



Cottonwood Extension District

K-State Research & Extension News

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4-H Youth Development-Susan Schlichting & Berry Unruh



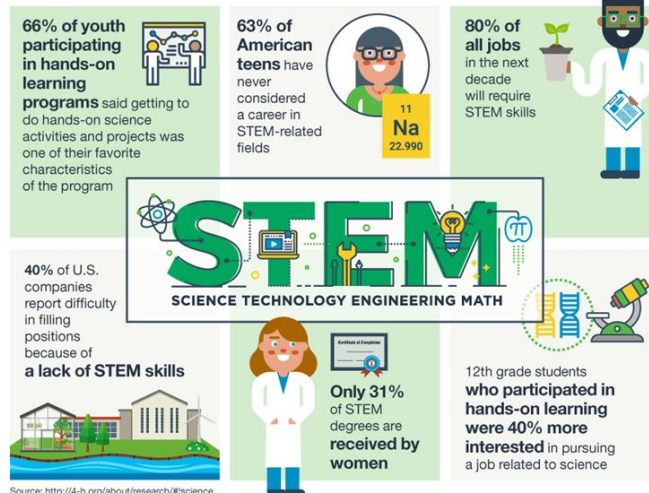
4-H National Youth Science Day 2017

4-H National Youth Science Day (NYSD) is celebrating 10 years of inspiring grade school students through a special science experiment. Every year thousands of youth take part in the National Science Challenge focusing on important STEM topics and issues.

This year's exciting theme for NYSD is Incredible Wearables. From watches and eyewear to fashion and virtual reality headsets, wearable technologies are fast becoming the must-have accessory for trendsetting people around the world. Wearable technologies didn't start out as trendy however – one of the world's first wearable technologies was the hearing aid! Wearable technologies are now used in industries around the globe, from education and sports, to health, fashion, entertainment, transportation and communication. Even agriculture is entering the wearable space with bio-metric ear tag sensors that can identify and signal illness in animals (<http://quantifiedag.com/about/>).

This year's challenge will see youth use the engineering design process to build a prototype wearable technology that will gather data to help solve a real-world problem.

4-H is uniquely positioned to help youth in and out of the classroom to embrace science, technology, engineering and math through time tested, research based, "hands-on" learning experiences. As you can see from the infographic below, we have work to do in getting our youth prepared to enter the workforce. Watch for more to come as we share the National Youth Science Challenge in classrooms around the area.



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4-H Youth Development

Susan Schlichting & Berny Unruh



Cottonwood Extension Youth to Celebrate National 4-H Week

For the 75th consecutive year, millions of youth, parents, volunteers and alumni across the country will be celebrating *National 4-H Week* during the first full week of October. Cottonwood Extension 4-H will leverage National 4-H Week this year by showcasing the incredible experiences that 4-H offers young people, and will highlight the remarkable 4-H youth in our community who work each day to make a positive impact on those around them.

4-H alumni around the country are always the first to acknowledge the significant positive impact 4-H had on them as young people; the opportunities and experiences that 4-H provides youth empowers them to become true leaders. In fact, research has shown that young people in 4-H are almost four times as likely to contribute to their communities, and are twice as likely to engage in Science, Technology, Engineering and Math (STEM) programs in their free time.

Local 4-H Clubs celebrate National 4-H Week in many different ways. There are clubs that celebrate 4-H Sunday to start the week. All our young people in Cottonwood District are encouraged to wear a 4-H t-shirt each day of the week. Window displays and 4-H banners also let the public know what amazing things our 4-H youth are doing.

4-H participates in Service Challenge

To end the National 4-H Week celebration, 4-H members in Cottonwood District will take part in the Kansas 48 Hours of 4-H Service Challenge.

The goal of 48 hours of 4-H is to challenge 4-H members in every Extension Unit to take time to make an impact on their community.

In Great Bend, members have selected the Brit Spaugh Zoo as their 48 Hours of 4-H project. On Sunday afternoon, October 8th, 4-H families and other community members will bring rakes and help get the zoo in tiptop shape.

Research has proven that participation in 4-H has a significant positive impact on young people. Recent findings from the Tufts University *4-H Study of Positive Youth Development* indicate that, when compared to their peers, young people in 4-H are nearly four times more likely to contribute to their communities.

For more information about how you can get involved in 4-H as a member or as a volunteer leader, contact the Cottonwood Extension District office in Great Bend at 620-793-1910 or in Hays 785-628-9430 or visit our Extension website at www.cottonwood.ksu.edu





Family and Consumer Science

Linda Beech & Donna Krug

Make a HEALTHY Food Donation

When donating food for a community food drive at holiday time—or anytime—choose foods that provide maximum nutrition from each food group of MyPlate. Consider dried or evaporated milk, canned chicken, tuna, salmon and beans, canned fruits and vegetables—especially dark green and deep orange varieties, tomatoes and tomato sauces, whole grain cereals, peanut butter and 100% fruit juices.



If you need ideas—for yourself or to share with your group—check out these resources from K-State Research and Extension;

- “Healthy Food Donations” 3/page flyer at www.cottonwood.ksu.edu, click on Ellis County Office
- “Donating Safe and Nutritious Foods to Food Pantries and Soup Kitchens” fact sheet at www.bookstore.ksre.ksu.edu/pubs/MF3352.pdf

“Spend Some, Save Some, Share Some” at TGIF-Family Night Out

Thank goodness it’s Family Night Out! Join Linda Beech on **Tuesday, October 24 at 6:00 p.m.** at the First Presbyterian Church, 2900 Hall Street in Hays, for a workshop on basic budgeting. Family Night Out, a free program for families with children ages birth-10, is co-sponsored by Early Childhood Connections and the Center for Life Experiences. Enjoy a free meal, free supervised child care and the opportunity to join other families for a program and interactive discussions. Call 785-623-2430 or 785-259-6859 by noon the day before to make your reservation for meals and childcare.

Real World 101 at FHSU

Tuesday, November 14, 7:00- 8:00 pm
Stouffer Lounge, FHSU Student Union
2nd floor

The Ellis County Extension Community Development program committee is partnering with Hays Area Young Professionals and Fort Hays State University to present "Real World 101," a program to



help college students ease their transition into the "real world."

Recent graduates will lead round table discussions on dealing with student debt, digital citizenship and the economics of renting vs. buying. The free program is informative for anyone entering the "real world" soon-- because growing up isn't easy!

Meals Under Pressure

Monday, November 20, 5:30-7:00 pm,
\$7 per person- includes a meal
Cottonwood Extension District- Hays
Office, 601 Main, Hays



Electric pressure cookers are a hot item! Are you considering asking for- or giving- one as a holiday gift?

Join us to learn more about how these electric “multi-cookers” work and how to use them. Erin Petersilie, Walnut Creek District Extension Agent, will talk about the pros and cons of this countertop appliance, different features, food safety considerations and what to look for when buying an electric pressure cooker. The cost for the demonstration program is \$7 per person and includes your meal of foods prepared in the cooker. Seating is limited, so register and pay fees at the Cottonwood Extension District office, 785-628–9430, 601 Main Street, Suite A in Hays.

Cottonwood District Agents Receive NEAFCS Awards

Cottonwood District FCS agents Linda Beech and Donna Krug will receive communications awards from the National Extension Association for Family and Consumer Sciences at their national conference on October 19.

- Linda Beech- 1st place national award in Written News
- 2nd place regional award in TV/ Video
- Donna Krug- 2nd place regional award in Publications

Additionally, Kansas will be recognized with a 3rd place national health & wellness award for Walk Kansas, the statewide health initiative from K-State Research and Extension. Congratulations!

Turkey Fundamentals

Thanksgiving is almost here. To help make the meal easier, here are some tips from the USDA Meat and Poultry Hotline:



- Buy enough turkey. Figure one pound per person for a whole turkey. This will allow for some leftovers, too.
- Plan thawing time. The rule of thumb is 24 hours per 4-5 pounds of turkey in the refrigerator. Thawing in cool water will cut the time to about 30 minutes per pound; change the water often to keep the water cool and ensure food safety. Do NOT thaw at room temperature (or warmer) as this will allow bacteria to grow.
- Don't rinse your turkey. Rinsing does not remove bacteria, but it does splatter your sink, faucet and counters with turkey juices, creating a cross-contamination hazard.
- A turkey is done when cooked to 165°F measured with a food thermometer in the thickest part of the breast and thigh.
- The minimum oven temperature for roasting turkey is 325°F. It is not safe to cook poultry at lower oven temperatures.

Electric Roaster and Slow Cooker Liners Available

Serving a big meal? Want to make the clean-up easier? The Hays Office has electric roaster and slow cooker liners for sale. The cost for either size is \$3 for a box of two liners. Stop by the Extension Office, 601 Main in Hays, to purchase the liners.



Global Handwashing Day- October 15

October 15 is designated as Global Handwashing Day. The theme, "Our Hands, Our Future", is a reminder that handwashing protects a person's health and other aspects of life.

Handwashing with soap is the most effective and inexpensive way to prevent death for millions of children in developing countries every year. Despite its lifesaving potential, handwashing with soap is seldom practiced.

Even in the United States, where soap is plentiful, handwashing doesn't happen as often as it should. Make handwashing a health habit!

Four Day Throw Away

Perishable, high-protein leftovers should be eaten, frozen or discarded within four days. That's the "4-Day Throw Away" rule!



Fixing Funky Foods

Each year more than 20,000 new foods arrive on grocery store and convenience store shelves. The next time you are in the grocery store, take a moment to look around at all the new foods available to purchase. These "funky foods" are the focus of this educational program presented by Donna Krug, Cottonwood District Family & Consumer Science Agent. Donna will share the fact sheet describing many unusual fruits, vegetables and grains, describing the nutritional value and preparation methods. So, join us **Wednesday, October 11th, at noon at the Great Bend Activity Center, 2715 18th Street in Great Bend.** You may get to sample something you have never tried before. Please **RSVP if possible by calling the Cottonwood Extension District – Great Bend office at 793-1910** to ensure adequate supplies.

Medicare Part D Open Enrollment

Each year from **October 15 through December 7** Medicare Part D (prescription drug plan coverage) enrollment takes place. Many people find it challenging to navigate the web site to sign up for Medicare drug plans. SHICK Counselors are available to help you with the Part D sign up. SHICK stands for Senior Health Insurance Counseling for Kansas. Our Cottonwood Extension District is actually served by two different Area Agencies on Aging. Ellis County residents are served by the Northwest Kansas Area Agency on Aging, located at 510 West 29th, Suite B, in Hays. Their phone numbers are: 785-628-8204 or 800-432-7422.

Barton County residents are served by the Southwest Kansas Area Agency on Aging, in Dodge City. Locally, though, six counselors, will make appointments in Great Bend. The Extension office located at 1800 12th Street in Great Bend is served by SHICK counselors, John and Donna Krug; phone # (620)793-1910. The RSVP office in Great Bend, directed by Lin Hogg, has four counselors to help you get enrolled. Their phone number is: (620)792-1614. There is no charge for these counseling services.

It is a good idea to do a comparison each year during open enrollment, especially if you have had changes in medication. Don't wait until the last week of open enrollment to schedule an appointment!

If you have questions, feel free to contact Donna Krug at (620)793-1910.



Agriculture & Horticulture

Alicia Boor & Stacy Campbell

Fall is an important time to finish chores to help your landscape next spring. Weather you have had experienced issues with weeds, need to work on your garden, or just are looking to improve your landscape for the following year, here are a few tips on what you can get completed now for a better spring.



Weed Control in the Fall

Every spring, I receive a lot of plants into the office for identification, and for advice on how to control the weed that is invading their lawn. Much of the time these plants are winter annuals or perennial weeds that are too established in the spring to get much control over. If you have dandelions, henbit or chickweed in your lawn, then now is the time to spray and get a better handle on the weeds. I have a short piece from Ward Upham, K-State Research and Extension's horticulture expert that gives you more information about the how's and whys of fall weed control.

Late October to early November is the most effective time to control broadleaf weeds in lawns. Dandelions usually produce a flush of new plants in late September, and the winter annual weeds henbit and chickweed should have germinated in October. These young plants are small and easily controlled with herbicides such as 2,4-D or combination products (Trimec, Weed-B-Gon, Weed-Out) that contain 2,4-D, MCPP and Dicamba. Even established dandelions are more easily controlled now than in the spring because they are actively moving materials from the top portion of the plant to the roots in the fall.

Herbicides will translocate to the roots as well and will kill the plant from the roots up. Choose a day that is 50 degrees or higher. The better the weed is growing, the more weed killer will be moved from the leaves to the roots. Cold temperatures will slow or stop this process.

Weed Free Zone (also sold under the name of Speed Zone) contains the three active ingredients mentioned above, plus carfentrazone. It will give a quicker response than the other products mentioned especially as temperatures approach 50 degrees.

Working soils in the fall

Though we often think of soil testing as a spring chore, 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. Many K-State Research and Extension offices have such samplers 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 container such as a resealable plastic bag.

Take the soil to your county extension office to have tests done for a small charge at the K-State soil-testing laboratory. A soil test determines fertility problems, not other conditions that may exist such as poor drainage, poor soil structure, soil borne diseases or insects, chemical contaminants or damage, or shade with root competition from other plants. All of these conditions may reduce plant performance but cannot be evaluated by a soil test.

Fall is the preferred time to prepare garden soil for next spring's vegetable garden. Spring is often wet making it difficult to work soil without forming clods that remain the rest of the season. Fall usually is drier allowing more time to work the soil when it is at the correct soil moisture content. Even if you work soil wet in the fall and form clods, the freezing and thawing that takes place in the winter will break them down, leaving a mellow soil the following spring. (continued on next page)

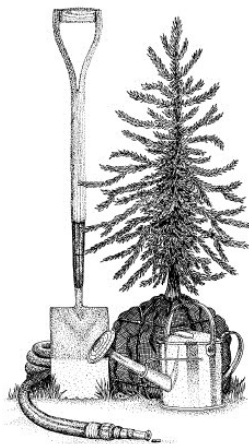
Insects often hide in garden debris. If that debris is worked into the soil, insects will be less likely to survive the winter. Diseases are also less likely to overwinter if old plants are worked under. Also, the garden debris will increase the organic matter content of the soil. Working the debris into the soil is often easier if you mow the old vegetable plants several times to reduce the size of the debris.

Fall is an excellent time to add organic matter. Not only are organic materials usually more available in the fall (leaves, rotten hay or silage, grass clippings) but fresher materials can be added in the fall than in the spring because there is more time for them to break down before planting. As a general rule, add 2 inches of organic material to the surface of the soil and till it in. Be careful not to overtill. You should end up with particles like grape nuts or larger. If you work your garden into the consistency of dust, you have destroyed the soil structure.

Planting Trees in the Fall

The fall season can be an excellent time to plant trees. During the spring, soils are cold and may be so wet that low oxygen levels inhibit root growth. The warm and moist soils normally associated with fall encourage root growth. Fall root growth means the tree becomes established months before a spring-planted tree and is better able to withstand summer stresses. The best time to plant trees in the fall is early September to late October. This is early enough that roots can become established before the ground freezes. Unfortunately, certain trees do not produce significant root growth during the fall and are better planted in the spring. These include beech, birch, redbud, magnolia, tulip poplar, willow oak, scarlet oak, black oak, willows, and dogwood.

Fall-planted trees require some special care. Remember, that roots are actively growing even though the top is dormant. Make sure the soil stays moist but not soggy. This may require watering not only in the fall but also during the winter months if we experience warm spells that dry the soil. Mulch also is helpful because it minimizes moisture loss and slows the cooling of the soil so root growth continues as long as possible.



Tips to avoid subsoil compaction during row crop harvest

Soil water content is a critical factor in soil compaction potential. Moist soils are the most susceptible to compaction. There are different types of soil compaction, but the deep compaction is the main concern at harvest time. Soil compaction occurs when soil particles are pressed together, limiting the space for air and water. The results are decreased permeability, moisture and nutrient stress, and the reduced exchange of gases.

Deep compaction is related to the maximum axle load and is not reduced by distributing the weight across more tires or larger tires. Deep compaction is very difficult to remove with tillage as it occurs at a depth that is beyond the depth of most tillage implements. For example, a moist soil can be compacted to a depth greater than 18 inches by a 10-ton axle load. Removing compaction at that depth will require more horsepower. As the depth of tillage doubles, the necessary horsepower increases by four-fold.

Much agronomic research has been conducted on subsoil compaction. The conclusions are that axle loads greater than 10 tons per axle can be very destructive to soil structure and lead to decreased crop yield potential. These yield effects will be most severe in a dry year, and less so in a wetter year, since soil strength increases as soils dry.

Harvest time is when most fields experience the heaviest loads from combines, silage harvest, and grain carts. Consider the following example:

- An *empty* 1,050-bushel grain cart weighs ~19,700 lbs.
- A *full* 1,050-bushel grain cart weighs ~78,500 lbs. (assuming grain weight is ~56 lbs. per bushel).
- Assume the cart transfers about 8,000 lbs. to the tractor through the wagon tongue.
- The grand total for this example is **70,500 lbs.**
- If the grain cart has two axles, that equals **17.6 tons per axle.**
- A 12-row combine full of corn often exceeds 20 tons per axle.

Of course, producers must traffic fields at harvest time. Two key points for minimizing compaction from heavy axle loads are to limit traffic when fields are wet, and to confine the majority of traffic to end rows when possible. Keep in mind that the first wheel pass causes 70 to 90 percent of the total soil compaction, so preventing random, unnecessary traffic routes on the field is very beneficial.

DeAnn Presley, Soil Management Specialist

Fall Best Time to Spray Thistles

Fall is the best time to spray Musk Thistles in the rosette stage. Even in late fall after Nov. 1st. Thistles can be sprayed effectively up until the ground has frozen. Spraying 12 ounces of Tordon or 4 ounces of Milestone in the Fall seems to work 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.

Ellis County Noxious Weed Department –

1197 280th Ave in Hays, KS -is now taking triple-rinsed plastic 30 and 55 gallon chemical drums until October 31th. For more information, please call their office at 628-9445.

Save the date:

Cover Your Acres Winter Conference (CYA) in Oberlin, January 16-17, 2018

Basal Bark & Cut-Stump Herbicide

Applications for Control of Woody Plants on Rangeland

Fall and even into the winter time can be an excellent time to treat unwanted stands of locust trees. Scattered stands of individual trees should either be treated individually using the basal bark method (for labeled plants less than 4 -6 inches in diameter) or the cut stump treatment method. The basal bark and cut stump treatments will not be effective if the plants cannot be treated down to the soil line. Avoid conditions where water (or snow later in the season) prevents spraying to the ground line.

The chart below are the results of a locust tree control study done in Ellis County by Keith Harmony, Range Scientist at the Hays Ag Research Ct. Several hundred trees were treated over a two year period. Always read and follow the label directions for proper application.

Honey Locust Trees, 3-8" diameter trees
Herbicide Applied September 2012 or 2013

| Treatment | % Control |
|---|-----------|
| 1. Remedy (25%) + diesel (75%)/basal bark | 76 |
| 2. Milestone (5%) + oil (95%)/basal bark | 97 |
| 3. Milestone (10%) + water (90%)/cut stump | 99 |
| 4. Dicamba (33%) + 2,4-D (2%) + water (65%)/cut stump | 84 |
| 5. Remedy (25%) + diesel (75%)/cut stump | 54 |

Fall Soil Sampling: Instructions for sample collection and submission to K-State Soil Testing Lab

Soil testing provides producers and homeowners important information concerning the fertility status of the soil. This information can lead to better crops and reduce costs by guiding management decisions like the type and amount of fertilizers to apply. If you plan to do your own soil sampling and use the K-State Soil Testing Laboratory, the following provides specific information on soil sample collection methods and mailing instructions.

- To take a sample, you will need a probe, auger or spade, and a clean pail. (If you're also having the soil analyzed for zinc, be sure to use a plastic container to avoid contamination from galvanized buckets or material made of rubber.) You will also need soil sample containers and a soil information sheet from your local Extension office or fertilizer dealer. You can also order soil sample bags online from K-State Research and Extension by clicking [here](#).
- Draw a map of the sample area on the information sheet and divide your fields into uniform areas. Each area should have the same soil texture, color, slope, and fertilization and cropping history.
- From each area, take a sample of 20-30 cores or slices for best results. At the very minimum, 10-15 cores should be taken per sample. Mix the cores thoroughly in a clean container and fill your soil sample container. For available nitrogen, chloride, or sulfur tests, a subsoil sample to 24 inches is necessary.
- Avoid sampling in old fencerows, dead furrows, low spots, feeding areas, or other areas that might give unusual results. If information is desired on these unusual areas, obtain a separate sample from the area.
- Be sure to label the soil container clearly and record the numbers on the soil container and the information sheet.
- Air dry the samples as soon as possible for the available nitrogen test. (Air drying before shipment is recommended, but not essential, for all other tests.) Do not use heat for drying.

Fill out the information sheet obtained from your Extension office, or download a sheet [here](#). Take the samples to your local Research and Extension office for shipping. Samples may also be sent directly to the lab by placing them in a shipping container. Information sheets should be included with the package. Shipping labels can be printed from the Soil Testing Lab website listed below. Mail the package to: **Soil Testing Laboratory, 2308 Throckmorton PSC, 1712 Claflin Road, Manhattan, KS 66506-5503**

A listing of the types of soil analysis offered, and the costs, is available on the Soil Testing Lab web site, <http://www.agronomy.k-state.edu/services/soiltesting> . You can also contact the lab by email at soiltesting@ksu.edu and by phone at 785-532-7897.

For more information on the proper procedures for the Soil Testing Laboratory, see K-State publication MF-734 at: <https://www.bookstore.ksre.k-state.edu/pubs/MF734.pdf>

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