

# PAWNEE COUNTY EXTENSION AG NEWS

Vol I Issue III

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## Plant a Salsa Garden

Planning to plant a garden? How about planting vegetables specifically for making salsa! In its basic form, salsa could include tomatoes, peppers, onions, parsley, basil, and cilantro. But the options are many!

What varieties of vegetables work best for salsa? For tomatoes, paste tomato varieties are best because of their meaty texture. The 'Roma' variety is the most common paste tomato. Others include 'La Roma,' 'Mamma Mia,' 'San Marzano' and 'Rio Grande.' Slicing tomato varieties produce more juice. A variety of peppers can be used which can turn a mild salsa into one with a hot kick! Use a variety of colors to add visual appeal. A mix of peppers can be used such a bell peppers, jalapenos, and 'Habanero' just to name a few. Any variety of onions can be used from white, yellow, to purple. Some varieties have a stronger flavor than others.

Any salsa recipe can be consumed fresh or frozen for later use. Always use safe, tested recipes for canning salsa. (Karen Blakeslee-KSRE)

*“Some old-fashioned things like fresh air and sunshine are hard to beat.”*

*- Laura Ingalls Wilder*



### In This Issue

- High Protein Diets and Reproduction
- Field Bindweed Control
- Q&A on Current Wheat Fungicide Use Issues
- Agricultural Mobile Apps
- Market Wheat Show
- Facilitation Services for Succession Planning

# High Protein Diets and Reproduction

Sandy Johnson  
Livestock Specialist

Anecdotal reports have been made concerning lowered fertility in beef cows and heifers bred on lush forage such as wheat pasture. Relatively high concentrations of crude protein in the wheat have been accepted as the cause for lowered fertility, primarily based on observations in dairy cows. However, it is often difficult to rule out other possible causes of lower fertility in these cases. Further examination of the literature shows differential effects of high protein diets in dairy and beef cows.

A study at the Ag Research Center in Hays compared fertility of cows bred on native pasture or wheat pasture over a five-year period. The average wheat grazing period was April 11 to June 11 with breeding beginning between May 15 and 20th. Free choice sorghum-sudan hay was available to wheat pasture cows the first two weeks of grazing. Neither AI pregnancy rate nor final pregnancy rate differed among cows bred on native pasture or wheat pasture.

Additionally, scientists at Oklahoma State University found no difference in pregnancy rates between yearling beef heifers bred on wheat pasture or in a drylot. This was despite the fact that blood urea nitrogen concentrations were 22 mg/dL two days before breeding in wheat pasture heifers and wheat contained 26-27% crude protein.

Lactating dairy cows typically receive diets containing 17-19% crude protein during early lactation which stimulates and supports high milk production. When excess protein is present in the diet, urea concentration in the blood stream increases. Measurements of blood urea nitrogen (BUN) or milk urea nitrogen (MUN) have been used to monitor overall protein metabolism in cows. Pregnancy rates were reduced when concentrations of plasma urea nitrogen or milk urea nitrogen were greater than 19 mg/dL.

While considerable evidence supports the negative impacts of high protein diets in dairy cattle, some studies have reported no impact. In beef cattle, positive effects of high protein diets on pregnancy rates have been reported.

Several mechanisms have been proposed that would explain some of the discrepancies in the impacts of high crude protein diets on reproductive performance. Protein sources vary in the amount of dietary protein that is rumen degraded protein (RDP) and rumen undegraded protein (RUP). A certain amount of degradable protein is used by rumen microbes to make microbial protein. When dry matter intake is low, more protein is degraded in the rumen because of the slower rate of passage. In the case of high dry matter intake, rate of passage is increased and less protein is degraded in the rumen. Adding more RUP may increase the amount of protein available in the small intestine.

High producing dairy cows often suffer from a negative energy balance during early lactation. The effects of high

dietary protein interact with the negative energy balance. More energy is required to metabolize any excess protein. When energy is needed for reproduction, this additional demand to handle excess protein may limit energy for reproduction. If metabolizable energy requirements are met, excess crude protein may be beneficial to reproduction.

Ethanol co-products such as distillers grains and corn gluten meal have become cost effective protein and energy supplements and their use may result in feeding protein in excess of NRC recommendations. Iowa State University scientists have been exploring the role of excess crude protein in beef cow reproduction.

In one Iowa State study, beef cows received isocaloric and isonitrogenous supplements composed of either a moderately high (corn gluten meal) or low (soybean meal) RUP source in addition to corn stalks ad libitum. Dominant follicle growth and ovulatory parameters were improved with the high RUP supplement. The soybean meal group (low RUP) had improved concentrations of progesterone post ovulation. A second study fed isocaloric supplements containing either .68 or 1.47 lb/d of corn gluten meal (.55 lb/d CP and 0.81 kg/d RUP vs 1.06 lb/d CP and 0.90 kg/d RUP, respectively) to dry, non-pregnant, mature beef cows with ad libitum access to corn stalks. The higher level of corn gluten meal resulted in a larger ovulatory follicle and more antral follicles. Further work is needed to understand the potential mechanisms involved and impacts on actual fertility.

In summary, while feeding excess amounts of crude protein to dairy cows often reduces reproductive performance the same has not been true for beef cows. This may be because the beef animal is much less likely to be in a negative energy balance when receiving a diet with excess crude protein. Additionally, protein supplements differ in the amount of RDP and RUP which may contribute to differential effects on reproduction.

While we still have much to learn, for now, producers feeding total crude protein in excess of 18% to beef cows prior to breeding should ensure energy requirements are met. Diets above that level might benefit from consultation with a nutritionist. In the case of lush cereal grain pasture, providing additional dry forage to slow rate of passage may be needed. Since wheat pasture may not last the entire breeding season, keep in mind other possible causes of lower pregnancy rates related to wheat pasture management. Reduced forage availability could reduce total energy intake. Reduced energy status and/or stress from moving to a new location after wheat pasture could stop females from cycling or cause embryonic loss.

## Wheat Plot

### Variety Tour

Date: May 23rd

Time: 6 P.M.

#### Speakers:

- ◇ Dr. Erick DeWolf, Plant Pathologist
- ◇ Dr. Sarah Zukoff, SW Area Entomologist
- ◇ Dr. AJ Foster, SW Area Agronomist
- ◇ Dr. Romulo Lollato, Wheat and Forages Production

#### Varieties:

- ◇ Brawl Cl+
- ◇ Byrd
- ◇ Doublestop CL+
- ◇ KanMark
- ◇ LCS Mint
- ◇ LCS Wizard
- ◇ SY Monument
- ◇ SY Sunrise
- ◇ T158
- ◇ WB4458
- ◇ WB Cedar

Location: Between 210th Ave and 220th Ave on H Rd

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



## Field Bindweed Control

Field bindweed is difficult to control, especially for homeowners, but there are options.

**Home Vegetable Gardens:** Weed control requires taking the treated portion of the garden out of production for a time.

*Glyphosate* - Glyphosate is sold under a wide variety of names, the most common being Roundup. Take the garden out of production when treating.

1. Glyphosate is a non-selective herbicide that will kill whatever it hits but is inactivated when it contacts the soil.
2. Glyphosate is most effective when applied to bindweed that is at or beyond full bloom. You can treat earlier but don't skip the late summer to fall application.
3. Do not apply to bindweed that is under moisture stress or not growing well.

**Turf:** Selective herbicides are available. A herbicide with the trade name of Drive (quinclorac) is now packaged in homeowner combination herbicides such as Fertilome Weed-Out with Q, Ortho Weed-B-Gon Max + Crabgrass Control, Monterey Crab-E-Rad Plus and Bayer All-in-One Lawn Weed and Crabgrass Killer.

Commercial applicators can also use Drive (quinclorac) as well as Q4 (contains quinclorac). Products with Drive work better than glyphosate and are selective. Note that lawns treated with Drive should not use clippings in compost or as mulch as Drive is very stable on grass clippings. We recommend clippings be returned to the lawn anyway but if they are bagged, they should be discarded. Do not apply products with Drive over exposed roots of trees and ornamentals. It would be best to avoid spraying beneath the canopy of any trees to avoid possible damage. If there are plans to convert a section of lawn to a vegetable garden, do not use Drive on that area. Eggplants can be damaged if planted within 12 months of areas treated with Drive, and tomatoes can be damaged if planted within 24 months. Shrub Beds: Use a spray of glyphosate between plants. Use a shield if spraying near plants to keep spray from contacting green plant material. Remember, glyphosate will hurt your shrubs if it contacts green tissue.

It is possible to control field bindweed by pulling, but you must be extremely persistent. I remember reading a study from the 1940s that found that bindweed produces enough energy to start strengthening the roots when it reached the six-leaf stage. So, if pulling, never allow plants to produce more than six leaves. (Ward Upham)

Stripe rust continues to be a serious concern for many wheat growers in the state. The threat of yield losses to stripe rust has many growers looking into fungicide options. Here are some common questions that others are asking about wheat fungicides and their use.

**Q: Are generic fungicides as effective as the more expensive products?**

A: In tests conducted by universities throughout the Central Plains and Midwest in recent years, researchers have found no significant differences in the efficacy of products with identical active ingredients. In other words, the generic fungicides are equally effective when used at the same rates as other products with the same active ingredient. We provide an efficacy rating of fungicide products in *Foliar Fungicide Efficacy Ratings for Wheat Disease Management 2016*, K-State Research and Extension publication EP-130: <http://www.bookstore.ksre.ksu.edu/pubs/EP130.pdf>

In this publication, you can compare the efficacy ratings of many different products (including products that contain more than one mode of action) for stripe rust and many common wheat diseases. In general, wheat growers have many very good or excellent product options. In my experience, correctly identifying when a fungicide is needed and timeliness of the application are more important than which product is being used in most cases. Control of Fusarium head blight (scab) is the exception. For Fusarium head blight control, triazole fungicides are the best option. This includes products such as Prosaro, Caramba, and Folicur (or generic tebuconazole). See the fungicide efficacy publication mentioned above for more information.

**Q: Are there other issues to consider when selecting a product?**

A: Yes. There is a growing concern about fungicide resistance in some parts of the country. For a long time, those of us growing field crops didn't really have to worry much about this issue, but that is no longer the case. The development of fungicide resistance can be slowed by alternating modes of action between years, by using a product that contains multiple modes of action, or tank-mixing different modes of action. Products containing only strobilurin fungicides are most at risk for fungicide resistance.

Another factor to consider is the maximum amount of any one active ingredient that can be used per season. If an early application of tebuconazole is made, for example, you will not be able to apply the full rate of a product now if that product would put you over the limit for tebuconazole for the season. This is one of the potential downside risks of making an early-season application of a fungicide.

**Q: What is the difference between a “curative” and “preventive” fungicide?**

A: Honestly, I don't really like to use these terms to describe fungicides because I think they can lead people down a confusing path. All fungicides are best applied before the disease becomes established or very early in the development of disease within crop. So from this perspective, all fungicides work best in preventive mode. The triazole fungicides are generally considered to have some limited curative activity but they cannot restore leaf tissue already damaged by the disease. It would be a mistake to think that a fungicide with curative activity does not provide any preventive activity. The different fungicides just stop the infection at slightly different times in the infection process.

**Q: Is it best to use a product that combines a multiple modes of action?**

A: Growers have a lot of product options with very good or excellent efficacy on stripe rust and other leaf diseases. I suggest that growers consider efficacy ratings, cost, and availability when selecting products to use on their farm. As mentioned previously, using a fungicide with a mixed mode of action can help reduce the risk of fungicide resistance. However, there are other ways to achieve similar results with respect to resistance.

**Q: Which fungicides can be applied latest in the season on wheat?**

A: Always consult the label on this since any label violations could have unwelcome consequences. In general, the triazole fungicides can be applied the latest. Tebuconazole products (Folicur and generic products), Caramba, and Prosaro can be applied through the flowering stage. But these products have a 30-day preharvest interval as well, so producers have to keep that in mind and make sure they're not applying it so late that they will have to delay harvest to meet the preharvest interval. Other fungicides have a growth stage cut off that prevents application during and after the flowering stages of growth.

Erick DeWolf, Extension Plant Pathology



# Agricultural Mobile Apps– Part 2

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.

## ECONOMIC APPS



(grain prices, market evaluations, finance, etc.)


Name of App and Source	Brief Description and cost	Available Downloads
CHS – Grain Trading  Telvent DTN, LLC	This app is the solution for producers to receive the price of grain. You will be able to make, manage, and monitor your offers to sell.  FREE	iOS  Android

Name of App and Source	Brief Description and cost	Available Downloads
<p>Crop Cost</p>  <p>Texas AgriLife Extension Service</p>	<p>Crop Cost is designed to help agricultural producers calculate their cost of production per crop unit, assisting them in executing a successful marketing plan.</p> <p>FREE</p>	iOS
<p>AGDirect Mobile</p>  <p>Farm Credit Services of America</p>	<p>This app computes finance and lease quotes, including annual and semiannual payments.</p> <p>FREE</p>	iOS Android
<p>DTN/The Progressive Farmer</p>  <p>Telvent DTN, LLC</p>	<p>This app meets your information needs with access to award-winning agriculture news, commodity market data, and industry-specific weather intelligence.</p> <p>FREE</p>	iOS

## FIELD GUIDE APPS




(diagnosing crop/horticulture production issues)

Name of App and Source	Brief Description and cost	Available Downloads
<p>Purdue Extension Corn &amp; Soybean Field Guide</p>  <p>Purdue University</p>	<p>This app provides information for corn and soybean production, presenting a very complete field guide.</p> <p>\$12.99</p>	iOS
<p>Hort Plants</p>  <p>University of Arkansas</p>	<p>This app provides an image collection and database presenting plant information that covers the mid-South region of the U.S.</p> <p>FREE</p>	iOS




Name of App and Source	Brief Description and cost	Available Downloads
<p>Seed Guide</p>  <p>AgReliant Genetics</p>	<p>This app provides information on seed purchasing decisions for corn, soybean, and alfalfa. Searchable database, easy to search by name, maturity, or seed trait.</p> <p>FREE</p>	<p>iOS</p>

## LIVESTOCK APPS

(health, nutrition, information on markets, etc.)

Name of App and Source	Brief Description and cost	Available Downloads
<p>iHerd</p>  <p>MANDRA Ltd</p>	<p>iHerd app provides a design to simplify the herd management process for station owners and managers around the world</p> <p>FREE</p>	<p>iOS</p> <p>Android</p>
<p>Angus Mobile</p>  <p>American Angus Association</p>	<p>The Angus Mobile app provides information for anyone with an interest in Angus cattle.</p> <p>FREE</p>	<p>iOS</p> <p>Android</p>
<p>Cattle Market Mobile</p>  <p>Michael Whitt</p>	<p>This app helps cattle producers monitor current auction prices. In addition, reports are also displayed.</p> <p>FREE</p>	<p>iOS</p> <p>Android</p>

(crop irrigation, estimation of water needs etc.)

Name of App and Source	Brief Description and cost	Available Downloads
<p>Irr. Pumping Plant Efficiency Calc.</p>  <p>University of Nebraska-Lincoln</p>	<p>This app provides assistance in calculating the efficiency and savings related to more efficient irrigation systems.</p> <p>\$3.99</p>	<p>iOS</p> <p>Android</p>
<p>Agriculture Irrigation Costs</p>  <p>University of Nebraska-Lincoln</p>	<p>This app provides information on irrigation costs for the most commonly used systems. It also compares costs of various alternatives.</p> <p>\$3.99</p>	<p>iOS</p> <p>Android</p>
<p>FieldNET Mobile</p>  <p>Lindsay Sales &amp; Service LLC</p>	<p>This app can be utilized to remotely manage your pivots, laterals, drip/micro-irrigation systems, and pumps. Users can quickly monitor irrigation equipment.</p> <p>FREE</p>	<p>iOS</p> <p>Android</p>

## Market Wheat Show

Open to all Kansas farmers, the Market Wheat Show honors the highest-quality sample of wheat based on a scoring system that will take into protein, test weight, dockage, mill and bake quality, and the percentage that is shrunken and broken. There are 1,000 points possible. All entries will be on display at the Pawnee County Fair, with the option for advancement to the State Fair in September.

Collection boxes will be placed at the surrounding elevators during harvest. A one gallon Ziploc bag will be provided for the samples consisting of 10 pounds of wheat (combine runs only). These samples will be tagged with the producer's name, mailing address, and variety. After harvest, crop data cards will be mailed to producers submitting a sample. If a producer has wheat stored on the farm, as the County Agent, I can make a farm visit and collect a sample. Each producer is limited to one entry for each variety of wheat. Landowners may enter if the operator does not enter. The sample must be grown in Edwards County by someone recognized by the Farm Service Agency as tenant or landowner.



## Free publica- tions 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

### May

13th: Cover Crop Field Day at 10 a.m., HB Ranch south of Cedar Bluff Reservoir

23rd: Wheat Plot Variety Tour, Larned  
See side panel on page 4

### June

3-4th: Ag Women of the Heartland 2016, Garden City  
More information to come

25th: Barbecue 101 Workshop, Wichita  
Insight to selecting meat, wood, rubs, spices, and sauces  
Registration due June 18th with fee  
Call the office for more information

### August

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

## Facilitation Services Available for Succession Planning

The average age of U.S. producers continues to rise and families will need to explore options for the transitional feasibility of current and future owners. Succession planning is a step by step process where families work together to develop a plan to incorporate the next owner and pass on knowledge and resources that will sustain the operation.

Farm and ranch families may be uncertain of how to begin developing a succession plan and need guidance moving forward. This is where a succession planning facilitator plays a key role. "The facilitator can help the family identify strengths, barriers and opportunities as they pass the farm business on to the next generation. They guide family members to resources and individuals who can help them find the information they need to develop an effective succession plan" said Jerry Jost, facilitator and mediator for Kansas Agricultural Mediation Services. Jost describes a facilitated meeting as guiding participants through shared discussions about important issues. "A facilitator helps families set an agenda and works to enable all voices to be heard within a respectful environment. While the facilitator remains neutral with the content of the discussion, they help everyone keep track of the substantive issues and options raised by the family as they chart their path forward."

Facilitators have received succession planning training and have experience working with farm and ranch families. Their skills provide guidance and support as families cultivate options for creating a succession plan. Facilitation services can be requested by calling Kansas Agricultural Mediation Services, 800-321-3276. Families may also visit the succession planning website and navigate through a variety of resources, including "Transition Planning: 12 Steps to Keep the Family Farming" and more topic focused areas such as estate planning or "FamilyTALK." The website is available at <http://www.ksre.k-state.edu/kams/succession/>.

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](mailto:pn@ksre.ksu.edu). K-State Research and Extension is an equal opportunity Employer.

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PLACE  
STAMP  
HERE

# Pawnee County

## 2016

# Wheat Plot Variety Tour

Monday, May 23, 2016

6:00 PM

Located on the North side of H Road between 210th Ave and 220th Ave

Follow the blacktop road out of the Northwest side of Garfield

*-Dr. Erick DeWolf, KSU Extension Plant Pathologist*

*-Dr. Sarah Zukoff, KSU Extension Entomologist*

*-Dr. A.J. Foster, KSU Extension Agronomist*

*-Dr. Romulo Lollato, KSU Wheat and Forages Production*

Dinner to follow, please RSVP, sponsored by Pawnee County

We encourage you to RSVP to ensure enough food. Please contact the Pawnee County Extension Ag Agent, Shannon Rogge, at (620) 285-6901 or luckiksu@ksu.edu. You may also contact the PCCA, Rick Hudson, at (620) 285-6919.



Kansas State University and Cooperative Extension Ser-  
vice

K-State, County Extension Councils, Extension Districts, and U.S. Department of Agriculture Cooperating. All educational programs and materials available without

