

Cottonwood Extension District K-State Research & Extension News

Cottonwood Extension District #17

Summer Edition 2018

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July 11-15— Barton County Fair—Great Bend

July 14-21—Ellis County Fair—Hays July 18—Story Walk-Great Bend

August 15—Employee ServSafe Class—Great Bend

August 23—ServSafe Managers Certification Course—Hays

August 16-17—Risk and Profit Conference August 30—Preplant Wheat School-Great Bend

September 24th—Family Day

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Help support Extension—Get a great e-book collection of recipes and news columns compiled by Linda Beech—Former Cottonwood District FACS agent

A word from the Director:

I am happy to announce the Cottonwood Extension District is celebrating its' first anniversary on July 1st! We are happy to have you on our e-mail list so that we can bring you quarterly updates of the many educational opportunities available in our district.

We welcomed Rip Winkel to the District Horticulture position in November and he has worked to establish an active Master Gardener program in Barton County while providing support for an experienced Master Gardener team in Ellis County. 4-H and youth agents, Susan Schlichting and Berny Unruh, embraced the Monarchs on the Move grant program early in 2018. They have seen their team of twenty — two young people step up to teach over 1000 students of all ages about the life cycle of the Monarch butterfly. Farmers and producers have had a variety of educational opportunities related to crops and livestock production thanks to the efforts of Stacy Campbell and Alicia Boor, our District Agriculture and Natural Resource Agents. Linda Beech and I provided families with educational programming related to many important topics; from food safety, nutrition and health, to family financial management.

With Linda's decision to retire at the end of May, our Cottonwood District Board is carefully considering the need to continue providing a strong Family & Consumer Science program going forward. Continue to watch our website for a position announcement.

Our Cottonwood team wouldn't be complete without the two office professionals who keep our 'behind the scenes' operation running smoothly. Theresa Meis - Hays office, and Brenda Walton – Great Bend office, do a great job, greeting the public and keeping up with the finances and updating the website. During the summer months we are also enjoying the enthusiasm of our two interns; Melea Hladky, in the Hays office, and Marissa Randel, in the Great Bend office.

As you can see, much has been accomplished in the 1st year as the Cottonwood Extension District and we look forward to an exciting year ahead!

Donna Krug, District Director



4-H Youth Development Susan Schlichting & Berny Unruh











The Monarchs on the Move grant program is winding down! Team members have been very busy reaching out to youth across the state of Kansas with the message of support for the habitat that Monarch butterflies need to survive and thrive. They have visited many out of school sites, camps and taught at the state 4-H Discovery Days and KS 4-H Insect Spectacular. They also had the opportunity to support the planting of several hundred milkweed plants in the Outdoor Classroom at Hays High that was part of a sub-grant from Monsanto through the Monarch Watch program in Lawrence. Thanks to the Master Gardeners and other community members who came out very early one June morning to plant all those plants!

This has been an awesome learning experience for these young leaders. We have watched their confidence grow as they made arrangements for classes, gave presentations in a variety of settings. They learned a great deal about patience and flexibility through the process, as well.

Summer Interns in the Cottonwood Extension District

We are pleased to welcome two student interns to the Extension Offices in Hays and Great Bend this summer. Be sure to say hi when you meet them at an upcoming event.



Hello everyone! My name is Melea Hladky. I am from WaKeeney, Kansas, and I am currently going to school for Business Management at NCK Tech. In my spare time, I enjoy spending time with family and my puppy, Royal. I am very excited to get this opportunity to work with the Cottonwood District Extension office here in Hays.

Hey everybody! I'm Marissa Randel, and I am from Seneca, Kansas. I am currently attending Cloud County Community College in Agriculture. I was a very active 4-H'er for 12 years in the Pony Express 4-H Club. Working in the Cottonwood District Extension office here in Great Bend is giving me an interesting look at the other side of 4-H. I look forward to meeting you this summer!

It's County Fair Time!

BARTON COUNTY FAIR

The theme for the 2018 Barton County Fair is **Everyday Heroes – Ordinary People, Extraordinary Courage**. 4-H members are busy working on 4-H projects they will exhibit at the county fair or at the pre-fair events.

The first Pre-Fair event is Thursday, July 5th. Fiber Arts, Clothing and Fashion Revue will be judged in the morning and the public **Fashion Revue** will be held at the Trinity Lutheran Church Fellowship Hall at 7 pm. The public is invited!

The **4-H Dog Show** will be held Saturday, July 7th beginning at 8:30 am in Expo III at the Expo grounds west of Great Bend. Members will compete in Showmanship, Obedience, Agility and Rally.

While fairboard members and superintendents may already working on decorations and displays for the fair, the official set up is Monday, July 9th at 5 pm. The opening day is Wednesday, July 11th with entries accepted from 8 am –noon. Judging in Expo II begins on Wednesday and continues on Thursday. Livestock shows are Thursday and Friday.

Thursday morning is the **Business Appreciation Breakfast** hosted by Extension, 4-H, the Fairboard and the Chamber of Commerce. Pancakes and Sausage will be served by the Dick Dougherty family beginning at 7:30 am. Thanks to the 4-H Clubs many friends of 4-H will go home with some amazing door prizes.

The complete Fair Schedule can be found at www.bartoncountyfair.com Saturday is Kid's Day with Mutton Bustin', Pedal Pull and other activities. Sunday is the final day with the **4-H BBQ** served from 11:30 am—1:30 pm, followed by Awards at 2 pm and the **Sale of Champions** at 2:30 pm. Please come support our 4-H youth at the Barton County Fair!

ELLIS COUNTY FAIR

"Summer Days ~ Country Ways" is the theme for this year's Ellis Co. Fair. I'd imagine that our local 4-H'ers are using those "summer days" to get their projects finished up and ready to enter at the Fair.

The Ellis County Fair entry deadline for 4-H members AND for community members wishing to enter in Open Class is Monday, July 9. Entries are made on the www.fairentry.com website. Search for Ellis County Fair. The Ellis County Fairbook is on-line at www.elliscountyfair.com You'll also find the schedule of events posted to their page.

There's lots going on at the Fair. A few highlights from the 4-H side of the Fair. . .

4-H Fashion Revue is Thursday, July 12, 6:30 in the Unrein Family building. Come check out some of the latest back to school fashions created or purchased by the 4-H members. Free to the public.

Were you a 4-H livestock showman? If so, consider entering the "Old Timer's Showmanship Contest" on Tuesday, July 17, 7 p.m. Visit with a 4-H member and arrange to show their animal. Registration form is on the Elliscountyfair website.

4-H Pet & Cat Show is Wednesday, July 18, 1 p.m. in the Deutschfest Hall. Always interesting pets and pretty kitties entered in this show. Come join us in the air conditioning as these 4-H'ers show their pets.

Wednesday morning is the **4-H Swine Show**. **Sheep and Meat Goats** are judged Wednesday evening. The 4-H **Dairy, Bucket Calf and Beef Shows** are Thursday evening. **Champion Fitting and Showing** is Friday evening at 6 p.m. this year.

You've seen Chopped on tv? The **4-H Food Challenge** is the 4-H version of this contest. It's a high energy contest for 4-H'ers of all ages. Come watch their creative use of "top secret" ingredients as they prepare original dishes for the judges to review.

Enjoy a cold drink and a fair food favorite at one of the **4-H Foodstands** during the Fair.

Finally, the **4-H BBQ and Livestock Sale** have moved to Saturday evening. 4-H'ers are selling BBQ tickets now. Join us for a great bbg beef / pork meal and come on over to the sale to support our 4-H members.

There's a lot more going on—Horse shows, dog show, rabbits, poultry shows, exhibits and more. Hope you'll join us for this year's Ellis County Fair!



Horticulture

Rip Winkel

Growing Your Veggies in Straw.

Over the last couple of weeks, I have heard "straw bale gardening" being mentioned several times. So when I saw this article come out this week from KSU (Manhattan) I thought I would pass it on as I am sure this will be of interest to many of you.

Straw Bale Gardening

There has been growing interest in straw bale gardening. What better place to try this than in Kansas where straw is so abundant. First, some pointers.

- The bales mentioned here are referring to the "small" straw bales that are about 2 feet high and 3 feet long.
- Place the bale on edge so the twine doesn't rot. (On the small bales, there are usually two strands of twine that keep the bale together running lengthwise. Place the bale so that you can see the twine on the side, horizontally.)
- Bales can be placed anywhere including concrete or asphalt. Just make sure there is plenty of sun and watering is convenient.

Bale Conditioning

- Water the bales and keep them wet for 3 days. The bale will start to heat up as it breaks down.
- On days 4, 5 and 6, sprinkle fertilizer on the top of each bale with 1 cup of ammonium sulfate (21-0-0) or ½ cup of urea (46-0-0). Water the fertilizer in. This speeds the decomposition process.
- On days 7, 8 and 9, continue to sprinkle fertilizer on each bale but cut the amount in half.
- Stop fertilizing on day 10 but keep the bale moist.

• Check for heat on the top of each bale for each day after day 10. When the temperature drops to below 100, the bale can be planted.

Planting

- Pocket Method: Make a hole for each plant several inches deep and fill with growing medium.
- Flat Bed Method: Cover the top of the bale with 3 to 4 inches of growing medium.
- The growing medium can be well-aged manure, compost or potting soil.

Number of Plants per Bale

•	Cantaloupe:	2
•	Cucumber:	3-4
	Peppers:	3-5
•	Squash (winter)	2
•	Squash (summer)	2-3
	Tomatoes	2-3

Watering

Watering will be the most challenging aspect of management. The straw will dry quickly. A drip irrigation system on a timer can work well but may take some time to set up. Gardeners may also use soda bottles or milk jugs to water by poking drip holes in the lid, filling with water and then turning upside down next to the target plant.

This information was taken from an excellent publication from Washington State University that includes much more detail as well as images. See http://cru.cahe.wsu.edu/CEPublications/FS109E/FS109E.pdf

Try it, and have some fun!

The Education Corner

Did you know that Nitrogen....?

Nitrogen is an element *sui generis*, in that it composes 80% of the earth's atmosphere. One could literally say that plants are submerged in a sea of nitrogen,

most of which get little to no benefit from this fact. And the reason? Plants cannot utilize atmospheric nitrogen, which is a relatively inert, or non-reactive form called dinitrogen (N₂). There is, however, a comparatively large group of plants classified as legumes (such as clover, beans, alfalfa, peanuts, etc.), by which most have the capability to convert the inert nitrogen into ammonia (NH₃), a usable form of nitrogen by plants. This process is called "nitrogen fixation", and is accomplished through a symbiotic association between the roots of the legume and rhizobium bacteria which are found in the soil. The bacteria invade the root and multiply within its cortex cells. The plant supplies all the necessary nutrients and energy in the form of photosynthesis-derived sugars for the bacteria. The bacteria then fixates nitrogen into a form usable by plants; *quid pro quo*. Plants by themselves cannot fix nitrogen, but definitely need it in one form or another to make necessary amino acids and proteins. Because legumes form nodules with rhizobia, they have high levels of nitrogen available. And, their abundance of nitrogen is beneficial not only to the legumes themselves, but also to the plants around them. Although there are other sources of nitrogen in the soil, they are not always provided at the levels required by plants, making the symbiotic relationship between legumes and rhizobia highly beneficial.

Family Day - Making Everyday Special



The theme for Family Day this year is "Making Everyday Special." Whether driving the kids to soccer practice, enjoying family dinner, or tucking little ones into bed, it's important to remember that those everyday activities have a lasting effect on your children. Each of these moments offers an opportunity to connect, share and really listen to what's on their mind. As children age, it is vital to keep those lines of communication open, especially as they start feeling increased pressure to start engaging in risky behavior including smoking, drinking or using other drugs. Adolescence is the critical period for the initiation of risky drug use and its conse-

quences. Nine out of 10 Americans who meet the medical criteria for addiction started smoking, drinking, or using other drugs before age 18. Preventing or delaying teens from using nicotine, alcohol, or other drugs for as long as possible is crucial to their health and safety.

Founded in 2001 by Center on Addiction, Family Day works with organizations across the country to educate parents about how everyday activities, like sharing a meal, playing a game, or asking about their day, can make a difference in the life of a child. Each year Family Day is celebrated on the fourth Monday of September (September 24th). To learn more about Family Day log on to www.casafamilyDay.org.

ServSafe Classes offered in the Cottonwood District



Two opportunities for anyone interested in the ServSafe program are set for August. Read on for more details.

An Employee ServSafe Class will be offered in Great Bend on **Wednesday, August 15th.** This class for food handlers will be held from 1:30 – 4:30 p.m. at the Cottonwood Extension District – Great Bend office, located at 1800 12th Street. As an Extension educator, I am happy to offer this training to food handler employees. This course is based on the 6th Edition of the ServSafe Food Handler Guide. Participants who complete the class will receive a certificate. The cost to register for the August 15th class is \$10 and registration may be completed on line by going to the KRHA website, www.krha.org

A ServSafe Manager Certification Course will be held on **Thursday**, **August 23rd**, 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 7th 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 A minimum attendance is required to hold this class.



It's Melon Season! Serve Them Safe!

Summer and fresh, juicy melons are a perfect match! Whether you grow them or buy from somewhere else, handling and prepping them safely at home is important. It is easy to forget that melons grow on the ground. They are exposed to pests and microorganisms from the soil. Here are some tips to safely prepare your melon.

- Select a melon with no imperfections. Damage to rinds can cause mold growth or other bacteria to travel to the inside of the melon.
- Before cutting the melon, wash your hands. Be sure equipment and utensils are clean and sanitized, including your sink.
- Place the melon under running water and scrub the outside rind with a produce brush.
- Cut the melon and rinse the pieces as you go. Serve immediately. Store any cut melon leftovers in the refrigerator.

Attention Family and Consumer Science Program Development Committee

Even though the weather is hot and we are just celebrating the Barton and Ellis County Fairs, it is time to begin thinking about Fall FCS programs in the Cottonwood Extension District. I have sent out a Doodle poll to the 12 PDC members from Barton and Ellis County to find a date and time that works the best for a meeting in Hays. I will be in touch via e-mail with the FCS PDC members with additional details.

Join Donna for StoryWalk in Great Bend

Mark your calendar for Wednesday, July 18th, and visit My Backyard Playground for a StoryWalk activity. The book "Count on Pablo" will be displayed on white boards in the playground area at 2715 18th Street in Great Bend. After the children have fun reading the book there will be samples of a healthy snack to enjoy

Changes are Coming to Nutrition Facts

The Food and Drug Administration is updating the Nutrition Facts label and changes will be required starting Jan. 1, 2020. The updates include:

- Added sugars will have a separate line directly under "Total Sugars."
- Serving sizes are based on what people actually eat at one time. These figures are being updated for the first time since 1993.
- Calories will be more noticeable in bigger and bolder font, you can't miss them.
- Updated Daily Values reflects how much of the nutrient is needed in a 2,000-calorie diet. Five percent is considered low, 20 percent is considered high. Sources: www.foodinsight.org/go-further-with-food-get-to-know-nutrition-facts-label and www.fda.gov/Food/



Does Pectin Expire?

Canning season will soon be here. Here is a question and answer that may help you plan ahead and save a trip to the grocery store. So does pectin expire? In a word, yes. It is not a food safety issue, but rather a



food quality issue. If pectin is past the expiration date on the package, the product made with this pectin will not gel or work as it should. This is true for both liquid and dry pectin. Dry pectin is made from citrus peel while liquid pectin is made from apples. They are not inter-changeable in recipes. For best results, use the type of pectin listed in the recipe. www.rrc.k-state.edu/preservation/jamjelly.html

Agriculture



Alicia Boor & Stacy Campbell

Checklist for Ranchers for their Beef operation

August is when forages are maturing, weaning time is approaching, and weather dictates several key management decisions. Here is a short checklist by Dale Blasi, Extension Beef Specialist to help organize the management decisions and tasks for the end of the summer.

Breeding Season

- Given high feed price inputs, ruthlessly cull all unsound cows from the herd. Cull cows that do not conceive after three services by a fertile bull.
- Limit the breeding season. Remove bulls after 60 days with cows, 45 days with heifers. These methods contribute to a more uniform calf crop, makes winter feed management easier and increases the success rate of next year's breeding season.

Cow Herd Nutrition

- Provide ample amounts of clean, fresh drinking water.
- Conduct an inventory of forage needs for the winter feeding period.
- Plan ahead and price availability of byproducts, such as wheat-middlings, dried distillers grains, etc. prior to typical seasonal price increases.

Herd Health

- If pinkeye is likely to be a problem, consider the following preventive and therapeutic measures. Preventive:
 - •Make sure the herd is receiving adequate vitamins and trace minerals in their diet.
 - •Consider using a medicated trace mineral package.
 - •Consider vaccination for pinkeye and IBR (consult your local veterinarian).
 - •Control face flies.
 - •Clip pastures with tall, coarse grasses that may irritate eyes.

Therapy:

- Administer an intramuscular injection of long-acting oxytetracycline when symptoms are first noticed.
- Shut out irritating sunlight by patching eyes, shade, etc.
- Control flies.
- Consult your veterinarian.
- Consider revaccinating for the respiratory diseases in any animals that will be taken to livestock shows.
- Vaccinate suckling calves for IBR, BVD, PI3, BRSV, and possibly pasteurella at least three weeks prior to weaning.
- Revaccinate all calves for blackleg.
- Vaccinate replacement heifers for brucellosis (4 to 10 months of age).
- Monitor and treat footrot.



Selecting a new wheat variety

When making a decision for a new wheat to plant on the farm, please use all resources and information available including replicated performance plots conducted by the K-State Experiment Stations. They are small plots but replicated 4 times to smooth out the variability that can occur in any field, for more accurate yield data. To view the Experiment stations results go to http://www.agronomy.k-state.edu/services/crop-performance-tests/index.html

Or visit our web site at www.cottonwood.ksu.edu and go to the Crops and Livestock page and then crop resources.

Agriculture-Alicia Boor & Stacy Campbell

What Producers Should Be Thinking About.....

Forage/Pasture Management

- •Enhance grazing distribution with mineral mixture placement away from water sources.
- •Observe pasture weed problems to aid in planning control methods needed next spring.
- •Monitor grazing conditions and rotate pastures if possible and(or) practical.
- •If pastures will run out in late summer, get ready to provide emergency feeds. Start supplemental feeding before pastures are gone to extend grazing.
- •Harvest and store forages properly. Minimize waste by reducing spoilage.
- •Sample harvested forages and have them analyzed for nitrate and nutrient composition.
- •Plan for sufficient standing pasture for winter grazing needs.

•For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore (feed additive) type supplement.

General Management

- •Avoid unnecessary heat stress Don't handle and/or truck cattle during the heat of the day.
- •Repair, replace and improve facilities needed for fall processing.
- •Order supplies, vaccines, tags and other products needed at weaning time.
- •Consider earlier than normal weaning, but have a marketing plan in place.



Depression and Suicide in Agriculture Related Fields are on the Rise

When looking at hazardous occupations in the world, agriculture is consistently in the top ten. There are many factors that go into this: the large equipment, working long days and longer evenings, and the repetitive heavy labor that just wears down the body over time. Additionally, there is an alarming statistic that is on the rise thus making agriculture even more dangerous. According to the Center for Disease Control, professions that are ag related sadly have the highest rate of suicides in the US. In July of 2016, 84.5 out of 100,000 in Ag took their lives compared to a national average of 13.4 per 100,000. The disparity is disturbing and unfortunately the number is on the rise with the uncertainty in agriculture at this time. There is help available specifically to the agriculture community, assistance from individuals who understand a producer's lifestyle and are ready to help.

The Kansas Agriculture Mediations Services at (800) 321-3276 can help producers with several programs in place. They will gather information from you and can connect you with financial advisors, legal advice, lawyers, and can also connect people with mental health facilities close to your location. One phone call can get you in touch with many people that can help your unique situation. Also, the National Suicide hotline is (800) 273-8255 and provides 24/7 free and confidential support. Some people do not want to talk on the phone. You can also text 741741, or chat online at imalive.org.

Most of all, watch out for your family and friends. If you feel that something is wrong, ask. It is also good to implement strategies that can help daily. Some practices you can implement are: Taking a walk, get a massage, try guided restful breathing practices, listen to relaxing music, or just take 10 minutes to write down your blessings. Positive thoughts and practices can go a long way to improving an outlook on life. And most of all, if you need help, seek it. Your friends and family need you.

Spray Kochia and Russian Thistle Before August in Wheat Stubble

With the abundance of precipitation the weeds are growing, well like weeds. Keep in mind that Kochia and Russian Thistle are day length sensitive and usually begin flowering in late July and early August, and set seed shortly after that. Controlling Kochia and Russian Thistle in June or July is very important to prevent seed production.

Pre-plant Wheat School, Barton Co.

On Thursday, August 30th there will be a Pre-plant Wheat School in Great Bend beginning at 2:30 until 5:00 p.m. with a light supper following. It will be held at American Ag Credit, 5634 10th Street, Great Bend.

Some topics of discussion: best mgt. practices, fertility, pest control (weed & disease), seed treatments, successful wheat production strategies, Q & A. Speakers will be Romulo Lollato, wheat production specialist, Erick DeWolf, wheat disease specialist and Dallas Peterson, weed control specialist.

RSVP is requested for the meal count by Aug. 28th, call the Great Bend office at 620-793-1910 or email Brenda at bwalton@ksu.edu

Risk and Profit Conference – August 16-17, 2018

Markets and Government: Trade, Taxes and Transition

An annual conference hosted by the Department of Agricultural Economics that provides an opportunity for key agricultural decision makers to interact with each other, with faculty and ag producers on important topics in agriculture.

To see the conference schedule & breakout session topics go to: www.agmanager.info

Register online: http://commerce.cashnet.com/ KSUagecon

Questions? Rich Llewelyn at rvl@ksu.edu_785-532-1504.

FSA Election Info.

The Ellis Co. Farm Service Agency will be holding an election for one ag producer for a position on the County Committee in the local administrative area #1. Which is the west one-third of Ellis County between 100th Ave and 200th Ave. Farm owners, operators, tenants, and sharecroppers of

legal voting age can vote in the Ellis Co. Committee Election, if they are eligible to participate in any FSA program and they are in the local administrative area in which the election is being held.

Important dates for FSA Co. Committee Election: June 15 – First day to file nomination forms August 1 – Last date to file nomination forms at local FSA office

November 5 – Ballots mailed to eligible voters December 3 – Last day to return voter ballots January 1 – Elected Committee members & alternates take office

Importance of controlling volunteer wheat

Volunteer wheat is a host to wheat curl mites, hessian flies, wheat aphids (bird cherry-oat aphids and greenbugs, etc).

The most important threat from volunteer wheat is the wheat streak mosaic virus complex. These virus diseases are spread by the wheat curl mite. These tiny, white, cigar-shaped mites are to small to be seen with the naked eye. The curl mite uses the wind to carry it to new hosts and can travel up to a mile or more from volunteer wheat.

If volunteer wheat and other hosts are not controlled throughout the summer and are infested with wheat curl mites, the mites will survive and even increase in numbers, until fall and could infest newly planted wheat at that time. Wheat curl mite infestations are the cause of infections of wheat streak mosaic, High Plains mosaic virus, and triticum mosaic virus. Wheat varieties with the wsm2 gene for resistance to wheat streak mosaic (Oakley CL, Joe, and Clara CL) remain susceptible to High Plains mosaic virus and triticum mosaic virus, so controlling volunteer wheat is still important even if you plant a variety with resistance to wheat streak mosaic virus.

Wheat Plot Results

Both the Barton and Ellis County plot results are attached. They are also posted on our web page, copies can be picked up in our office.



Agriculture-Alicia Boor & Stacy Campbell

Post-harvest weed control in wheat stubble

Post-harvest weed control in wheat stubble is very important to conserve soil moisture and prevent weeds from going to seed and adding to the weed seedbank. Thin wheat and recent rains will likely require earlier and more intensive weed management efforts this year than in some years.

The standard treatment for many years to control weeds and volunteer wheat in wheat stubble was glyphosate plus 2,4-D LVE. If kochia was present, we may have added some dicamba, but it generally wasn't added in the eastern areas of Kansas because of drift concerns to soybeans. Glyphosate plus 2,4-D and/or dicamba remain a primary option for weed control in stubble, but with the development of glyphosate-resistant weeds, these options certainly don't work as well or quickly as they used to.



Glyphosate used to be fairly foolproof, even on big weeds, but that is no longer the case. Dicamba and 2,4-D probably weren't contributing as much to the weed control in those tank mixes as we may have thought, so now we are struggling to achieve acceptable control. Timing and weed size is much more critical with almost all other herbicides than it was with glyphosate. Consequently, it is very important to try and apply those treatments before the weeds exceed 4 to 6 inches tall, but that often doesn't happen. In addition, treatment before weeds exceed 4 inches tall may require a number of applications to manage multiple flushes of weeds, which adds significantly to the cost of control.

Higher rates of the 2,4-D and dicamba may improve control, but in most cases we probably don't want to exceed 1 qt/acre of 2,4-D or a pint/acre of dicamba. Sharpen is another herbicide tank-mix partner that may help with control of the pigweeds and provide some residual control. Sharpen works best with the addition of methylated seed oil and can provide some pretty good burndown on smaller weeds, but if the weeds are very big, it tends to burn the tops and plants eventually resume growth. Sharpen requires complete coverage so using 15 to 20 gallons/acre spray solution is important.

One herbicide alternative to glyphosate that can work well to control emerged pigweed and kochia is paraquat. Paraquat is a contact herbicide, so spray coverage is critical. Spray volumes of 20 gallons/acre or higher are preferred, especially on larger and thicker weeds. Paraquat also needs to be applied with a nonioinic surfactant or oil concentrate to enhance surface coverage of the plant foliage. A tank mix with atrazine will enhance control and provide some residual weed control if planning to plant corn or sorghum next spring. Likewise, metribuzin can be tank-mixed with paraquat if rotating to soybean to enhance control and provide some residual. If planting wheat this fall, a tank mix with Sharpen is an option to provide some residual control. Recent work at K-State suggests that making the paraquat application as soon as possible following wheat harvest allows for better coverage and more effective control especially of the pigweeds.

Another herbicide that can be added to the burndown treatments for residual broadleaf weed control in wheat stubble is flumioxazin (Valor and others). Flumioxazin has been used as a preplant/preemergence treatment in soybeans for years, but it hasn't been used much in wheat stubble because of the cost. However, with the recent reduction in flumioxazin prices, it may be worth considering as part of our stubble management treatments for residual weed control, especially the pigweeds. Wheat can be planted 30 days after 2 oz/ac, or 60 days after 3 oz/ac Valor application, if at least one inch of rain occurs between application and planting. Corn, sorghum, cotton, sunflowers, or soybeans can be planted the following spring following flumioxazin treatment. Residual weed control with flumioxazin will depend on rainfall for activation, just as with preplant treatment in soybeans.

Information provided by Dallas Peterson, Weed Management Specialist

2018 Cottonwood District - Barton Co. Wheat Variety Demonstration Plot



Number of Varieties: 16; Dryland; not grazed

Soil Type: Harney

Soil Sample recommendation: 0-6" - 9 ppm P, 40 lb. P, 270 ppm K, pH 5.0

Fertility: planting 70 lb. actual NH3 & 55 lb. P applied

Planting date: October 19, 2017

Seeding Rate: 70 Lbs./Ac

Row spacing: 10"

Seed treatment: Yes & no insecticide Prior Crops: Wheat Conventional

Top-dress fertilizer: No

Herbicide: 2,4-D, .10 oz Glean

Fungicide: No

Soil Moisture: Av. 28-30" Subsoil moisture at planting

Location: 4 Miles E of Susank & 1 North, then 3/8 mile E on NE 200

Harvested: 6-28-18; Legals: Beaver NW 19 16 12 Average, max., & min. plot yields - 48, 63, 40

Variety	Yield (bu/a)	TW(lb/bu)	Moisture	Test Av.%
T158	40	58	11.7	84
Oakley	48	57.9	11	100
 SY Rugged 		56.5	11.2	
WB 4462	47	57.3	10.9	98
LCS Pistol	45	55.5	10.5	95
Larry	46	58.2	10.3	96
WB Grainfield	41	56.3	10.2	87
 SY Monument 		56.9	10.4	
TAM 114	43	59.1	10.7	90
LCS Chrome	50	56.2	9.8	105
Tatanka	54	56.5	10.5	113
WB WinterhawK	49	58.3	10.6	102
WB 4721	48	59.3	10.2	101
Zenda	52	58.2	10	109
WB 4303	46	53.3	9.4	96
Joe	63	57.9	10.3	133
Average	48	57.2	10.4	

Company request yield not reported

Note: When making a final variety selection, it is highly recommended to base your decision on replicated yield data; such as the K-State Research & Extension Agricultural Experiment Stations wheat performance tests. As well as your past crop and field history. Be sure and evaluate all aspects including varieties, disease, fertilization, insects and growing conditions. Please note this is not a replicated plot, it is for demonstration purpose only. For replicated data go to http://www.agronomy.k-state.edu/services/crop-performance-tests/winter-wheat/

2018 Ellis County No-Till Wheat Variety Demonstration Plot

Cooperators: L & N Farming



Number of Varieties: 13, dryland, not grazed

Field Location: 2.5 mile north I-70 Victoria exit, 1.5 mile west Fairground Rd.

Soil Type: Harney

Fertility: planting 8 lb. N, 27 lb. P applied at planting in the row

Planting date: October 13, 2017

Seeding Rate: 90 lbs./Ac

Row spacing & planter: Crustbuster 4030 all plant - 7.5" spacing

Seed treatment: Fungicide, certified seed

Prior Crops: Corn 2017, Milo 2016, Wheat 2015, Wheat 2014, Corn 2013, Milo 2012, Wheat 2011

Top-dress fertilizer: 50 lb. 32-0-0

Size of Plot: 30' X 480' Herbicide: Finesse preplant

Fungicide: No

Soil Moisture: 15" @ planting Harvested: 5-Jul-18

					Multi-yr. avg.	
Variety	Yield (bu/a)	TW(lb/bu)	Moisture	% of test Avg.	2nd	3rd
WB 4721	20	57.8	12.6	121	25	
LCS Pistol	18	56	12.8	110		
Tam114	15	57.3	13.2	92		
Larry	15	55.8	12.9	91		
WB 4462	15	54.2	13.3	90		
Joe	16	57.1	13	101	27	
WB Grainfield	16	56.3	14	102	35	39
Oakley CL	18	58.2	12.9	113	26	42
LCS Chrome	16	56.7	12.8	99	28	
T158	14	55.8	13.1	89	29	38
Tatanka	16	56.7	13.6	98	26	
WB Winterhaw	16	58.1	13.4	100		
* SY Monumen	t	56.2	13.5			
Average	16	56.6	13.1		28	38

^{*}company request yield not reported

Note: When making a final variety selection, it is highly recommended to base your decision on replicated yield data; such as the K-State Research & Extension Agricultural Experiment Stations wheat performance tests. As well as your past crop and field history. Be sure and evaluate all aspects including varieties, disease, fertilization, insects and growing conditions. Please note this is not a replicated plot, it is for demonstration purpose only. For replicated data go to http://www.agronomy.k-state.edu/services/crop-performance-tests/winter-wheet/



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