



# Cottonwood Extension District K-State Research & Extension News

**Cottonwood  
Extension  
District #17**

**Fall Edition 2018**

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## What's Happening

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October 9—4-H Spirit Day—Wear Green to show your support for 4-H

October 13—[Shutterbug in Hays 9-Noon Ag Research Center](#)

October 26—[4th Friday Program-Reviewing Your Prescription Drug Plan- Great Bend](#)

October 27—Ellis County 4-H Achievement Banquet

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November 11—Barton County Achievement Banquet

November 12—Ext. Offices Closed in Observance of Veteran's Day

November 14—[ServSafe Manager Certification Course-Hays](#)

November 17—18—Kansas 4-H Leadership Weekend—Rock Springs

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SAVE THE DATE—[Cover Your Acres Winter Conference-January 15-16, 2019](#)

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# 4-H Youth Development

## Susan Schlichting & Berny Unruh



### National 4-H Week Kicks Off New 4-H Year

National 4-H week is October 7 – 13, 2018. It’s time to invite others to come and join the fun and learning. 4-H has opportunities for youth and adults alike. And so many great things to learn and experience in the process! **Don’t miss out!!**

This year, 4-H has kicked off the fun early with 30 days of doing. . . doing activities, doing service, doing learning! Take a look at the projects to inspire [here](#).

4-H is committed to kids learning by doing. This ongoing effort needs adults to help out! If you have skills that you are willing to share with youth, we’d like to visit with YOU! Are you a 4-H alumni interested in “giving back”? Or a community member who enjoys working with youth? Stop by the local Extension Office and visit about the possibilities.

4-H gives kids more opportunities to grow and lead in life and in careers. Come and join the fun and learning!

Since 1968, National 4-H Week has been held the first full week of October. This week is set aside to give 4-H members a chance to share their story about what 4-H has done for them. It is an opportunity for 4-H Clubs to raise an awareness of their activities and to invite new families to join the club and find out more about this organization. It is also a time for adults of all ages to learn more about the volunteer opportunities offered through 4-H. If you have a special interest and you would like to share that passion with a group of young people there is no better time than the present to make a difference in the life of a young person.

4-H learning experiences enhance our young people’s abilities to grow into tomorrow’s leaders. The positive learning environment combined with the encouragement of adult mentors allows 4-h programming to play a vital role in helping our youth achieve future success.

The new 4-H year starts October 1. the Kansas 4-H online enrollment will open on that day. We ask that all returning members complete your re-enrollment as soon as possible. Some 4-H project activities (especially Shooting Sports) start in October and you do have to be enrolled in order to participate. New families will first have to create a Family profile and then enroll each child. Information to complete enrollment can be found on the website but if assistance is needed please call the Great Bend or Hays office for assistance.

All 4-H parents are invited to include your information in the 4-H online system and volunteer as a club leader, a project leader or an activity helper. The 4-H program is led by volunteers and great things happen with great volunteers!



### National Youth Science Day

In its 11<sup>th</sup> year, the National Youth Science Day theme this year is “Code Your World”. It’s a program inviting kids to get involved in computer science through hands-on doing. It’s a four part challenge that teaches kids 8 – 14 to apply computer science to the world around them. This year 4-H is partnering with Google to take their coding to the next level on Google’s CS First platform. Watch for these activities coming to classrooms in our area soon!

4-H Learning to Fly Drones–Saturday, November 3, 9 –Noon –Rush Center

The Cottonwood Ext. District received two drones for their use with the Monarchs on the Move project. We are offering you a chance to come and learn how they work and how to fly them safely. We’ll be holding a special training for youth and adults at the Sr. Center in Rush Center on Saturday, November 3 from 9 –Noon. If you would like to take part in this special 4-H workshop opportunity, contact your local Extension Office by Monday, October 29 to sign up. We will arrange a carpool from Hays for those interested in attending.



# Family & Consumer Science

## Donna Krug

### 4<sup>th</sup> Friday program at the Great Bend Senior Center – Reviewing Your Prescription Drug Plan

– It is open enrollment time for the people with Medicare to review their current prescription drug plan. Navigating the Medicare maze can be a little overwhelming so let Donna and John Krug, SHICK counselors, give an overview of the process. This free program is set for Friday, October 26<sup>th</sup>, at 1:00 p.m. at the Great Bend Senior Center. (2005 Kansas Ave.) Make sure you bring your calendar to set up an appointment with the Krugs' is you need to review your prescription drug plan before December 7<sup>th</sup>.

### Everyday Mindfulness Program in Hays

The term “mindfulness” seems to be everywhere – it is touted as the new yoga, the answer to stress, or the alternative to prescription drugs. But beyond the buzz, do you understand the concepts of “mindfulness?” Donna Krug, Cottonwood District Agent, and her husband John, will introduce you to the benefits of practicing mindfulness and provide resources for you to explore. A K-State Research and Extension fact sheet titled, “Everyday Mindfulness” will be shared. The program is set for Monday, November 5<sup>th</sup>, at noon, at the Hays Public Library. The one- hour program will end with a short meditation. This free program is open to everyone.

### Cooking Under Pressure Program-Great Bend

If you have an electric pressure cooker or are thinking about putting one on your Christmas list, mark your calendar for this free educational program on Wednesday, November 7<sup>th</sup> at noon at the Great Bend Recreation Center – Burnside room.

Donna will share how to use this popular appliance safely when preparing recipes for your family. From hard cooking eggs, to preparing main dishes to desserts, the pressure cooker is quite versatile. Please RSVP if possible by calling the Cottonwood Extension District – Great Bend office at 793-1910 to ensure adequate supplies.



### 4<sup>th</sup> Friday program Focuses on Alzheimers

Kansas' aging population is rapidly increasing and with that will come unique opportunities as well as challenges, one of which is Alzheimer's disease. Alzheimer's 101 will be presented twice in the Great Bend community: Friday, November 30<sup>th</sup>, at 1:00 p.m. join Donna at the Great Bend Senior Center and Wednesday, December 5<sup>th</sup>, at noon, Donna will be presenting the information at the Great Bend Activity Center. Call our Great Bend office for more information.

### Seasonal Soups Program -Hays Library

Eating food that is in season not only costs less but it also tastes better. Join Donna Krug, Cottonwood Extension District Agent for a program focusing on “Seasonal Soups.” Several recipes and samples will be shared during this free program set for Thursday, December 6<sup>th</sup> at 5:30 p.m. at the Hays Library. Call the Hays office, at 628-9430 to register for this program.



A ServSafe Manager Certification Course will be held on **November 14<sup>th</sup>** from 8:00 am to 5:00 pm at the Cottonwood Extension District – Hays Office, located at 601 Main Street. The ServSafe program is a national certification program designed to teach safe food handling practices to those who serve food to the public. ServSafe in Kansas is provided by K-State Research & Extension in partnership with the Kansas Restaurant and Hospitality Association (KRHA). Neeley Carlson, KRHA, will be the course instructor. The cost for the course is \$113 for KRHA members or \$133 for non-KRHA members and includes the ServSafe 7<sup>th</sup> edition textbook, national certification exam, training materials and refreshments. The course is taught in English, however exams in other languages are available. Please note language preference in registration. Pre-registration is requested in advance to allow for ordering books and materials. Mail registration and payment to KRHA or register online with a credit card at: [www.krha.org](http://www.krha.org) A minimum attendance is required to hold this class.

### SHICK counseling available in the Great Bend and Hays offices

Donna Krug, Cottonwood District Agent, and her husband, John, are certified SHICK counselors and available to help Medicare recipients review their prescription drug plans during the Open Enrollment dates. Appointments in both the Great Bend and Hays offices will be limited so call either office soon.



# Agriculture

## Alicia Boor & Stacy Campbell

### K-State Agronomy eUpdate

An electronic newsletter that comes out each Friday afternoon from the K-State Research & Extension Agronomy Dept. It has timely information for growers, the articles are brief and informative. If you wish to subscribe to this free weekly Agronomy eUpdate. Send your email address to Troy Lynn Eckart at [sprite@ksu.edu](mailto:sprite@ksu.edu).

You can also subscribe to it here:

<https://listserv.ksu.edu/cgi-bin/SUBED1=EUPDATE&A=1>

### AgManager.info

The K-State Research & Extension-Ag Economics web site is an awesome resource!!

This is my go-to web site to answer your questions about leasing arrangements, cash rents, ag law, cost of production, custom rates, upcoming events, and so much more.

To visit it go to [www.agmanager.info](http://www.agmanager.info)

### Midwest Cover Crops Decision Tool – data available for Kansas

A resource available to assist farmers in selecting cover crops to include in field crop rotations. It is easy to use and is a helpful tool, check it out at

<http://mccc.msu.edu/covercroptool/covercroptool.php>

### E-Mail is handy

Periodically on an as needed basis throughout the year I will send out emails to Ag Producers. During the growing season it might be some timely tips or alerts to be checking your crop(s) for pests (diseases & insects) or during the fall and winter of upcoming Extension programs for producers. And K-State Research & Extension has strict rules in place that forbid us to share our mailing or email list to anyone. If you would like to be added to our ag producer email list. Please send your email address to our Office Professional, Theresa Meis at [tam3@ksu.edu](mailto:tam3@ksu.edu)

If you are already on this list but are not getting any emails from me, please check your spam and junk folders first, if you can't find any emails from us, then feel free to send us your email address again.

### Fall Best Time to Spray Thistles

Fall is the best time to spray Musk Thistles in the rosette stage. Because all perennial and biennial plants are preparing for winter by translocating carbohydrates down into their root system in order to have

enough food reserves for Spring growth. Even in late fall after Nov. 1<sup>st</sup>. Thistles can be sprayed effectively up until the ground has frozen. Spraying 10 ounces of Tordon or 3 ounces of Milestone in the Fall can work very well, it is not necessary to add 2,4-D in the rosette stage with the Tordon or Milestone in the early spring or in the fall.

### Fall Best Time to Spray Bindweed

The same applies for bindweed as Musk Thistles spraying bindweed in the fall but prior to a killing freeze, can be an excellent time to treat field bindweed – especially in a year when good fall moisture has been received. This perennial weed is moving carbohydrates deep into its root system during this period, which can assist the movement of herbicide into the root system.

The most effective control program includes preventive measures over several years in conjunction with persistent and timely herbicide applications. The use of narrow row spacings and vigorous, competitive crops such as winter wheat or forage sorghum may aid control. No-till has been very beneficial for managing bindweed by providing routine herbicide treatments through time and not breaking up the root system and dragging root segments around the fields.

### Controlling annual weeds with fall-applied herbicides ahead of corn & sorghum

Fall herbicide applications during late October and through November can greatly assist control of difficult winter annuals and should be considered when performance of spring-applied preplant weed control has not been adequate.

Fall applications have another side-benefit. While it is always important to manage herbicide drift, herbicide applications made after fall frost have less potential for drift problems onto sensitive targets.

### Save the date –

#### Cover Your Acres Winter Conference, Oberlin

This popular and well attended program by growers from several states will be held once again in Oberlin, KS. On January 15-16, 2019. It is the same program both days with concurrent sessions to pick and choose from.

## Options for managing cows through the winter with limited forages

The drought that plagued most of the state through the previous winter and this summer was a perfect storm that has some operations concerned about forages for this winter. There are areas that have limited pasture growth and even with some of the recent rains, the rain may be too late or insufficient to change the pasture situation. Through last winter, around the nation, there were producers that fed more hay than typical and that has used up a significant amount of hay reserves. Given all these factors, cattle producers need to find alternative feedstuffs to maintain current cow numbers. This article will address a few things to think about when trying to stretch forages.



Use of annual forages. With the recent August moisture, producers might be able to grow small grains and brassicas for fall to early winter grazing. If planting prior to September 15, there may be sufficient growth to offer some relief to perennial cool season pastures. All of these fall/winter annuals are high energy and protein feeds that more than exceed a dry, pregnant cow's maintenance requirements. Strip grazing and limit grazing these annuals can increase the stocking density on the paddock and can stretch the grazing days. The annuals that seem to grow the fastest for fall/winter grazing include oats, barley, and all the brassicas (i.e. turnips, radishes, rape). Annual forages are not a silver bullet when other forage resources are limited since they still require moisture and an early freeze can severely inhibit growth.

Substituting hay with a high energy feed. Feeding a starchy feed such as corn is an option in cow-calf operations. Generally, we consider this a "no-no" for the cow operation as it can potentially inhibit voluntary forage intake. Traditionally grass is the cheapest commodity and the resource that producers want to utilize to the greatest extent. However, in limited forage situations cost per unit of energy may favor use of corn or other high-energy feeds. We do need to be aware of the substitution effect that comes into play when doing so. Some report that feeding corn to cows at less than 0.3% of body weight will have limited impact on voluntary hay intake and fiber digestion. Offering corn at levels greater than this can result in reductions in fiber digestion and hay intake. At certain proportions, adding corn to the diet could reduce total energy intake. Nutrition and extension professionals can develop a feeding program that determines how much corn and how much harvested forage should be offered to meet performance objectives. Correctly balancing the diet can result in feeding less hay to the cows, thus extending the forage supply. To more accurately develop a feeding strategy, a forage analysis will be beneficial. The following is an example of how to stretch your hay by feeding a high-energy feedstuff such as corn. Assume your hay is 8% crude protein and 46% TDN and corn averages 8% crude protein and 88% TDN (all dry matter basis). For each pound of corn fed, you can feed 1.9 pounds less hay to achieve a diet that has the same protein and energy as hay alone. Another thing to think about is there are some high energy, and high-protein by-product feeds that can be used as a substitute for hay. These are often a preferred feed because of reduced bloat and acidosis potential since the starch has been removed.

Limit feeding. Nutrient dense diets can be fed to cows, especially if limiting the total amount offered to meet but not exceed requirements. Typically, cows on a high-quality forage can easily consume 2.5% of body weight (dry matter basis) daily. If cows are in good flesh prior to start of feeding, the goal would be to maintain, not gain weight. Thus, feeding a primarily silage ration at 1.8% of body weight could meet cow requirements while extending feed reappear sources. When limit feeding cows the first couple of weeks you will think that they are losing weight. These cows will gaunt as compared to full feed on pasture. If you run them across the scale they will also weigh considerably less. The difference in weight is purely based on rumen fill. Monitor body condition score to evaluate if the ration is meeting goals. Other things to consider when limit feeding cows is that cows will be hungry, and all cows will want and need to eat at the same time, thus a minimum of 24 inches of liner bunk space needs to be provided. Cows should be fed at the same time each day. High-energy, limit fed diets require little time for consumption and leave many hours in the cow's day to find trouble. These cows could also be somewhat more vocal and might do some moderate damage to the facilities (driven by boredom). When limit-feeding cows make sure to mix the salt, mineral, and vitamins into the ration. Do not offer free-choice because they will over consume. **(continued on next page)**

## Options for managing cows through the winter with limited forages (continued)

Ionophore use: Ionophores are a feed antibiotic (veterinary feed directive not required) that alters the rumen microbes to generate higher energy metabolites to the animal. This improvement in efficiency has been demonstrated by research out of Oklahoma State University where cows maintained the same body condition on 10% less hay when consuming an ionophore as compared to cows that did not receive the ionophore. Ionophores are cheap (roughly \$0.02/hd/d) and improve feed efficiency. At this time there is only one ionophore that is approved for use in the reproducing cow (tradename Rumensin).

Sort and feed by body condition and requirements. Sorting cows by need will minimize over and under feeding. If you have the space, place all thin cows and cows with a high nutrient demand (pregnant replacement heifer, early lactation cow) in the same location and offer these cows a more nutrient dense diet. The cows that are in adequate body condition and just need to maintain weight can be fed either a less nutrient dense diet that is cheaper or the same nutrient dense diet at a restricted amount, whichever is most economical. This approach will increase the overall feed efficiency and will result in less waste (overfeeding the fatter cows).

A few other options to consider include:

- Limit access to hay. Some studies have shown that you can remove cows from hay for 12 hours a day and they will consume less hay and maintain the same condition as cows with free choice access.
- Hay feeder type can have significant effects on the amount of hay wasted thus reducing the number of bales that go through a feeder and time to clean up feeding sites.
- Pregnancy check if you haven't already. Make sure to remove cows that have no chance of producing a calf in the short term. Feeding open cows can become very expensive if you have limited resources.
- Graze crop residues.
- Make strategic culling decisions.

As you are making the tough decisions, it will help to have accurate estimates of the available resources, costs, feed analysis, and labor restrictions. Not all of these options will work in every operation but being willing to do an in-depth evaluation of your capabilities will help you to determine what works for you. Take advantage of the resources provided by your local extension unit, nutritionist, and state extension specialist to help evaluate resources to maintain your cow herd.

## TESTING FOR HAY QUALITY

How much did the spring and summer's weather affect the feed value of your hay? You don't know? Then forage test.

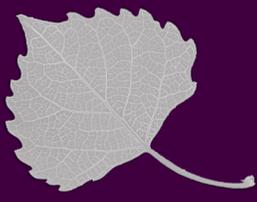
The nutrient concentration of nearly every bushel of corn is similar, but with hay it varies considerably. Why does this happen? Well, there are many causes. For example, leafiness of the hay, or maturity of the plant when your hay was cut, or even how you handled the hay during raking and baling all can affect its feed value.

This year, weather conditions have made things more complicated. This spring's cool, dry weather in many areas caused many folks to delay first cutting. Then summer rains damaged hay while leaf diseases, mature plants, and other factors made much alfalfa lower in quality. Also during summer we had periods of hot and very humid weather that often caused plants to burn off their easily digested nutrients at night, leaving us with hay that looks really good but is high in fiber and low in energy.

Grass hay might be even more difficult to predict. Some fields had fewer seedheads than normal. This might give higher quality hay, but if harvest was delayed in hopes of increasing yield or if summer heat affected grass quality like it affects alfalfa, grass hay quality might actually be lower. And when late growth was stimulated by extra rain, plants used many nutrients for increased tonnage instead of quality.

So you see, this year, just like always, forage testing is important. It is the only way that you can find out for sure ahead of time what the feed value is of your hay.

So gather samples now for testing, before feeding your animals and before it's too late.



# Horticulture

## Rip Winkel

### Did you know...?



Trees are a true gift of nature, benefiting us in so many ways here in this area of Kansas. They add to the aesthetics of the landscape, they act as buffers from adverse weather, and can provide much needed shade in the heat of the summer among other benefits. But in the more arid areas of Kansas in which we live, have you ever wondered what an average, large, mature tree does with the water it absorbs?

For the most part, water enters a tree via the root system by osmosis. These absorbing roots are usually found within 15 inches below the surface of the soil, and are generally located in the area of the “drip-line”. Water along with dissolved mineral nutrients are transported upward (by capillary action) to the canopy of the tree through a thin cellular layer located in the inner bark called *xylem*, continuing until reaching the leaves. The nutrient enhanced liquid is then used by the tree to aid in the complex process of photosynthesis.

This process uses the water acquired by the roots along with carbon dioxide (CO<sub>2</sub>) to convert light energy from the sun into a glucose sugar (chemical energy) and oxygen (O<sub>2</sub>). The sugar will ultimately be used as fuel for the trees activities, including cellulose formation (tree structure) as well as new growth.

The tree will then release O<sub>2</sub> and excess water out of the leaf through its stomata. Stomata are the small apertures, or tiny pores generally located on the underside of the leaf. This loss of water and O<sub>2</sub> through the leaf stomata is called *transpiration*. For all the water taken up by the roots, only 10% of it is used to keep the tree's system healthy and to maintain its growth. The other 90% of the water in this process is eventually dispersed and released into the air.

What is interesting is that a large, fully grown tree may transpire several hundred gallons of water through its leaves on any given hot, dry day, if not more. For example, in the month of a typically hot and dry July,

possibly up to 6,200 gallons of water can be transpired into the atmosphere from that mature tree in your yard. On the other hand, that same tree will lose very little water on wet, cold, winter days. Therefore, water loss is directly related to ambient temperature and humidity. Another way to say this is that almost all water that enters a tree's roots is lost to the atmosphere.

Certainly there are tree species that are more efficient in managing their rate of water loss, having their origins from drier, more arid locations. And, there are other tree types that could drain a swamp if allowed. So, when making plans to plant a tree in your yard, it is great to think about the many benefits that can be had with its placement on your property. But in the same sense, you might look into whether the type (species) of tree you want to plant is best suited for our climate, and how many you are wanting to plant.

Possibly an unpopular question you could ask yourself is, how much water will ultimately be lost into the air by the trees you have, or are planning to place in your yard...water that may be getting harder and harder to come by.

### The Education Corner

Dandelions are well-known, robust weeds; the common name derives from the French '*dent de lion*', meaning 'lion's tooth', which refers to the deeply toothed, deep green leaves, which are arranged in rosettes. It is perennial, and flowers throughout the year. The flowers close at night, and can produce around 2,000 wind-dispersed fruits.

Plants can also regenerate from pieces of the tap root . Dandelions were used as a food source and as a medicine for at least 1,000 years. European immigrants purposely carried seeds to America, where greens were used for salads and teas. Dandelion roots were served as a vegetable course, or were dried and used as a coffee substitute, a practice that was common during the rationing of the Second World War. The flowers were used to make dandelion wine and to make a yellow dye for wool. There has been a recent revival of using the dandelion in these many ways.



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