer.

“Knowledge for Life”

