

River Valley District

K-STATE RESEARCH AND EXTENSION NEWS

rivervalley.ksu.edu

October 2018
Volume 13 #10

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Extension District

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PRUSSIC ACID

If you have ever planted any variety of sorghum or sudan grass for cattle feed you have likely heard of prussic acid. Prussic acid (or hydrocyanic acid) is attached to a cyanogenic glucoside called dhurrin. Once the plant containing dhurrin has been disturbed in some way such as grazing, hail, freeze, or swathed the molecule is broken down with one of the compounds being prussic acid. Prussic acid enters the blood stream from the rumen and prevents cells in the body from receiving oxygen from red blood cells. This causes the animal to die from asphyxiation.

Prussic acid poisoning is not the same thing as nitrate poisoning. Both cause asphyxiation, so clinical signs will be the same. However, nitrate poisoning prevents red blood cells from carrying oxygen by converting hemoglobin to methemoglobin which caused the blood of the animal to be a dark brown or chocolate color. Like stated before, prussic acid prevents oxygen from being received from red blood cells. This causes the blood to be a bright red color.

Prussic acid is common in all sorghum and sudan varieties including the hybrids as well as johnsongrass. The conditions mentioned previously should be suspected of having high prussic acid. Other conditions that could cause high prussic acid are young rapidly growing plants, soils that are high in nitrogen and low in phosphorus and potassium, and drought conditions. Testing soils for adequate phosphorus and potassium allows efficient formation of cells and proper nitrogen utilization. This will minimize the risk of both prussic acid and nitrates.

If you do *not* suspect the forage to be high in prussic acid it is still recommended not to turn hungry animals out on the forage. Make sure they are well fed before putting cattle on to the forage for grazing.

Prussic acid should be tested in forages that are suspected to contain high levels especially in a grazing situation. Most labs can perform a prussic acid test along with forage analysis. When collecting a sample to send to the lab, get a good representation of the field and not the closest to the road. Walk around and get several samples across the field. Place the samples in a sealed bag and mail early in the week and not around holidays to prevent any hold ups. If at all possible deliver the sample to the lab yourself. The earlier the samples get to the lab the more accurate they will be.

If you get your analysis back and you do have high prussic acid, all is not lost. There are precautions that must be taken. If you want to graze the forage that tested high in prussic acid, then wait for about 7 days and retest the forage. If the forage that was high in prussic acid is to be hayed or ensiled, retest the forage after the silage is ensiled or after the hay is cured. Prussic acid is volatile and will dissipate as the forage dries or is ensiled. If you have any questions, stop by the office in Concordia, call 785-243-8185, or email bmelton@ksu.edu.

BSE FOUND IN FLORIDA COW... BUT THERE'S NOTHING TO WORRY ABOUT

On August 29, 2018 reports of a cow with bovine spongiform encephalopathy (BSE), or more commonly known as Mad Cow Disease, were being reported. My first thought was, "That can't be right." However, as I investigated the reports it was in fact clear that the USDA confirmed that a six-year-old cow in Florida was diagnosed with the atypical form of BSE. I was worried that American beef was going to be shut-off from trade markets around the world and our industry was going to be in trouble.

Fortunately, I was wrong. If you are reading this and wondering, "Why haven't I heard about this?" The answer to this is that the cow had atypical BSE. This means that the disease spontaneously developed within the animal. This is the first atypical BSE case since an Alabama cow was diagnosed in 2017 and the 6th diagnosed in the US. The other form of BSE is known as classical BSE. Classical BSE was



the cause of the outbreak in the 1980's in the United Kingdom that eventually became a problem in the United States with "the cow that stole Christmas" on December 23, 2003. The cow that stole Christmas is the only classical BSE case

in the US. Classical BSE is spread to ruminant animals by consuming feed contaminated with the infectious prion agent. The FDA has prohibited the inclusion of mammalian protein in feed for cattle and other ruminants since 1997. The classical form of BSE is known as a transmissible spongiform encephalopathy (TSE) and believed to cause variant Creutzfeldt-Jakob disease (vCJD) in humans. Other forms of TSEs exist in other species as well. In sheep and goats, it is known as scrapie and in deer, elk, and moose it is known as chronic wasting disease.

Only four cases of vCJD have been reported in the U.S. Two of the four patients were believed to have contracted the disease while they were living in the U.K. One of the four was believed to have contracted the disease while the patient was living in Saudi Arabia. The last patient was a US citizen that was born overseas, and it is unclear where the disease was contracted.

The bottom line is that the United States food supply is safe and will continue to be. John Maday wrote an article recently in *Drovers* about this issue and I think his quote says it best, "The BSE story provides an excellent example of science and industry working together to solve a problem and to educate the public regarding the actual risks."

If you have any questions, stop by the office in Concordia, call 785-243-8185, or email bmelton@ksu.edu.

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 resources. When limit feeding cows the first couple of weeks you will think that they are losing weight. These cows will appear 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 bunk space needs to be provided per cow. 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.

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. **by Jaymelynn Farney, Beef Systems Specialist, Parsons, KS.**

MYCOTOXINS IN CORN

As harvest is vastly approaching in the River Valley District, one of the concerns that comes up every year, especially during the dry years, is the dreaded "A" word, aflatoxin. What exactly is aflatoxin? Aflatoxin is classified, along with fumonisins, in corn (another detrimental fungus-caused toxin) and are collectively known as mycotoxins. A mycotoxin is essentially *a fungus produced toxin*. Some questions that commonly come up include: which fungi cause which mycotoxins? What are the concerns with each of the mycotoxins? What are some harvest and storage considerations a producer should consider?

Again the mycotoxins, that we are commonly concerned with in the River Valley District, are each caused by a respective fungus. For example, fumonisins are caused by Fusarium Ear Rot. Fusarium Ear Rot is very distinguishable with its "starburst" pattern of white, pink, or salmon-colored kernels of corn. The kernels may eventually turn tan or brown. Fusarium Ear Rot drastically reduces yield and grain quality and if the grain is used for feed, concerns should be taken when grain is fed to horses and pigs due to the risk of death and can be damaging to the organs of other mammals as well. A few considerations to take into account, when storing Fumonisin infected grain, is to store the grain in as cool and dry of environment as possible (below 50°F) and below 15 percent moisture.

Moreover, one of the most dreaded terms heard when harvesting corn is the word "aflatoxin." Aflatoxins are caused by Aspergillus Ear Rot. How I remember which ear rot causes which mycotoxin is to remember that "aspergillus" and "aflatoxin" both start with the letter "A." Aspergillus Ear Rot's most notable symptom is a gray-green, powdery mold on and between the kernels with symptoms often developing on damaged areas (insects, hail, etc.).

Aflatoxin is very toxic and the FDA has even developed formal ion levels. For instance, corn grain with aflatoxin levels exceeding 20 ppb (parts per billion) may not be sold or transported across state lines. Much like with corn containing fumonisin, corn with aflatoxin should be stored in as cool and dry of environment possible. Grain should also be aerated to help equalize temperatures throughout the grain and stirring may be required to help eliminate hot spots.

If you have any questions feel free to stop by or contact me in the Concordia Office (River Valley Extension District, 811 Washington, Suite E, Concordia, KS 66901) by calling 785-243-8185 or emailing thusa@ksu.edu

WHEAT SOWING– 2018

From about the third week in September, until the last week of October is the optimum time to sow wheat in the River Valley District. The thought of wheat sowing brings up some questions needing to be addressed: What population should I be planting? Is there a difference in population for grain-only versus dual purpose wheat (grazing and grain)?

One of the first questions coming to mind is what is the optimum population? There are many variables in answering this question, but there are also some points to consider when trying to answer it. One point to begin with when considering optimum seeding rate is your location. The River Valley District is split in the middle of Republic and Cloud counties between two different population ranges. The east halves of Republic and Cloud counties, along with Clay and Washington counties want to stay in the range of 900,000-1,125,000 seeds per acre (around 60-75 pounds per acre, assuming 15,000 seeds per pound), while the west halves of Cloud and Republic counties want to stay in the range of about 750,000-900,000 seeds per acre (50-60 pounds per acre, assuming 15,000 seeds per pound). It is important to remember these are only suggested ranges. Soil types, producer management, and other outside factors (like irrigation) greatly influence the optimum seeding rate.

Moreover, a few more considerations to keep in mind are to increase the wheat population after entering into the second week of October for dual-purpose wheat production. Planting at a higher population later on allows compensation for higher rates of winterkill and the wheat will not have the same amount of time to tiller. Moreover, planting at higher populations for dual purpose wheat is a necessity to optimize return for usage of the wheat as a forage for livestock and grain. Higher planting populations, usually 1.5 to 2 times greater at around 1,125,000-1,800,000 (75-120 pounds per acre, assuming 15,000 seeds per pound) help to offset the stress of grazing. Along with seeding rate, another important emphasis should be placed on variety selection. For dual purpose wheat, varieties germinating under warmer conditions (temperatures greater than 85 °F) should be considered.

If you have any questions feel free to stop by or contact me in the Concordia Office, at 785-243-8185 or by emailing me at thusa@ksu.edu.

FALL - A GOOD TIME FOR SOIL TESTS

Though we often think of soil testing as a spring task, fall can actually be a better time. Soil-testing laboratories are often very busy during the spring resulting in a longer turnaround from submission to recommendations. Also, soils in the spring are often waterlogged, making taking samples difficult. If your soil test suggests more organic matter, fall is a much better season because materials are more available than in the spring, and fresher materials can be used without harming young tender spring-planted plants.

Begin by taking a representative sample from several locations in the garden or lawn. Each sample should contain soil from the surface to about 6 to 8 inches deep. This is most easily done with a soil sampler. Each office in River Valley District have samplers that are available for checkout. If you don't have a sampler, use a shovel to dig straight down into the soil. Then shave a small layer off the back of the hole for your sample. Mix the samples together in a clean plastic container and select about 1 to 1.5 cups of soil. This can be placed in a plastic bag, or a soil sample bag that is available at the offices. Take the soil to your local office to have the tests done for a small charge at the K-State soil-testing laboratory. If you have any questions contact me in the Washington office, 785-325-2121 or khatesohl@ksu.edu.

CONTROLLING BROADLEAF WEEDS IN LAWNS

Late October to early November is the most effective time to control broadleaf weeds in your lawn. A few of the major broadleaf weeds that we tend to see are dandelions, henbit, and chickweed. These plants are winter annuals and start to grow in the fall. They spend the winter as small plants and most people don't notice them until they start to flower in the spring. Trying to kill them in the spring, once they are flowering, usually is a waste of time and money.

These three weeds tend to be the hardest to control and the most noticed in lawns in the spring. Dandelions usually produce a flush of new plants in the fall, so they are more easily controlled now because they are actively moving materials from the top portion of the plant to the roots. Henbit and chickweed start germinating in the fall, and are controlled easier when they are young. Herbicides will translocate to the roots and will kill the plant from the roots up.

So what should you do? Spraying herbicides such as 2,4-D, Weed-B-Gon, Weed Free Zone, Weed Out or Trimec in the fall, October to early November, can go a long way toward eliminating these plants. Choose a day that is at least 50° F so the young plants are actively growing and will take up the chemical. The better the weed is growing, the more the weed Killer will move through the plant.

Spot treating will probably be needed early in the spring before they have put on much growth (March) to catch the few plants that germinate late. Use Weed Free Zone, Speed Zone, Weed Out, Weed-B-Gon, Trimec, or any other herbicide that controls broadleaf weeds.

Kelsey Hatesohl

TIME TO PLANT SPRING-FLOWERING BULBS

With fall quickly approaching it's hard to think about next spring, but now is the time to plant those spring flowering bulbs we all love. Late September through October is an excellent time to plant spring-flowering bulbs such as crocus, tulips, and daffodils. These plants need to develop roots in the fall and must meet a chilling requirement over the winter in order to bloom in the spring.

Choosing the right planting location can make a difference on how well your bulbs do in the spring. You need to pick a planting site that has full sun to partial shade. The ideal soil should be a sandy loam mix, but even if you don't have that you can add organic material such as peat moss, compost, or aged bark to improve your current soil. For example, a heavy clay can be amended by mixing in one-third to one-half organic material.

The planting depths of bulbs will vary depending on the type and size of the bulb. For example, tulips and hyacinths are set about 6 inches deep, and daffodils are put 6 to 8 inches deep. As a rule of thumb, bulbs are planted two to three times as deep as they are wide. The planting depth is the distance from the bottom of the bulb to the top of the soil. Large bulbs are normally spaced 4 to 6 inches apart, and small bulbs about 1 to 2 inches. You can plant bulbs in clumps or irregular masses produce a better display, or you can line the edge of your flower beds by planting single bulbs in a row.

After placing the bulbs at the proper depth, you want to slowly replace the soil so you can be sure to have good bulb to soil contact. First replace half the soil back into the hole and add water. Wait until the water is soaked in and then add the remaining soil and water the area again. This process will settle the soil around the bulbs, and will create good aeration as well as good drainage for proper root development. Although there will be no top growth in the fall, the roots are developing, so soil needs to be kept moist but not wet. Mulch can be added after the soil has frozen to prevent small bulbs from being affected by the alternating freeze and thaw of the soil throughout the winter.

Even though you don't see immediate effects of planting bulbs, they will provide you with that pop of spring color, and will add different dimensions to your flower beds. If you have any questions feel free to stop by or contact me in the Washington office, 785-325-2121 or khatesohl@ksu.edu.

SAFETY AROUND PIPELINES

Several times per year we try to provide information on the Dig Safe (811) services and items relating to safety. As we have two major trans-continental pipelines that transect the River Valley District we wanted to focus this month on pipeline safety. There are also a number of natural gas pipelines that run through the area and around communities.

It is important to be able to recognize pipeline location identification markers. Markers are located in the pipeline right-of-way and can be found at road/street crossings and at fence lines. The markers indicate the approximate location but not the depth of the buried pipeline. The markers display the product being transported, the name of the pipeline operator, and a telephone number to contact in the case of emergency. As landowners, it is important that we do not damage or tamper with the markers and that we do our best to keep the right of way clear of any obstructions such as fences, trees, shrubs, and structures that might impede the routine safety checks and maintenance of pipelines.

If one must do any excavating or digging near a pipeline be sure to call 811 for a utility locate service. Some pipelines will have an employee on site during construction to help maintain the safety of everyone involved and the integrity of the pipeline. In any case, it is vital to research and observe any set-backs or clearances that might be required by state law or by the pipeline operator.

The two major, transcontinental pipelines through the district are operated by NuStar Pipeline Operating Partnership L.P. and TransCanada operator of the Keystone Pipeline System. The NuStar web site is: www.nustarenergy.com and the emergency number is 1-800-759-0033. The TransCanada web site is: www.transcanada.com and their company email is: public_awareness@transcanada.com. The emergency number for TransCanada is 1-800-447-8066.

Although rare, pipeline leaks may occur on major pipelines as well as something as small as the gas or propane line to your house. Many pipeline gases are colorless and odorless and so it is important to recognize the signs of a leak using your senses of sight, sound, and smell.

Underground leaks of gases may be identified by a patch of dead or dying vegetation in an otherwise green area. Hazardous liquids produce a sheen or film on standing water and highly volatile liquids may produce a fog-like vapor cloud in areas of high humidity. Blowing dirt may be observed as gas escapes from the ground or bubbles may be seen coming through standing water. Vapor and "ground-frosting" may be visible at high pressure leaks regardless of temperature. In extreme cases, an explosion and intense fire with a dense smoke plume may be observed.

Leaks may produce noise from a slight hissing to a loud roar depending upon line pressure and the size of the leak.

Finally, some products in a pipeline have an odor but others are odorless. In the latter case, companies typically add odorants to help us detect possible leaks.

If a leak is suspected then one should dial 911 and if you have the emergency contact for the utility, call it as well. Be sure to vacate the area and if you can do so safely warn others against going into the area. While near a suspected leak do not do anything that would create a spark of any kind. This would include things such as starting an engine or motor; striking a match; using a phone; using a cell phone to call or text; turning lights on/off; or using any electrical device such as a garage door opener, handicap door opener, elevator, etc. Never drive into a vapor cloud area or touch, breathe, or come in contact with a leaking product.

Grant Writing Workshop

Grants are a vital piece in your community's funding puzzle...and *you* can do it.

October 23rd
9:30 am to 3:00 pm
North Central Kansas
Technical College
Beloit, Kansas
\$25 Registration Fee

What you will learn:

- Sources of data for community needs.
- Where to find grants.
- Elements of a great grant proposal.
- Practicing the grant elements.

To register please contact:

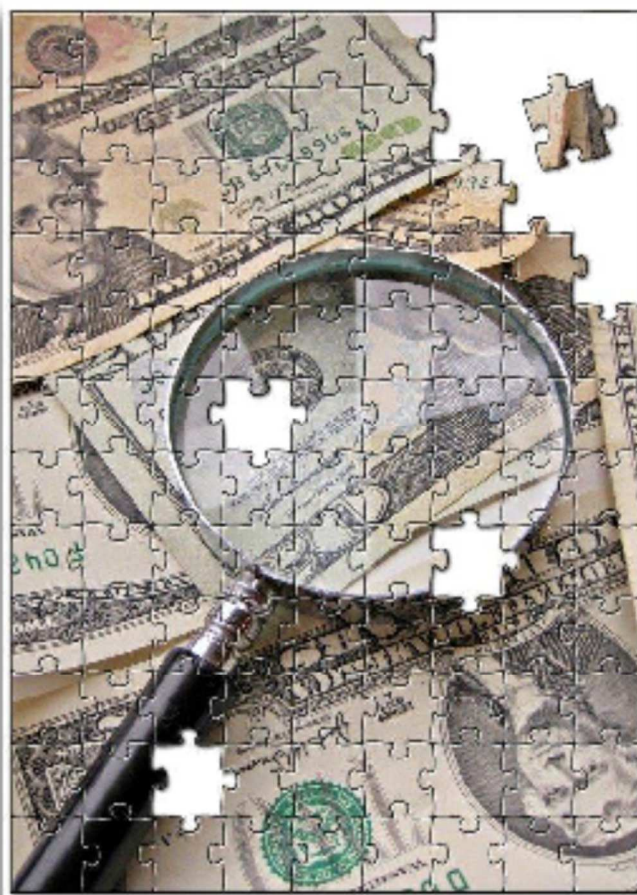
Post Rock Extension District - Beloit Office
(785) 738-3597

awoods@ksu.edu

Make checks payable to:

- Post Rock Extension District

Deadline to Register - October 12th



Presented by: Nancy Daniels
Community Vitality Specialist
K-State Research and Extension


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DANE G. HANSEN FOUNDATION SUMMER COMMUNITY INTERNSHIPS

The Dane G. Hansen Foundation, in cooperation with K-State Research and Extension, is offering NW Kansas communities an opportunity to host a summer intern or multiple interns.

The Dane G. Hansen Foundation community internship initiative matches Northwest Kansas communities or organizations that have a specific need with upper-level college students to address that need during a summer internship.

Communities or organizations first identify a community improvement project such as downtown revitalization planning; community website, calendar or marketing; park or trail improvement; design for re-purposing an old building; or a host of other possibilities, and then apply to host an intern to assist with the project.

Job descriptions for summer internship positions are developed once projects are identified, and students apply for the various positions.

Students are able to get the hands-on experience needed when looking for a job and communities benefit from their knowledge. It's a win for both.



In the River Valley Extension District communities in Cloud and Republic County are eligible for the intern program. If you have any questions or if you would like more information then contact the K-State Research and Extension NW Area Community Vitality Specialist, Nadine Sigle at nsigle@ksu.edu or at 785.346.6256

Kansas Forest Service Conservation Tree & Shrub Seedlings Fall Orders—being taken now!

The Kansas Forest Service is now accepting fall orders for containerized Conservation Tree and Shrub Seedlings as well as non-plant supplies such as tree tubes, weed barrier squares, and marking flags. Orders will be accepted now through October 15 with shipping typically happening within one day of receipt of the order. The cost is \$55 per unit of 25 containerized plants.

Order forms may be picked up at any K-State Research and Extension Office or printed off at: www.kansasforests.org. Trees may be ordered by phone at 1-888-740-8733 or online at: <http://kfs.mybigcommerce.com>.

Allowable uses for trees include: windbreaks, woodlots, wildlife, riparian plantings, Christmas trees, or education.

EXTENSION FALL FLING OCTOBER 8

Enjoy the fun, fellowship and learn at the upcoming Fall Fling on Columbus Day at the 4-H Conference Center on the Clay County Fairgrounds. All interested men and women in the area are encouraged to attend. Please bring a salad. Silverware and a beverage are provided. Refrigeration is available for the salads.

Morning Speaker: Jamie Spikes, a semi-retired nurse, will present "Buttons Galore". She encourages everyone to do something with your buttons: embellish your clothes, display them, and decorate various items with them. Jamie will share some of her framed and preserved button pieces and show the button necklaces and bracelets she makes. The items will be available for purchase with proceeds to go to charity.

Afternoon Speakers: A healthy normal 14 year old boy who excelled in school and was active in band, track, and 4-H suddenly drastically changed. The Mike and Melanie Musselman family will share about their journey on "The Brain Inflamed: Losing and Saving Luke". Their son Luke was finally diagnosed with PANS (Pediatric Acute Onset Neuropsychiatric Syndrome) after much treatment and challenges. Mike and Melanie continue to fight for his treatment and to help him get back to the life he knew before PANS.

The Clay County Homemaker Extension women invite everyone to attend this free event.

AGENDA-FALL FLING- OCTOBER 8

REGISTRATION, COFFEE & TEA	10:30 -11:00 a.m.
WELCOME, AWARDS & RECOGNITION	11:00 a.m.
By: Carol Adams & Deanna Turner	
"Buttons Galore"	11:15 a.m.-Noon
By: Jamie Spikes	
BLESSING, SALAD LUNCHEON & FELLOWSHIP	Noon
"The Brain Inflamed: Losing and Saving Luke"	1pm
By: the Mike & Melanie Musselman Family	
DOOR PRIZES	2pm

Commercial Pesticide Applicator Training November 5-7, 2018 Webster Conference Center, Salina, KS

Sponsored by: K-State Research and Extension Integrated Pest Management & Pesticide Safety Education Program

Questions: Contact Frannie Miller at 620-241-1523

Registration: conferences.k-state.edu/commercialpesticide

Information: available at River Valley District Offices.

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PERMIT NO. 3****Address Service Requested****RIVER VALLEY DISTRICT****“2018 UP-COMING MEETINGS & EVENTS”**

DATE	TIME	PROGRAM	LOCATION
Oct 8	8-2:30pm	Extension Fall Fling	Clay Center-4-H Conference Center-Fairgrounds
Oct 11	6:30pm	4-H Informational Meeting	Clay Center-RVED Office
Oct 15-Dec. 7		Medicare Part D Enrollment	Contact your local RVD office for an appointment
Oct. 19-21		Kansas Sheep Shearing School	Manhattan-KSU Sheep and Meat Goat Center
Oct 21	4:30pm	4-H Informational Meeting	Washington-Washington County High School
Oct 23	6:30pm	4-H Informational Meeting	Belleville-RVED Office
Oct. 26-27		Kansas Sheep Symposium	Hutchinson-Atrium Hotel & Conference Center
Oct 30	6:30pm	4-H Informational Meeting	Concordia-RVED Office
Nov. 15	8:00-4:00	K-State Swine Day	Manhattan-KSU Alumni Center