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Climate Impacts on Cropping Systems

in Eastern Nebraska

Tyler Williams *Extension Educator*

Nebraska is located on the western edge of the Corn Belt with 30-inches of precipitation annually in the southeast corner to less than 15-inches annually in the western panhandle. Ninety-three percent of the state's land is in agricultural production. Nebraska ranks third nationally for corn grain production (1.6 billion bushels in 2014) and fifth nationally in soybean production (289 million bushels in 2014).

Corn and soybeans cover 9.3 and 5.4 million acres in Nebraska, and most of Eastern Nebraska, including Lancaster County (see map). In many cases, soil type, slope, development or other land features limit the ability to produce corn and soybeans, so pasture or other crops are used.

Corn and soybean rotations are the dominant rotation utilized in Eastern Nebraska cropping systems, which may be vulnerable to projected climate trends and extreme events. The timing of critical periods of farmer operations and crop development (planting, vegetative growth, reproduction and harvest) are similar between corn and soybean.

The growing season for corn is typically mid-April to October and mid-May to late-September for soybeans. The reproductive period and most critical growth period for both crops, is usually in mid-July to early-August. The overlap of these critical periods creates a higher risk for whole-farm impacts from extreme events.

Weather and Climate Risks

Nebraska has a highly-variable and extreme climate and there are numerous climate and weather-related risks that have, and will continue, to impact agriculture in Nebraska. The current trends and projected climate changes for Nebraska (see table below), illustrate climate and the associated extreme weather events are not static.

The risk of severe drought and heat waves during the summer pose a threat to corn and soybean crops, especially in non-irrigated areas. An increase in spring and fall precipitation decreases the number of field work days for harvest and planting. Severe weather, such as hail, tornadoes, high winds and floods, also pose a threat to eastern Nebraska during the peak crop-growing season. An extended growing season may provide a bigger window for crop production, but may alter pest growth. All of these threats increase the risk of crop loss, economic stress on the farm and the community and increased dependency on insurance.

Adaptation and Resiliency

Farmers have always adapted their operation to be more resilient to climate and weather impacts; however, there are always new strategies and management practices to explore. No-till management may be the best, and widely utilized management tool to reduce weather impacts. No-till farming increases surface residue cover, which reduces soil erosion and will also reduce soil moisture loss through evaporation.

Reducing evaporative losses will help mitigate the impact of increased



Land cover map for 2015 in southeast Nebraska. Map from USDA CropScape — Cropland Data Layer

Corn
Soybeans
Grass/Pasture

temperatures and drought conditions. Continuous no-till farming will enhance soil structure, increasing water infiltration rates and potentially reduce the "wait-time" to re-enter a field for planting after spring rains. The addition of cover crops may also increase resiliency to projected climate impacts, especially reducing water erosion by increasing soil resistance to detachment.

Many Eastern Nebraska fields are sloped, which leads to some erosion even with the adoption of no-till. Heavy rainfall events may leave gullies that need repair at the end of the season. Cover crops can be planted on these repaired gullies to prevent erosion during the fall and spring.

The projected increase in the growing season length would provide additional growing days for cover crops, providing a greater chance for successful establishment and growth. The value of cover crops for resiliency to climate-related risks is a relatively new topic and needs more

see CLIMATE IMPACTS on page 4

Climate Trends and Projections for Nebraska's East Central (includes Lancaster County) and Southeast Climate Divisions The table shows the trends (long-term and short-term) and projections for the Palmer Drought Severity Index (PDSI), precipitation and temperature.

	Palmer Drought Severity Index Trend (PDSI) ¹ (index value/decade)		Total Precipitation Trend (inches/decade)			Maximum Temperature (°F/decade)		Minimum Temperature (°F/decade)	
	April-Oct.	June-Aug.	April-May	June-Aug.	SeptOct.	March-May	June-Aug.	March-May	June-Aug.
East Central	1895-2015: +0.03	1895-2015: +0.03	1895-2015: +0.10	1895-2015: -0.04	1895-2015: -0.01	1895-2015: +0.5	1895-2015: 0.0	1895-2015: +0.2	1895-2014: +0.2
Nebraska	1980-2015: -0.07	1980-2015: -0.08	1980-2015: +0.41	1980-2015: -0.08	1980-2015: +0.08	1980-2015: +0.2	1980-2015: -0.2	1980-2015: +0.2	1980-2014: +0.1
Southeast Nebraska	1895-2015: +0.02	1895-2015: +0.03	1895-2015: +0.06	1895-2015: -0.00	1895-2015: -0.02	1895-2015: +0.1	1895-2015: -0.1	1895-2015: +0.2	1895-2014: +0.2
	1980-2015: -0.04	1980-2015: +0.07	1980-2015: +0.29	1980-2015: -0.03	1980-2015: -0.05	1980-2015: +0.6	1980-2015: -0.2	1980-2015: +0.2	1980-2014: +0.2
	Future Projections ²								
High Emissions Scenario	Decrease	Decrease	Increase	Increase/Decrease	Increase/Decrease	Increase	Increase	Increase	Increase
Low Emissions Scenario	Decrease	Decrease	Increase	Increase/Decrease	Increase/Decrease	Increase	Increase	Increase	Increase

¹The PDSI is a weekly index using temperature, precipitation and soil moisture to reflect long-term drought. Positive values reflect wetter than normal and negative values reflect drier than normal (Scale: -4.0=Extreme Drought, 0.0=Normal, +4.0=Extremely Moist).

²The Future Projections are based on climate models using two potential greenhouse gas emission scenarios and show direction of change. Historical data from http://Climate.gov and future projections are from Understanding and Assessing Climate Change: Implications for Nebraska.

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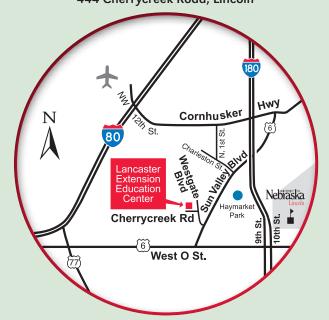


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NEBLINE FOOD & HEALTH

Reducing the Size of Recipes

Alice Henneman, MS, RDN Extension Educator

If you're now cooking for one or two with the same recipes you used for a larger family, you may struggle with eating the leftovers. They may still taste great by the second day, but by the third or fourth day, perhaps, not so much.

The good news is many recipes can be cut in half or thirds. Here are some guidelines to help you adapt a larger recipe to a smaller one.

It may be easier to make the entire recipe for baked goods and freeze half.

When reducing recipes, you



may need to use smaller saucepans, skillets and baking pans. The time for baking smaller amounts of food may be less.

The standard size egg for recipes is the large egg. To halve an egg, break it, mix it together with a fork and use 2 tablespoons. Refrigerate the rest and use in an omelet or scrambled eggs within two days.

A 9 x 13 x 2-inch pan holds 14–15 cups; when halving a recipe use a square 8 x 8 x 2-inch pan or a round 9 x 2-inch pan. When using a different pan size, try and keep the depth of food the same. Reduce the oven temperature by 25°F when substituting a glass pan for a metal one.

To help divide recipes, remember:

- 1 cup = 16 tablespoons
- 1 tablespoon = 3 teaspoons
- 1 cup = 8 fluid ounces
- 1 fluid ounce = 2 tablespoons
- 1 pound = 16 ounces (weight)
- 1 pint = 2 cups• 2 pints = 1 quart
- 1 quart = 2 pints

REDUCING THE SIZE OF RECIPES				
When the recipe says:	To make 1/2 of a recipe, reduce to:	To make 1/3 of a recipe, reduce to:		
1/4 cup	2 tablespoons	1 tablespoon + 1 teaspoon		
1/3 cup	2 tablespoons + 2 teaspoons	1 tablespoon + 2-1/3 teaspoons (or round to 1 tablespoon + 2-1/4 teaspoons)		
1/2 cup	1/4 cup	2 tablespoons + 2 teaspoons		
2/3 cup	1/3 cup	3 tablespoons + 1-1/2 teaspoons		
3/4 cup	6 tablespoons	1/4 cup		
1 cup	1/2 cup	1/3 cup		
1 tablespoon	1-1/2 teaspoons	1 teaspoon		
1 teaspoon	1/2 teaspoon	Generous 1/4 teaspoon		
1/2 teaspoon	1/4 teaspoon	Scant 1/4 teaspoon		
1/4 teaspoon	1/8 teaspoon	Scant 1/8 teaspoon		
1/8 teaspoon	Dash	Dash		



SPAGHETTI WITH A SECRET

(Variable servings)

The "secret" to this recipe is using a blender to mix vegetables with the pasta sauce before heating the sauce and adding it to the spaghetti.

1 Serving	4 Servings	Ingredients
2 ounces	8 ounces	Dry spaghetti
1/2 cup	2 cups	Steamed broccoli or carrots or half broccoli/half carrots (see Alice's note #4 if you don't have a steamer)
1 cup	4 cups	Low-sodium spaghetti sauce (see Alice's note #1)
1 tablespoon	4 tablespoons	Parmesan cheese, grated

- 1. Cook the spaghetti according to package directions, drain, and rinse with cold water; set aside.
- 2. Whiz steamed vegetables with spaghetti sauce in a blender until vegetables are no longer visible.
- 3. Toss spaghetti with sauce and heat through. Divide among 4 plates; sprinkle the cheese over top.

(Recipe adapted from materials provided by the Centers for Disease Control and Prevention.)

ALICE'S NOTES

- 1. If you can't find low-sodium spaghetti sauce, use 2 (15-16 ounce) cans crushed tomatoes. Add 1-2 teaspoons Italian seasoning or to taste. Check seasoning container to see if examples are given for how much to add for a pasta sauce. Or, use regular pasta sauce if sodium levels are
- 2. If serving less than 4 people, you might make all the pasta sauce and freeze the extra sauce for later use. Freeze in the portion sizes you'll use at your meal.
- 3. Use whole grain pasta for additional fiber.
- 4. If you don't have a steamer, follow these directions to cook fresh vegetables on top of the stove.
 - 1. Bring 1/2 cup water to boiling in a saucepan.
 - 2. Stir in vegetables.
 - 3. Bring heat back to boiling.
 - 4. Cover and reduce heat to maintain a simmer for desired time:
 - Cook 1/4-inch slices of carrots or baby carrots about 7-10 minutes.
 - Cook 1-inch broccoli florets 8-10 minutes.

OR, use frozen vegetables and microwave them or cook them on top of the stove according to package directions. Drain off water before adding them to the sauce.

5. If you don't have Parmesan cheese, substitute another grated cheese.

FAMILY LIVING

When the Child Care Director Calls, "Your Child is III ... Please Pick Her Up"

Jaci Foged *Extension Educator*

The child care centers phone number pops up on my caller ID and my first thought is, "You have got to be kidding me." As a parent of two, I can tell you I have had my fair share of sick days for my daughters. Children are good at catching illness (and spreading illness to others) many times throughout the year. Most parents only have a certain number of sick and vacation days and they rely on child care to ... actually provide care.

Child care directors have a BIG responsibility to ensure children, staff and visitors are healthy when they walk through the doors of the center. Children have smaller respiratory and digestive systems than adults, so illnesses can be severe and spread very quickly. There is a method to the madness when it comes to sending sick children home.

Remember, the goal of the child care director is to stop the illness from spreading and when you have a building full of little ones, things can get out of hand very quickly. Let's put this in perspective using you, the reader.

- 1. You, sick with a fever and sore throat.
- 2. You + your spouse and two kids = 4.
- 3. You and your spouse go to work and work with eight

co-workers each = 16.

- 4. Your two kids go off to child care in classes of 12 and 20 = 32, plus the 4 teachers = 36.
 - . Add up your family, co-workers, child care friends and teachers (4 + 16 + 36) = 56 children and adults you have either directly or indirectly been in contact with in just one day.

That is 56 people you could potentially spread an illness to and we didn't even add in a stop at the grocery store, other classrooms in the child care center and the families all of those people in their homes. As I said earlier, the child care director has a BIG responsibility when it comes to the health of the children at her center.

The Department of Health and Human Services in Nebraska requires licensed centers to have a written illness exclusion policy identifying why children would be excluded from care for an illness. Now, what good would a policy be if it wasn't enforced? None. So if your little one is sick, expect your phone to ring.

On the flip side, it is not fun to have to be the director, teacher or staff member who is responsible to make the call notifying parents their child is ill and they need to come and pick them up promptly. As a past child care director, I would take getting the call over making the call any day! child care director would be to request a copy of their illness exclusion policy. It is much easier to follow a policy if you know what you are supposed to be doing. If your center director tells you they do not have one, encourage them to create one. A good practice would be to get a copy of your child care centers health contract before you enroll, so you fully understand what they expect from you as a parent when it comes to sick children.

A quality policy should list major and minor illnesses, the centers definition of a fever, when your child can return to care, as well as the steps the center takes to stop the spread of illness (such as hand washing, disinfecting toys and documentation of immunizations).

My little ones were sick with ear infections and colds every other week for about the first four years of each of their lives. I typically try to find the positive side of things — now they are bigger and in elementary school, they are rarely ill — maybe they 'caught' all the viruses when they were young! I know it might be hard to have to leave work to take care of your little one, but when your child gets sick, other children are exposed. The director, teacher and staff members at your child care center are doing their very best to make sure they are stopping the spread of illness.

The ABC's of Baby's Zzzzs!

One way you can help your

Tonia DurdenUNL Early Childhood Specialist

Did you know sleep is the primary activity of the brain during early development? As a matter of fact, sleep is a critical part of a baby's healthy growth and development; especially a baby's mental and physical health. So, what are the healthy sleep patterns for infants? How long should your baby be sleeping?

Typically, newborns will sleep between 10.5–18 hours a day. Their sleep cycle is irregular and usually depends upon their need to be nurtured, changed or fed. By six months of age, nighttime feedings are usually not needed and therefore infants sleep through the night (9–12 hours). The following are a few sleep tips all parents should consider as your baby catches his or her daytime or nighttime Zzzzs.

Sleep Tips for Newborns

- Put baby in crib when sleepy NOT asleep. They'll eventually learn how to get themselves to sleep.
- Encourage nighttime sleep by playing with baby and introducing them to light and noise during the day while they are awake.
- Take note of baby's sleep patterns and signs of sleepiness (rubbing eyes, crying, fussing).
- Always place baby on their back to sleep. Be sure baby's head is clear of blankets or other soft objects to help prevent Sudden Unexpected Infant Death (SUID).

Sleep tips for Infants (3–11 months)

- Create an enjoyable and consistent bedtime routine (song, bath, pajamas, book reading).
- Develop a 'sleep friendly' environment free of noise, toys and other distractions (grandmothers included!).



This photo shows parents placing their baby in a safe sleep environment, in which the risks of Sudden Infant Death Syndrome (SIDS) and other sleep-related causes of infant death are low. Baby is sleeping on its back on a firm sleep surface; and there are no crib bumpers, pillows, blankets, loose bedding, or toys are in the sleep area.

- Try to avoid irregular daytime and bedtime schedules.
- Put baby down to sleep when drowsy to encourage baby to become a 'self soother' and to fall asleep independently.

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Stepping On Workshop to Reduce Falls, April 11-May 23



What is Stepping On? Stepping On is a program that has been researched and proven to reduce falls in older people. It consists of a workshop that meets for two hours a week for seven weeks. Workshops are led by a health professional and a peer leader — someone who, just like you, is concerned about falls. In addition, local guest experts provide information on exercise, vision, safety and medications.

Aging Partners and Nebraska Extension in Lancaster County will present the workshop on Mondays, April 11–May 23, 1–3 p.m. at the Lancaster Extension Education Center, 444 Cherrycreek Road. Call Aging Partners at 402-441-7575 to register. \$3 per class suggested contribution. You'll learn exercises and strategies to help prevent you from falling.

2016 Household Hazardous Waste Collection Events

These collections are for households only. Only residents of Lincoln and Lancaster County can bring items to collections.

SOME ITEMS YOU CAN BRING FOR DISPOSAL: Thermometers, thermostats containing mercury, bleach cleaners, glues, oil-based paint, paint thinner, furniture stripper, oil-based stains, old gasoline, transmission fluid, pesticides, small propane cylinders. You can dispose of compact fluorescent light bulbs at these waste collections.

DO NOT BRING latex paint, fertilizers, medicines/pharmaceuticals, electronics & computers, large propane cylinders, tires, used oil, batteries, antifreeze or ammunition.

For more information or if you have questions how to recycle or dispose of items not accepted, call the Lincoln-Lancaster County Health Department at 402-441-8021 or go to www.lincoln.ne.gov (keyword: household).

Saturday, April 2 Walmart South: 87th & Hwy. 2

Saturday, May 7
Zoetis: 601 W. Cornhusker Hwy.

Friday, June 3
Lincoln Southwest High School: 14th & Pine Lake

Union College: S. 52nd & Cooper Ave.

Saturday, Aug. 26
Shepherd of the Hills Church: 6901 Panama Rd,
Hickman

Saturday, Aug. 27 Lincoln Industries: 600 W. E St. Saturday, Sept. 24

Continental: 4021 N. 56th St. Saturday, Oct. 22
Woods Park: S. 31st & J St.

Friday, Nov. 18
Appointment Only: Call 402-441-8021 to schedule

Latex Paint Exchanges

Latex paint is not accepted at Household Hazardous Waste Collections.

USABLE latex paint can be taken to one of the latex paint exchanges.

Residents can dry out latex paint and discard in regular household trash.

Saturdays, April 2 & Sept. 24
EcoStores Nebraska: 530 W. P St., 402-477-3606
(EcoStores disposes of UNusable paint for \$5/can)

Saturdays, May 7 & Aug. 27
Habitat for Humanity ReStore: 47th & Y St., 402-464-0010

CLIMATE IMPACTS

continued from page 1 research, specifically in the area of water use. Properly selected cover crops may also provide other potential benefits, such as increasing soil organic matter, but those are not discussed

Increasing equipment size is another option and may allow for field operations to be completed in a smaller window due to increase spring precipitation; however, the added expense may hinder the ability of the operation to purchase larger, more expensive equipment.

Another issue with increasing equipment size is the ability to farm terraces and small, irregular-shaped fields common in Eastern Nebraska. This may make it more difficult to farm on the contour within these fields, which is a strategy used to reduce water runoff and

Introducing a third or fourth crop into the rotation and diversifying your operation is another option and would spread out the work load, desynchronize critical growth stages and decrease whole-farm risk to severe weather events.

Wheat, for example, is an alternative crop that reaches maturity in late June/early July, which is before the typical peak temperature period in Nebraska. Wheat is planted in early fall and provides a growing surface cover during the fall and spring. This surface cover can reduce erosion from spring and fall precipitation events, as well as capture an extended growing season in the fall or an early start to the

growing season in the spring. Other small grains may also be included in the rotation for the potential for double cropping.

The potential adaptation strategies come with their risks and challenges. Adding an alternative crop into the rotation will require new equipment and management practices, as well as the knowledge to successfully grow a new crop. Planting cover crops creates an additional expense for seed, field operations, etc., and transitioning to no-till farming creates grower concerns about costs, lack of experience and knowledge of no-till practices, uncertainties with crop yields and risks of crop loss resulting from unpredictable agronomic factors.

We know weather will continue to impact crop production, so practices increasing farm profitability and sustainability will be important.

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- · United States Department of Agriculture – National Ag Statistics Service – www.nass.usda.gov
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Early Spring Pasture Grazing

This winter and spring has provided adequate soil moisture and warm temperatures to promote an early green-up of our pastures and rangeland. This is a positive for most situations, but it may bring up some management questions and risks.

For example, if you wait to turn out animals into the pasture until close to your normal beginning date, the chances are high the grass will grow fast enough it will become "stemmy" and low quality. On the contrary, if you turn cattle out right now at your normal stocking density, any cool-down in temperatures might slow grass growth so much your pastures will run short before summer even begins.

We also have to be concerned about the onset of a drought. It is important to monitor soil-water conditions and forecasts to pick up any early warning signs of a potential drought. For now, it may be best to go ahead and start grazing, but at a lower stocking rate.

Try to match your stocking rate with the growth rate of the grass. It is better to under-graze than over-graze because you can add more animals later as growth begins to accumulate. If we have a growing season like 2015, spring rains may provide more than adequate moisture for grass growth during the summer grazing season and you can increase your stocking rate. If we turn hot and dry like 2012, you will be happy you didn't overgraze early on in the season.

Early season grass will have high forage quality, so use animals that can make use of better-quality feed. You may also want to give them access to some hay to reduce scours and help adjust to this new, high-quality

It may be beneficial to rotationally graze very rapidly and let animals graze the top portions of the pasture before many plants form seedstalks. As grasses start to elongate later in the season, begin slowing the timing of the rotation to ration out remaining

Source: Bruce Anderson, UNL Forage

Fruit Tree Spray Schedules

Sarah Browning Extension Educator

Fruit plantings are a great source of home produce, but growing beautiful perfect fruit is not as easy as it may appear when looking at pictures in garden mail-order catalogs. Unfortunately fruits are susceptible to many pest problems, both insects and diseases, so it's not possible to harvest quality fruit with little or no effort. Harvesting usable produce is dependent on good cultivar* selection for disease resistance, good management and sanitation of your planting, and pest control.

Fruit Cultivar* Selection

When choosing fruit cultivars for the home orchard, growers most often think about fruit size, flavor and color. But one of the most important goals should be to minimize pesticide applications during the life of that tree or shrub. To achieve this, it's important to select cultivars with good natural resistance to common pests — especially disease problems. Below are two publications that help growers research fruit disease resistance.

- "Disease Resistant Apple Cultivars," University of Missouri, http://go.unl.edu/ apples
- "Fruit Cultivars for Home Plantings," University of Missouri, http://go.unl.edu/ fruitselection

Sanitation

Adopt good orchard sanitation practices to minimize disease and insect problems. The destruction of harboring places for pests plays a large part in the control program. Conditions that encourage mice should also be eliminated.

Good sanitation should be practiced all year round, but is particularly important in fall at the end of the growing season. Clean up any dropped fruit and diseased leaves to reduce pest pressure in spring. If fall sanitation wasn't done, then sanitize in



An apple tree in May.

the spring before bud break.

- Collect and discard or destroy (burning where legal) debris.
- Remove and discard or destroy all dropped fruit.
- Rake and discard or destroy apple and cherry leaves or other heavily disease infected leaves.
- Remove loose bark from trunks, crotches and main limbs of fruit trees to minimize insect overwintering sites.
- Prune out and destroy all dead or diseased limbs, branches and

Pest Control

Fruit growers often call Nebraska Extension asking what pesticide products should be used on their home fruit plantings and when they should be applied. Our first question for them is, "What insects and diseases are you trying to control?"

In the past, orchard pest control was often done with a pre-determined schedule of pesticide applications at specific times of year. Now, with growing concern related to: 1) environmental concerns like pesticide impact on pollinators, and 2) pesticide impact on human health, it makes sense to develop a customized spray schedule based on the specific insect and disease problems present in your fruit planting.

In other words, growers only need to use pesticides to control insect or diseases that are problems for their fruits and can't be control with good management techniques.

"Fruit Spray Schedules for Homeowners," online at http://go.unl.edu/sprayschedule, is a great publication from University of Missouri Extension, divided into sections for each type of fruit. It lists common pest problems and their control measures. Growers can pick out the pests that give them the most problems and identify the pesticide applications needed for just those problems.

For example, you have apple trees and selected cultivars with good resistance to fire blight, cedar-apple rust and apple scab, the most common diseases of apples. But the fruits still have problems with maggots, which in apples are most often caused by codling moth or plum curculio larvae. So you choose to make pesticide applications for control of just those insects. Your trees don't have problems with spider mites or scale insects, so you don't need to make any dormant pesticide applications. In other words, your spray schedule is tailored to the needs of your

Of course identifying the exact insect and disease problems affecting your fruits is always the first step and Nebraska Extension in Lancaster County is a great resource to help, along with your local nursery and garden center professionals. Give Extension a call at 402-441-7180 or stop by the office for assistance with fruit pest identification.

* The term cultivar stands for 'cultivated variety' and each cultivar name represents a plant with specific characteristics.

2016 Composting **Demonstrations**



Learn how to be successful with composting by attending a free composting demonstration sponsored by Nebraska Extension in Lancaster County and the City of Lincoln Recycling Office. Demonstrations are presented by Extension Master Gardeners. You will see three types of composting bins and how to use them. At each composting program, two lucky participants will win either a composting thermometer or a composting bin.

Composting Demonstrations are presented at the Pioneers Park Nature Center's backyard composting demonstration area. Demonstrations will be held:

- Saturday, April 2, 2 p.m.
- Saturday, May 21, 2 p.m.
- Saturday, June 11, 10 a.m.
- Saturday, Sept. 24, 10 a.m.
- Saturday, Oct. 15, 10 a.m.



Weed Awareness

Play Clean Go

STOP INVASIVE SPECIES IN YOUR TRACKS.

The Weed Control Authority is responsible for implementation of the Nebraska Noxious Weed Control Act throughout Lancaster County. The authority has also provided the inspection and administration of the City of Lincoln's Weed Abatement Program since entering into an interlocal agreement with the city in 1996.

444 Cherrycreek Road, Bldg. 'B', Lincoln, NE 68528 • 402-441-7817 • http://lancaster.ne.gov/weeds

Controlling Noxious Weeds in Lancaster County is Working Thanks to Landowners and "Early Detection – Rapid Response"

BY BRENT MEYER

Lancaster County Weed Superintendent

As a society we tend to focus on the things that are bad and want to fix them. In the noxious weed business we focus a lot of time on the problem and work with property owners to control infestations. We don't focus enough on the successes, and YES, there are encouraging success stories to tell.

We can all agree it is easier to eradicate a problem when it is small, rather than waiting until we have a huge problem, we then wonder how am I going to manage that? Similar to a fire, it is easier to put out a small fire rather than waiting until the entire forest is on fire. It is similar with invasive plants. We call this Early Detection – Rapid Response (EDRR) we want to find the infestation early on, while it is still manageable and then attack it, and eradicate it before it becomes a large infestation making it almost impossible to eradicate.

In the early years of noxious weed control, the process was to take the invasives that were out of control, taking over the land, and add them to the noxious weed list. Typically it was too late to ever eradicate the problem. Today, with the help of the Weed Risk Assessment (WRA) we are able to detect plants with the potential to become invasive, add them to the noxious weed list early and begin working to contain or eradicate the problem before it becomes widespread.

The opening statement in the Noxious Weed Control act reads: "The Legislature finds and declares that: The failure to control noxious weeds on lands in this state is a serious problem which is detrimental to the production of crops and livestock and to the welfare of residents of this state and which may devalue land and reduce tax revenue."

Recognizing the potential harm invasives can do is the reason we all need to work together to control invasive plants. Noxious and invasive weed control has come a long way over the years.

Property owners now understand the importance of controlling invasives and preventing them from taking over their land. Even musk thistle today is less of a problem than it was 20-30 years ago. Today's landowners and managers understand musk thistle and how quickly it can take over if uncontrolled, however, some of the new invasives are less recognizable by the public. By learning how to identify and how to control the new invasives, together we should be able to

keep them from taking over the landscape.

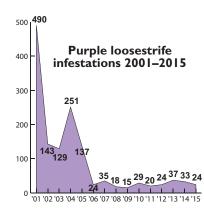
Let's take a look at some of the Noxious Weeds landowners in Lancaster County have been successful in containing.

Purple Loosestrife



Purple loosestrife in Lincoln, 2012

In 2001, purple loosestrife was declared a noxious weed in the State of Nebraska because of its ability to rapidly spread and take over wetland areas, rivers and streams. This was a very difficult decision because this plant was also a top seller for the nurseries as a favorite for homeowners in their flower gardens and landscaping. The characteristics that made it so popular with the homeowner; easy to grow, flowers for a long period of time, etc., were the same characteristics that made it so aggressive when it escaped into our natural habitats in the state. In the end, the risk outweighed the reward and the Director of Agriculture added purple loosestrife to the noxious weed list.



In 2001, Lancaster County reported 490 parcels infested with purple loosestrife. Through years of education and outreach, helping property owners recognize the potential danger of this high seed producing plant, we now document around 20–40 parcels per year that remain infested. The central part of the state, especially along the Platte River in Hall and Buffalo counties, aren't as lucky and continue to battle large infestations of purple loosestrife every year.

Saltcedar

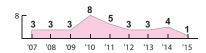
Saltcedar exploded onto the scene during the drought years. Mature saltcedar trees consume as much as 200 gallons of water per day. This is a major concern when



Saltcedar in Lincoln, 2005

it is infesting our lakes, rivers and wetlands already stressed for lack of water. Saltcedar loves to take over any area vacated by receding waters. This was especially evident on Harlan Reservoir and Lake McConaughy in the early 2000s when both water bodies saw record low levels. Thousands of acres of exposed lake beds led to major infestations of saltcedar. The Director of Agriculture declared saltcedar a noxious weed in Nebraska in 2007.

Saltcedar infestations 2007–2015



While the central and western parts of the state continue to battle saltcedar, Lancaster County has always been able to detect the infestations early and control them, never reporting more than eight parcels infested in any one year. We will continue with our EDRR program on saltcedar and make sure it never becomes a widespread problem.

Knotweed



Japanese knotweed infestation in Lincoln, 2012

Knotweed is considered one of the top 10 most aggressive and destructive plants in the world, existing primarily in the eastern part of Nebraska. Knotweed comes in many subspecies including, Japanese knotweed, giant knotweed, bohemian knotweed and variegated knotweed just to name a few. These were the first plants in Nebraska to go through a scientific Weed Risk Assessment (WRA) to determine its ability to grow and spread in Nebraska. With the WRA done by USDA APHIS, it was determined that knotweed ranked very high to become a problem in Nebraska. With today's technology we're able to

determine if a plant species has the potential to become aggressive and begin working on control before it becomes a "huge fire."

Knotweed was another plant being used in the ornamental market and being planted in landscaping; however, when it escapes into the rivers and wetlands is when it becomes a major problem. This is one of the few plants responsible for property to be condemned. Knotweed will grow right through cracks in basement walls and destroy the foundation. The research from around the world made this an easy decision to add knotweeds to Nebraska's noxious weed list in 2011, requiring it to be controlled by landowners and stopping the sale of new plants.

Teasels



Cutleaf teasel in Lincoln, 2014

When infestations of common and cutleaf teasel started to be found in Lancaster County, the Weed Control staff began researching this plant, the results were alarming. Teasel has every indication of being very destructive to our pastures, rangelands and roadsides. Lancaster County proceeded with the hearing process according to the Nebraska Weed Control Act and declared both common and cutleaf teasel as noxious weeds in Lancaster County in 2014.

Many states have declared one or both teasels to be noxious. requiring them to be controlled. Illinois, Iowa, Kansas and Missouri are all states with widespread teasel infestations. Because the plant has no value as a forage crop and its ability to produce a tremendous amount of seeds and rapidly take over, it was determined teasel be controlled by the landowners of Lancaster County in the future. If left untreated, there is little doubt it has the potential to be as bad as, or worse than, musk thistle, invading similar habitats. With an aggressive EDRR program, we want to make sure Lancaster County never ends up losing productive pastures, rangelands or habitat to this invader.

Sericea Lespedeza

Sericea lespedeza was added to the State's noxious weed list in 2013, while only infesting about a dozen counties in southeast see Sericea Lespedeza on next page

So Many Ways Weeds Can Spread

BY PAT DUGAN

Lancaster County Weed Chief Inspector

In order to control weeds, it is very important to understand how weeds spread. If an area of land is scraped, burned, tilled or otherwise has desirable vegetation removed. invasive weeds can move in very quickly because the competition from desirable plants has been eliminated. If you have ever had a flower garden or vegetable garden, you may have noticed how rapidly common garden weeds move into areas you have hoed or tilled with a

Invasive weeds are spread primarily by seeds, but some plant fragments — such as roots — can take hold in a new place if moved. Seeds often remain viable in the soil for many years, sometimes decades. Here are a few ways seeds and plant fragments can be transported:

- wind,
- wildlife and domestic animals — on animal hooves and hair, or through the digestive tracts,
- water such as flooding, streams and irrigation water,
 contaminated gravel, topsoil and livestock feed — such
- non-certified grass seed,
- uncomposted, fresh manure used to fertilize crops and gardens,
- straw bales used for environmental protection projects such as erosion control,
- mud on shoes, boots, ATVs and all types of vehicles,
- farm tillage equipment, mowers, construction equipment, loaders, dirt movers and graders, and
- boats and boat trailers (especially aquatic vegetation).

Through all the potential pathways, it's really no wonder weeds spread so quickly.

I4 Steps for Effective Weed Control

What can you do about the weed problem we have in Southeastern Nebraska? If you have read the Weed Awareness insert in the Nebline, you have done something — you've started educating yourself about noxious weeds. You can also help by participating in volunteer efforts to control

see Control on next page

WEED AWARENESS

CONTROL

continued from previous page weeds in your community. The list below summarizes 14 steps to take for effective weed control on your property and working with others around your community.

- Learn what problem weeds look like, from the seedling stage to the flowering and fruiting plant. For help, use the "Weeds of the Great Plains" published by Nebraska Department of Agriculture, or contact your local Weed Authority.
- Inspect your property often to catch the presence of weeds as early as possible.
- Identify your problem weeds. Whenever possible, bring a fresh sample stored in a paper or plastic bag to your local Weed Control office, Nebraska Extension office or Natural Resources Conservation Service (NRCS) office. Be careful not to spread seeds while transporting the sample. Double bagging the sample is recommended.
- Gather information on your weed. Obtain any available publications or other materials. Your local weed control offices have fact sheets discussing integrated weed management of specific invasive weeds. The Nebraska Extension publication *Guide for Weed, Disease, and Insect Management* (EC130) is available at
- https://marketplace.unl.eduLearn the life cycle of the weed. Is it an annual, perennial or biennial?
- Determine whether the weed is a broadleaf or grass plant.
- Evaluate the reproduction method and likely means of spread of the weed.
- Learn what time of year is best to control the weed.
- Keep desirable landscape plants or pastures healthy and vigorous so they can out-compete weeds. Don't overgraze pastures, or weeds will invade.
- Create a plan for the eventual revegetation of the land once the problem weeds have been eradicated.
- List and assess the treatment options for the weed and the site: cultural, mechanical, biological, and chemical.
- Prevent annual weeds from flowering and setting seed whenever possible. This can be done for some species by mowing or using another mechanical control method at the most effective time. Consider such alternatives as burning, if permitted, or mulching.
- Perennials cannot be controlled by interrupting the seed production. Instead, learn how the plant spreads and determine whether pulling, digging or disking will be effective. Some perennials will require chemical applications for control.
- Complete your weed management plan and evaluate its success.

SERICEA LESPEDEZA

continued from previous page Nebraska. The WRA indicated sericea lespedeza has the potential to infest up to 97 percent of the landscape in Nebraska. This alarming number raised concern among land managers.

Sericea lespedeza was originally planted as a cover crop and thought to be good for wildlife. As it turns out, this is not the case, escaping onto pastures and rangelands where it can completely take over the landscape. As more landowners continue to learn how to identify this invasive and learn how to manage sericea lespedeza, the amount

of acres infested should begin to decline. While it is still too early to determine if sericea lespedeza will become a success story or not, by adding it to the noxious weed list before it is widespread should help contain this aggressive invader.



Sericea lespedeza infestation in Lancaster County, 2012

New Weed ID Videos

One of the goals of the Nebraska Weed Control Association (NWCA) is providing education to the public on noxious and invasive plants. One of the keys to eradicating any noxious weed infestation is the ability to correctly identify the plant.

As farmers and ranchers turn more to technology-based operations, NWCA realized the need to do more than just hand out brochures and send letters. In today's society, people would rather pick up a smart phone or tablet and watch a video instead of reading a brochure.

Last year, NWCA produced three videos on how



Beau Wolfe, cameraman for 5-City TV and Brent Meyer, Lancaster County Weed Superintendent.

to identify leafy spurge, musk thistle and purple loosestrife. More videos will be produced in the next few years.

View the videos at http://lancaster.ne.gov/weeds

Frequently Asked Questions about Noxious Weed Control

Where did all the noxious weeds come from in the first place?

Most of our noxious weeds came from Europe. Many were brought over in the ballast of ships. Some were brought on purpose as ornamentals. The problem is the natural enemies were not brought along, and this gives the invaders the opportunity to crowd out native plants.

Why do I need to control my noxious weeds?

First of all, it's the law. It is the duty of every landowner to effectively control noxious weeds on his or her property. As a landowner, you will find out quickly if you do not control noxious weeds, they will reduce cropland yields, reduce livestock forage and crowd out native vegetation.

Where can I find more information on weeds?

You can spend hours on the Internet looking for

information about noxious and invasive weeds. Your local county weed superintendent can help with identification and control recommendations. The Google search engine can locate information and photographs of all noxious weeds. So do websites such as http://neweed.org and http://lancaster.ne.gov/weeds

How should I control weeds along my creek?

Some herbicides, called aquatic herbicides, are meant for use in areas like this. Learn to identify the weeds, control them at the proper time and always read and follow the herbicide label.

I spray and spray...will I ever get rid of these weeds?

Timing and persistence are the two keys to winning the battle against noxious weeds. Be sure the herbicide you choose is labeled for the weed or weeds you are trying to control. Use the proper amount of water, herbicide and adjuvant to get the best results. Read and follow the herbicide label for the best application times, any personal protective equipment may be necessary and any other important information.

Questions to ask yourself when developing a Management Plan:

- Have I identified the location, species, life cycle and reproduction method of my problem weed?
- Have I identified the extent of the infestation? Is there one plant, a few plants, nearly an acre, more?
- How will the site be used? What do I hope to do with the site? Does it require frequent cultivation or tilling, which may favor the increase of rhizomatous perennials? Are there other site conditions that cannot be changed?
- Have I incorporated prevention methods to keep from reintroducing weeds?
- Do I know what the most



If you find a noxious weed, mark the location using GPS location, if possible, for future treatments.

effective methods of control are? Have I considered cultural, mechanical, biological and chemical controls?

- Can I afford to follow all the elements of my weed control plan? Is it economically viable?
- Have I read the herbicide safety information, product label and safety data sheet (SDS), so that I will not endanger myself, others or the environment when applying herbicides?
- Does my plan help reach the goals of my weed control authority (WCA) or weed management area association (WMA)?

Hidden Word Find

Responsible landowners take pride in their management efforts to control weeds in order to protect our environment. Sometimes the greatest challenge is to understand how invaders spread, the groups involved in treating them and tools they use.

Find the words in the puzzle and send your completed form to Lancaster County Weed Control for your chance to win the "Weeds of the Great Plains" book published by Nebraska Department of Agriculture. All entries must be postmarked by April 16.

If your name is drawn, the book will be mailed to you. This information will not be used to contact you with any other offer.

Enter drawing to win:

Name

Send completed Word Find to: Lancaster County Weed Control, Weed Book Drawing, 444 Cherrycreek Rd., Bldg. B, Lincoln, NE 68528

Annual
Biennial
Canada thistle
Knapweed

City/State/Zip

Knotweed Herbicide Introduced Invasive Lancaster Leafy spurge Mapping Musk thistle

WEEDS

P P E R R T T P M I N V A S I V E L D HULDYVTERUANEEAAEOE RTRUNOXIOUSWEEDSEWL AHTPMSTITYAKHEAOWTG GODHLEAIHNLHTETNTNN M S H E Y E L L E E R I T H R S I N L IMAHAELETETHVEIPNAC TTROROROSCFAHLPSUTT EMACWDRLOSECHAANTNR SADTEULEESTDMTNRYLE HERBICIDEAEHAASRGRE IENNIALWDFSIRTSTTP KNAPWEEDCTWYTSELSEE DEHPERENNIALSRTLTNE KNOTWEEDOAEFEPILNEN IUDWLANCASTERUFESD INTRODUCEDMHRXLREEN SERICEALESPEDEZAGRH FSCANADATHISTLEIHEM

Noxious weeds Perennial Phragmites Plumeless thistle Purple loosestrife Saltcedar Sericea lespedeza Teasel Weed watcher

Nebraska's Noxious Weeds

It is the duty of each person who owns or controls land to effectively control noxious weeds on such land.

Noxious weed is a legal term used to denote a destructive or harmful weed for the purpose of regulation.

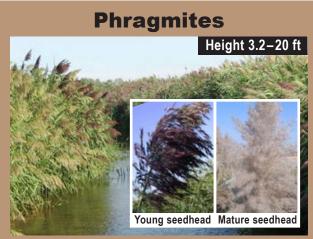
The Director of Agriculture establishes which plants are noxious. These non-native plants compete aggressively with desirable plants and vegetation. Failure to control noxious weeds in this state is a serious problem which is detrimental to the production of crops and livestock, and to the welfare of residents of this state. Noxious weeds may also devalue land and reduce tax revenue.











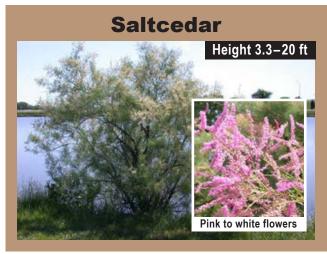


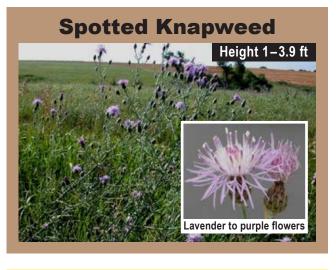


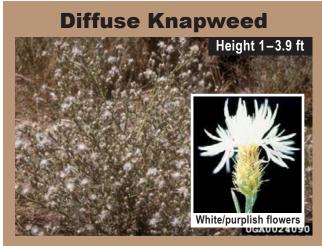












Lancaster County's Noxious Weeds





MEED AWARENESS

The County Commissioners serve as the Lancaster County Weed Control Authority. Currently Brent Meyer serves as the superintendent and supervises a seasonal staff of six weed inspectors with the assistance of Chief Inspector Pat Dugan and Account Clerk Jasmine Mau.

NOXIOUS WEEDS

2015 Annual Report

Lancaster County Weed
Control Authority's purpose is
to educate the public concerning
noxious weeds, exercise the
necessary authority to obtain
effective control of noxious weeds
county-wide, educate the public
concerning weed abatement and
to exercise the necessary authority
to cut and clear overgrown weeds
and worthless vegetation in the
city of Lincoln. We accomplish
this by:

- educating the landowners of Lancaster County about the legal requirements and benefits of controlling noxious weeds,
- providing information to the citizens of Lincoln about the legal requirements and benefits of cutting and clearing overgrown weeds and worthless vegetation,
- efficiently and effectively exercising authority, when necessary, to obtain acceptable noxious weed and weed abatement control and
- improving efficiency and effectiveness of operations through management techniques.

Noxious Weed Program

Lancaster County Weed Control office utilizes a three-phase program to assist landowners in reducing the number of noxious-weed-infested acres in the county.

1. Prevent the development of new weed infestations — Prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Integrated weed management includes preventing encroachment into land not infested, identifying the pathways in which weeds are spread, detecting and eradicating new weed introductions, containing large-scale infestations using an integrated approach and often re-vegetation.

2. Provide education and public outreach on noxious and invasive weed control — The public is generally not aware of the economic and environmental impacts of noxious weeds. There is a need to improve awareness of noxious weeds and to provide educational information to cooperators, land managers and the public. As people become more aware of noxious weeds, the probability of detecting them is greatly increased, which allows for more effective and timely control

Education and awareness

- weed identification
- reporting new infestations
- prevention
- control
- fostering cooperation and partnerships

3. Provide for ongoing management of State of Nebraska-mandated noxious weeds — Noxious weed management is the systematic approach to minimize noxious weed impacts and optimize intended land use. It is very important for all infested areas to be treated with effective methods. Integrated management

is a program of noxious weed control that properly implements a variety of coordinated control methods. Types of control methods include mechanical, cultural, chemical and biological. Integrated management greatly improves the success rate for your weed control plan. All noxious weed management must be applied and evaluated over an extended period of time to be successful.

Noxious Weed Overview

No piece of land is safe from noxious weeds. They are found wherever they are able to establish a root system. In 2015, our inspectors documented 1,503 sites infested with noxious weeds. 367 of those sites were located within city limits. Due to their introduction as ornamentals saltcedar, purple loosestrife and knotweed are more commonly found in the city than rural areas in Lancaster County. In order to prevent the spread of noxious weeds, an aggressive management plan is required on all noxious weed sites no matter where they are found.

Musk Thistle — Musk thistle is a commonly-reported noxious weed due its easy identifiable bright rose-purple colored head. The key to successful musk thistle control is to prevent seed production. A total of 828 inspections were made on 463 sites. There were 309 sites found to be in violation amounting to 788 acres infested. Legal action was taken on 2 parcels, resulting in a \$1,500 fine on each parcel.

Phragmites — We continue to find new infestations of phragmites throughout Lancaster County. Phragmites is an aggressive noxious weed and immediate action is required to keep this noxious weed under control. In 2015, we identified 463 sites infested with phragmites.

Number of Lancaster County Sites in Violation 552 Lighter colors = City of Lincoln Darker colors = Outside of Lincoln 309 99 24 20 18 17

Knotweed — The majority of knotweed in Lancaster County is ornamental. The key to successfully eradicating knotweed is to educate the landowners about the impact knotweed can have on the environment and on proper control methods. In 2015, there were 20 known sites of knotweed in Lancaster County.

Canada Thistle -

Canada thistle is on an increase in Lancaster County. Currently we have 18 known infestations in the county and city. Canada thistle, typically known as a row crop problem, is being transported with nursery root stock and is commonly showing up in landscaping around trees and shrubs

Saltcedar — Currently, Lancaster County has one uncontrolled infestation of saltcedar. This low number is due to Early Detection-Rapid Response (EDRR). Saltcedar was identified early on as having the potential to cause problems and action was taken to eradicate it.



A manageable infestation of leafy spurge in Lancaster County.

Leafy Spurge — Leafy spurge is the noxious weed that seems to sneak up on us in the spring. It can be very easy to detect when the grasses are still trying to grow. Leafy spurge continues to be very difficult to control and requires years of monitoring. In 2015, we made 950 inspections and found 552 infestations. Leafy spurge infests 1,154 acres in the county and city. Purple Loosestrife —

Purple loosestrife is known as the greatest noxious weed success story in Lancaster County. Wild purple loosestrife has been found in Lincoln city limits and in rural Lancaster County. Most commonly, purple loosestrife is found as ornamental plantings within the Lincoln city limits. Purple loosestrife was added to the State Noxious Weed list in 2001 and, at that time, we had identified

490 locations. In 2015, we had 24

sites of ornamental or wild purple

loosestrife.

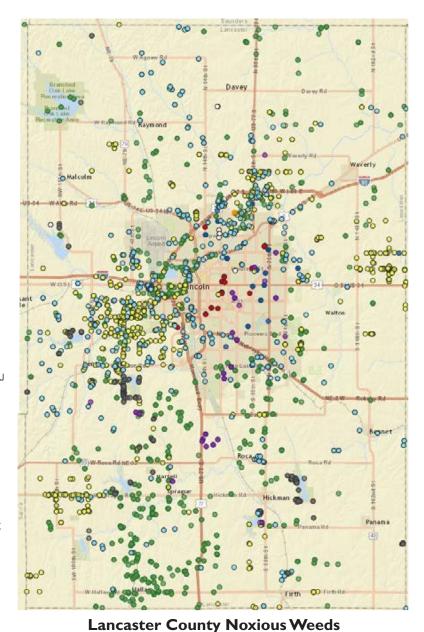
Sericea lespedeza -

Now in our third year of dealing with sericea lespedeza as a noxious weed, we continue to get a better understanding of where it likes to grow. Sericea is commonly found within one mile of wildlife management areas, but has been found in other areas. In 2015, our inspectors found 99 sites infested, totaling 157 acres.

Teasel — In July 2014, cutleaf and common teasel were added to the Lancaster County Noxious weed list. Our inspectors found 17 infestations in 2015. Our office is hopeful that Early Detection-Rapid Response (EDRR) will be effective with these plants. We will continue to target teasel in 2016 to ensure it does not spread.

Noxious Weeds in County Roadsides

Landowners are encouraged to control noxious weeds along property they own. If not



Sericea lespedeza

Purple loosestrife

Knotweed

controlled by the owner, Lancaster County Weed Control will control the perennial noxious weeds such as phragmites, sericea lespedeza and leafy spurge in the county roadsides. While you will continue to see the blue flags or ribbon along the roads, our inspectors are now using GPS to mark all the locations. Our contractor is provided with the latitude/ longitude points and will begin to use this to treat the locations. Since beginning this process in 2014, we are seeing better control while saving the county money.

Musk thistle

Phragmites

Leafy spurge

City of Lincoln Weed Abatement Program

The City of Lincoln Weed Abatement Ordinance requires landowners within city limits to maintain the height of weeds and worthless vegetation below six inches. This includes all areas to the center of the street and/or alley that adjoins their property. Three seasonal inspectors assist in administering this program. The seasonal employees complete inspections based on pre-selected properties due to their history, complaints from the public received in our office and by observing severe yards while conducting other inspections. In 2015, our office received 1,863 complaints from the public and additional 1,449 properties were inspected that were observed as having violations. Our office made 7,802 initial and followup inspections on 3,312 sites. Properties not in compliance were notified of the violations with 1,895 letters, 1,575 legal notices, 765 reminder letters and 50 personal contacts. Landowners cut 2,926 sites and forced cutting was contracted on 386 sites. Landowners are responsible to pay the cost of control plus an administrative fee. A lien is placed against the property until the bill is paid.

Canada thistle

Saltcedar

○ Teasel

City Landfills

The Weed Control Authority is responsible for managing noxious weeds at the 48th Street landfill and the Bluff Road landfill. Presently, we deal with musk thistle and leafy spurge at both landfills and phragmites at the 48th Street landfill. The landfills are annually inspected and mapped. This helps to keep track of the spread of noxious weeds and the effectiveness of the control. Maps are provided to a contractor to complete the control work and follow-up inspections are completed.

Lancaster County Abandoned Cemeteries

Mowing and general maintenance on six abandoned cemeteries throughout the county falls under the supervision of the Weed Control Authority. Cemeteries included are the County Poor Farm, Dietz, Evangelical, Highland Precinct, Jordan and Uphoff.

Special recognition goes to the following volunteers:

- Lincoln Tree Service for tree trimming and removal
- Steve Wedige for mowing Jordan
 Terry Briley for mowing
- Evangelical
 Boy Scouts of America Troop 64
- for mowing Dietz
 Troy Henning for mowing
 Highland Precinct and Uphoff

NEBLINE HORTICULTURE / PESTS & WILDLIFE

Bird Houses Can Add to Changing Landscapes

Soni Cochran Extension Associate

This past fall, the Lincoln neighborhood where my sister lives went through some changes. Trees of all species and sizes were cut down to protect power lines including many in their yard and in neighboring yards. Of course, it is important to keep our power supplies safe, but this sudden change has created some challenges.

My sister and her neighbors are learning how to select and place trees in more suitable locations. To encourage birds who will soon be returning to raise their young, residents can add birdhouses and other features to their backyard habitats. They can also try to attract new species to their neighborhood like purple martins who prefer open areas away from trees.

It is always helpful to learn more about the birds in your area and the type of habitat and nest sites they prefer. Robins and barn swallows will use a shelf. House finch will nest in your hanging baskets. Purple martins live in colonies. Here are a few of the guidelines you should follow for all birdhouses you build or buy:

- Material to Build Houses: Wood is the best material to use. Avoid pressure-treated lumber because when it gets wet it can give off vapors that are poisonous to birds. Preservatives, such as paint or stain, can be used on the outside of the box, especially the back, but not on the inside. Avoid using creosote as a preservative. Another fun material for birdhouses is to use birdhouse gourds. These gourds are fun to grow, dry and decorate for birdhouses. Plan on them only lasting one season as a birdhouse.
- What Not to Use to Build **Houses:** Do not use tin cans, milk cartons or metal for nest boxes. They can overheat

and kill the eggs and young birds. The only exceptions are commercial aluminum martin houses.

- **Easy Cleaning:** Provide a hinged side or roof so you can easily clean the house each spring. If you already have birdhouses, early March is a good time to clean them. Use rust-proof hinges to make the task easier. Keep in mind that raccoons can open a hook and eye!
- · Drainage and Ventilation: Drill at least four 1/4-inch drain holes in the bottom of every house, and two 5/8-inch ventilation holes near the top of each side of the house.
- **Roof:** Provide a roof with at least a two-inch overhang on the front to protect the entrance hole from winddriven rain, and to prevent cats from reaching in from above.
- Side and Floor: The sides of the house should enclose the floor to keep rain from seeping into the house and nest. Recess the floor 1/4-inch up from the bottom to further prevent rotting caused by moisture.
- **Perches:** Don't put perches on any bird house. (Take them off houses that you purchase.) The only birds that prefer them are starlings and house sparrows.
- Entrance Holes: Keep entrance holes on songbird houses 1-3/8 inches or smaller to keep out starlings and house sparrows. (Purple martins are an exception.) Rough up the inside of the birdhouse so the young birds can easily get out of the box when it is time.
- **Spacing Boxes:** Space birdhouses at least 25 feet apart (300 feet for bluebird houses) to reduce conflicts. Most birds are territorial and protect the area around their nests. Purple martins live in colonies and prefer "apartment houses" located in open areas away from trees.

- **Mounting:** Learn about the birds you want to attract before deciding where to mount your birdhouses. Houses mounted on metal poles are less vulnerable to predators. Some birds prefer to nest in trees or very near trees and shrubs. Birds that prefer a shelf are going to prefer the overhang of a building, porch or on a tree. No matter where you mount your birdhouse or shelf, make sure it is attached securely to prevent predators from tearing it down. More tips:
- Water is Important: Add a water feature or bird bath to your landscape. These attract many bird species even if they aren't nesting in your yard. Learn about fruit-bearing shrubs that attract wildlife and include them in your landscape plan.
- · Leave Snags "safely:" Leave snags (dead trees) standing as natural birdhouses or, if desired for safety, cut them about 15 feet above the ground.

If birds aren't using your birdhouse or shelf, first check to make sure you have it placed correctly for the species of bird you want to attract. Also check to see if other animals have taken over the birdhouse. Wasp and bees will also use a birdhouse if given the chance. You can remove them "carefully" so not to get stung. English house sparrow and starling nests and eggs can be removed because they are not protected species. If these nuisance birds are nesting in your birdhouses, be persistent. Keep removing the nest material until the birds give up.

Learn about the types of bird you want to attract to choose the best location for your birdhouse. If you are putting up bluebird boxes, they should be mounted on a post and placed away from trees to prevent predators like cats and raccoons getting access to the eggs and young. Bluebird boxes should also be placed away from shrubs to discourage birds

Mary Jane Frogge, Extension Associate

Consider planting native perennials that are beneficial to native pollinators like solitary bees, bumblebees and butterflies. Native plants include coreopsis, coneflower, aster, liatris, goldenrod, pasque flower, butterfly milkweed, pitcher sage, bee balm and purple poppy mallow.

The last Friday in April is National Arbor Day. Plant a tree or support an organization which plants trees.

Do not add organic matter to the soil when planting trees. It does not help the plant become established and it may create conditions that encourage the roots to stay inside the planting hole instead of spreading to surrounding soil. Do dig a large planting hole, but fill it with the original soil removed from it.

Prune spring blooming shrubs such as forsythia and spirea after they have completed flowering.

Remove sticks, rocks and other debris from your lawn to prevent damaging your lawnmower or injuring yourself when mowing. Check your lawnmower and other lawn-care equipment in preparation for the coming season.

Put a birdhouse in the garden to attract insect eating friends.

Cut flower stalks back to the ground on daffodils, hyacinths and other spring flowering bulbs as the flowers fade. Do not cut the foliage until it dies naturally. The leaves are necessary to produce strong bulbs capable of reflowering next year.

Seed bare spots in your fescue or bluegrass lawn.

Scatter annual poppy seeds in flower borders. The fine seeds need not be covered. The plants grow rapidly and provide colorful flowers in early summer.

In a sunny location with poor soil, plant nasturtiums for a colorful show. They require warm soil to sprout and start blooming in about 50 days. Too much water and fertilizer produces excess leaves and few flowers.

Measure the rainfall with a rain gauge posted near the garden so you can tell when to water. The garden needs about one inch of rain per week from April to September.

When chrysanthemums start to grow, dig up and divide large plants. Discard woody portions and replant divisions 12-15

Consider planting flowers which may be dried for winter arrangements. Some of the best are strawflower, statice, celosia and globe amaranth.

Do not restrict yourself to buying plants in bloom. Petunias that bloom in the pack are often rootbound or overgrown and after planting will actually be set back and cease to bloom for about a month. Plants without blossoms will actually bloom sooner and will grow better as well.

To extend the blooming period of gladiolus, plant early, middle and late-season selections each week until the middle of June. Choose a sunny location and plant the corms 4-6 inches deep and 6-8 inches apart.

like wrens from using the boxes. To learn more about bluebirds, visit the Bluebirds Across Nebraska website at www.bbne.org

Get your birdhouses out now as birds will begin nesting behaviors very soon.

Additional source: University of Maine Extension, "Birdhouse Basics'

FOR MORE INFORMATION

You can find information and resources on attracting birds at http://lancaster.unl.edu/pest/ birds.shtml

Facts for Nebraska Bird Houses

Species	Floor of Cavity	Depth of Cavity	Entrance Above Floor	Diameter of Entrance	Height Above Ground	Notes
House Wren	4" x 4"	6-8"	4-6"	1 – 1-1/4" or 1" x 3–4"	4-10'	Easily attracted in urban areas, acreages, farmyards near woodland clearings or edges of woods. Will use a free-hanging house, unlike most other species.
Black-capped Chickadee	4" x 4"	9"	7"	1-1/8"	4-15'	Easily attracted to urban yards, acreages, farmyards and woodlots with mature, hardwood trees. Add 1-inch of wood shavings to bottom of box. ★
Eastern Bluebird	5" x 5"	8-12"	6-10"	1-1/2"	4-10'	Commonly uses nest boxes properly placed in or near an open rural area of grass, such as an old field, orchard, golf course, cemetery or pasture.
Screech Owl	8" x 8"	12–15"	9–12"	3"	10-30'	Chances of attracting are fair to good. Line box with 1–2 inches of wood shavings. ★ Place box near woodland clearings or edges of mature woods. Sometimes nest in suburban mature hardwood trees.
Tree Swallow	6" x 6"	8-12"	6-10"	1-1/2"	4-10'	Tree Swallows and bluebirds often nest in same area. To reduce competition, erect a pair of nest boxes 25 feet apart. Tree Swallows are more common near water areas like wetlands, creeks and ponds.
Purple Martin	6" x 6"	6"	1"	2-1/8- 2-1/4"	10-20'	Place houses or gourds in areas surrounded by pastures or lawns; at least 30 feet away from buildings and 40 feet from tall trees, and if possible, near lakes, ponds or marshes.
Eastern Phoebe	7" x 8"		*	*	6-15'	Easily attracted. Place platform under eaves or overhang, preferably near a flowing stream or creek.
Barn Swallow	7" x 8"		*	*	6-15'	Readily accepts nest shelf. Place away from doorway to avoid droppings by the door and aggressive adults.
American Robin	7" x 8"		*	*	6-15'	Excellent chance of attracting in urban areas, acreages and farmyards. Place platform high on trunk of tree or under the overhang of a house, shed or porch.

^{*} One or more sides of the house should be left open.

[★] Cedar shavings are not recommended for lining or filling boxes because naturally-occurring chemicals may not be healthy for nestlings. Use other wood shavings instead.

information is optional.

You DO NOT need to

complete this portion

of the online form.

4-H & YOUTH

Furniture Painting Workshop, April 16

4-H youth ages 8 and up are invited to participate in a furniture painting workshop on Saturday, April 16, 9 a.m. at the Lancaster Extension Education Center, 444 Cherrycreek Road. No cost to attend. Adults are welcome to attend to help youth. Register by April 14 by calling 402-441-7180.

Bring a small piece of unpainted furniture, such as a shelf, stool or chair. These items can be found around your house, at craft stores, garage sales and thrift stores. Learn how to prepare new and used wood furniture by sanding, sealing, painting and finishing. All paints and finishes are provided.

4-H Interview Regional Contest, **May 26**

4-H youth ages 11 and up are invited to participate in the Interview Contest. This contest will give youth the opportunity to practice the real-life skill of applying for a job. Youth will use their 4-H and life experiences to write a resumé and cover letter for one of three job descriptions and participate in a live interview. The regional contest will be held Thursday, May 26, 1–7 p.m. in Norfolk, Neb. Enter by submitting information to the Norfolk Research and Extension Center by May 12. Contact Tracy at 402-441-7180 or tracy.anderson@unl.edu to learn more about the contest.

IT'S NOT TOO LATE TO RE-ENROLL!

4-H members and volunteers must re-enroll every year! Current 4-H members and volunteers who have not re-enrolled on the 4-H enrollment website 4HOnline this year are no longer officially enrolled members and may miss out on communications such as Nebline, email reminders, etc. New members and fair projects may be NOTE: Health

updated through June 15. The website to enroll is **https://ne.4honline.com**. The process is easy and only takes a few minutes per member or volunteer. Only parents/guardians may enroll 4-H members. Each 4-H household will need to set up a profile in which the 4-H youth and/or volunteers in

the household will be added. More details and step-by-step instruction guides with pictures are at

http://lancaster.unl.edu/4h/club. If you have questions about the process or

need access to a computer, call Karen Evasco at 402-441-7180. INDEPENDENT MEMBERS: 4-H members enrolling as independent need to select "Lancaster Independent" under "club."

FFA MEMBERS: FFA members need to select Crete FFA, Norris FFA, Raymond Central FFA or Waverly FFA under "club."

PARENTS: If you serve in a leadership capacity in any way, please enroll as a volunteer and select "project volunteer."

VOLUNTEERS: Last year, volunteers could not register online, so Extension staff member Karen Evasco entered many organizational leaders on 4HOnline. These leaders' names will show up under their family profile — and will need to select "I forgot my password" to re-enroll as a "returning volunteer." If leader names do not show up on 4-H Online, then they will need to enroll as a "new volunteer." At this time, 4-H club organizational leaders are NOT able to view their 4-H club's roster online (Nebraska 4-H is working out the details).

Kiwanis Karnival is Free, Fun Family Event, April 8

Families of 4-H members and Elliott Elementary School students are invited to attend the annual Kiwanis Karnival, a FREE family event. Kiwanis Karnival will be held Friday,



April 8, 5:30-7:30 p.m. at Elliott Elementary School, 225 S. 25th St., Lincoln. The Karnival features carnival type games for the kids, bingo for adults, prizes, snacks, fun and fellowship. Lincoln Center Kiwanis has sponsored this event for over 50 years providing prizes and snacks.

4-H clubs are needed to create and staff carnival-type booths, such as bowling pins, throwing bags through holes, etc. This is a great community service and leadership activity for clubs. About 250-300 people attend this annual event. If your 4-H club or family would like to have a booth or for more information, call Lorene at 402-423-7541 or 402-310-3481.



Discover, Learn and Grow at 4-H Summer Camps

2016 4-H Summer Camp brochures are now available online at http://4h.unl.edu/camp and at the Extension office. Camps are open to all youth ages 5-18 (need not be in 4-H). With locations at Gretna and Halsey, there are over 40 camps ranging from half day to seven days/six nights! The 4-H camps and centers all meet over 300 standards established by the American Camping Association.

Big Red Summer Academic Camps

Big Red Summer Academic Camps are residential, career exploration camps held at the University of Nebraska Lincoln open to all youth grades 10th-12th. During the week-long camps, participants work with UNL faculty to explore the topic of their particular camp, like computing, veterinary science or culinary arts. Brochures are available online at

http://4h.unl.edu/4hcamps/bigredcamps

and at the Extension office.

Early Bird Discount Before April 15!

4-H SUMMER

CAMPS & TRIPS

4-H Horsemanship Level Testings, April 12 & 26

The first 2016 riding skills level testing will be held on Tuesday, April 12, 5:30 p.m. at the Lancaster Event Center in the Multipurpose Arena. Anyone wishing to be tested must sign-up by April 5. Contact Marty at mcruickshank2@unl.edu or 402 441-7180.

A second testing is scheduled for Tuesday, April 26, 5:30 p.m. at the Lancaster Event Center in the Amy Countryman Arena. Sign-up deadline for the April 26 testing is April 19.

Remember, all other horsemanship level requirements must be completed and handed in to Marty before the riding portion can be done.

It is important to note 4-H'ers need to be testing with their own 4-H projects. The horse is being tested (and acclimated) also. In addition, youth testing for level II must have their horses groomed/clipped for show readiness. This is part of the level II test. If youth/horse do not pass this portion, they will need to come back and retest.

Notice from Horse VIPS About 'No Shows' at **Level Testings**

In the past, there has been a problem with 4-H'ers signing up to test and then not showing up for the testing. A lot of work/ time goes into preparing for the testings. If those signed up don't show, the testers are giving their time, talent and gas money for nothing.

4-H'ers must notify Marty (mcruickshank2@unl.edu or 402-441-7180) at least 24 hours in advance if they can't make the testing they are signed up for.

A \$20 fee will be assessed to anyone who signs up for a testing and then doesn't come or doesn't notify Marty before the testing date. The fee will need to be paid before the 4-H'er will be allowed to test on another date.

4-H & Youth

New Nebraska 4-H Cat Club

Are you fascinated with felines? Captivated by cats? If so, you are invited join the UNL Companion Animal 4-H Online Cat Club which meets the second Thursday of every month, 6–7 p.m. Meetings are hosted in Lincoln at UNL East Campus, Animal Science Complex, room A211. Youth in other counties can join online. Open to all youth ages 8–18. Free of cost.

This is a great way to expand your knowledge about cats and meet other 4-H youth from across the state of Nebraska. Meetings will include a short lesson, cat activities and hands-on learning opportunities. Topics covered in this program include: health care, nutrition, showmanship, at home cat care and more

Contact Dr. Lisa Karr-Lilienthal at 402-472-6458 or lkarr-lilienthal2@unl.edu for details on how to register and where to park.

4-H/FFA Sheep & Meat Goat Weigh-In and Tag Day, May 17

4-H/FFA members planning to exhibit market sheep and meat goats need to have their lambs and goats officially tagged and weighed on Tuesday, May 17, 6–8 p.m. at the Lancaster Event Center - Pavilion 2. For more information, call Cole at 402-441-7180.

Livestock Quality Assurance

All 4-H/FFA members showing market beef, market sheep, market swine, meat and dairy goats, dairy cattle, poultry and rabbits at county fair, State Fair or the Ak-Sar-Ben 4-H Stock Show must complete the Quality Assurance training. Livestock exhibitors showing only breeding animals and horse exhibitors do not have to complete it.

Again this year, the Quality Assurance certification is online. As always, this must be completed by June 15. Instructions are online at http://4h.unl.edu/qualityassurance. There is a \$5 per youth charge. If you have any questions, contact Cole at cmeador2@unl.edu or 402-441-7180.

New 4-H/FFA Livestock Identification Requirements

All market beef, market sheep, market goats and market hogs being identified for Nebraska State Fair and AKSARBEN Stock Show will be tagged with an EID tag. Ear notches and EID tag will be recorded for market hogs. DNA will still be required as usual at \$6 per market animal. Paper identification forms are no longer required for Nebraska State Fair or AKSARBEN animals — the DNA will serve as the nomination. **Market beef needs to be identified by April 15;** sheep, hogs and goats by June 15.

Breeding heifers, breeding ewes and breeding meat goats being identified for Nebraska State Fair and AKSARBEN Stock Show will submit a breeding nomination card with a \$2 fee per animal by June 15. This card will serve as the animal's identification.

Youth participating in the Nebraska State Fair will have until Aug. 10 (state fair pre-entry deadline) to select whether they are showing their animal in 4-H or FFA.

All livestock ONLY being shown at county fair will be tagged with a normal 4-H tag and will need a paper animal identification form (also called ownership affidavit). **Market beef ID forms are due by April 15** all other livestock ID forms are due by June 15. Forms can be picked up at the Extension office or found at http://4h.unl.edu/animalscienceprogrammanagement. If you are showing at county fair and either State

Fair or AKSARBEN, you do not need a paper

identification form.

If questions, contact Cole at 402-441-7180 or cmeador2@unl.edu.



Doug Malone

Lancaster County 4-H is proud to announce Doug Malone as winner of April's "Heart of 4-H Award" in recognition of outstanding volunteer service.

A Norris FFA Advisor for 32 years (retiring this spring), Doug has contributed greatly to 4-H/FFA at the Lancaster County Super Fair. He has announced the beef



show for many years, helped get trophy sponsors and volunteered at horse shows when his daughter was in 4-H. He advocated to the Lancaster County Commissioners for the Lancaster Event Center to be built. He also helps train youth on livestock and horse judging teams.

"I enjoy watching kids light up when they accomplish new skills or things they never thought they could do," says Doug. "My favorite experiences as a 4-H volunteer was serving the exhibitor breakfast at the county fair as part of a joint effort with our Men's Church group and local cooperative. We served thousands of pancakes and had a great time in the tent."

Lancaster County 4-H thanks Doug for donating his time and talents. Volunteers like him are indeed the heart of 4-H!



let the good times grow

AUG. 4-13, 2016
4-H & FFA Exhibits & Events Aug. 4-7
4-H Horse Show Aug. 1-7

4-H/FFA Fair Books Have Been Mailed

The Lancaster County 4-H & FFA Fair Book contains entry information for 4-H & FFA members exhibiting in 4-H/FFA. Fair Books have



been mailed to all 4-H & FFA families. It is also available at the Extension office and online at http://lancaster.unl.edu/4h/Fair. The online version indicates changes from last year's Fair Book in green text. Many fair handouts, forms and videos are also on this website.

Open Class entry information and schedule will be online by May 1 with online registration opening July 1 at www.SuperFair.org. Anyone can participate in open class categories.

New 4-H Exhibits

See the Fair Book for detailed information about each of the following new classes:

- **Presentations Contest:** 4-H Illustrated Presentation, Special Topic: Nebraska Agriculture
- Style Revue is Now Called Fashion Show: classes are the same
- Consumer Management: all new classes based on the new curriculum, My Financial Future
- ESI: Entrepreneurship Investigation: Unit 3 Photos of an Original Product
- Photography: Unit II, Controlling the Image Showcase Entry; Unit II & III, Nebraska Exhibit Print — tell a story about how "4-H Grows Here" in your local community
- **Home Environment:** Design Decisions, Accessory 2D
- **Human Development:** New rules and classes focusing on designing toys that meet the different needs of children.
- **Clothing:** Beyond the Needle, Fashion Accessory
- **Computers:** Unit 2, Computer Application; Unit 3, 3D Printing
- **Horticulture:** new classes for the new curriculum, *Landscape: Grow a Beautiful Space*
- Llama/Alpaca: Beginner Obstacle Class for llamas and alpacas 18 months old or less
- Rabbit Static Exhibits: Favorite Rabbit Photo Exhibit Print; Recycled Materials Exhibit
- Dog Show: Theme "Winter Wonderland" for Creative Kennel Contest and Costume Contest.
- Poultry Show: Costume Contest; Poultry Presentation Contest and Quiz Bowl are back after being substituted for live bird classes last year
- Household Pets Show: Homemade Item Made by Exhibitor

Shavings — New Procedure

Absolutely no outside shavings or straw is allowed. All exhibitors must use shavings provided by the Lancaster Event Center. Note that all stalls are disinfected with Nixall between each rental year-round.

Special discounted 4-H/FFA price of \$7 per bag (with sales tax included) will be honored for 4-H/FFA animal shows from Sunday, July 31 through Sunday, August 7, 7 p.m. (NOTE: shavings pricing will return to year-round price of \$9 for all Open Class shows which includes sales tax and delivery to stall.)

Exhibitors must first pay for their shavings at the NEW General Store on the east end of Pavilion 2, open at peak times listed below. Otherwise, shavings are available at the nearest open cafe (see planned times below). Cash, check or credit cards accepted. After paying, 4-H/FFA exhibitors then may immediately pick up their shavings at the Shavings Bay in northwest corner of Pavilion 2. (If Shavings Bay is not open, cashier will call Lancaster Event Center Operations staff to meet you there.)

Pavilion 2 General Store & Shavings Bay hours:

- Sunday, July 31, Noon–8 p.m.
- Wednesday, Aug. 3, Noon–9 p.m.
- Thursday, Aug. 4, 7 a.m.–Noon

Alternative places to buy shavings when Pavilion 2 General Store is closed:

Exhibit Hall Cafe (with window in Pavilion 3) hours:

Monday, Aug. 1 to Tuesday, Aug. 2, 7 a.m.–
 10 p.m. (may be shortened around Pavilion 3 horse show hours)

Good Times Grill (between Pavilions 1 & 4) hours:

- Wednesday, Aug. 3, 7 a.m.–Noon & 9–10:30 p.m
- Thursday, Aug.4, Noon–10:30 p.m.
- Friday, Aug. 5 to Sunday, Aug. 7, 7 a.m.–10:30 p.m.

4-H & FFA Entry Pass Hangtags

4-H/FFA exhibitors can get free 4-H/FFA entry pass hangtags for their immediate families at the Extension office (available July 1–Aug. 3). These entry passes allow one vehicle and its occupants to enter the fairgrounds each day Thursday, Aug. 4-Monday, Aug. 8, 11 a.m. and park in designated areas. 4-H/FFA families are asked to enter Gate 3 (second Havelock driveway) where there will be an exhibitor lane when possible to speed entry except when unloading/ loading static exhibits, use 84th street entrance and temporarily unload/load by the Lincoln Room and park in Lot K if staying longer.

Every 4-H/FFA vehicle needs an entry pass hangtag — NO EXCEPTIONS — so be sure to get a hangtag for every vehicle used during the fair (e.g. mom, dad, teen exhibitors that drive). General parking without the entry pass will be \$5 daily except Monday—Wednesday will be free parking.

After the 4-H/FFA days of the fair, each 4-H/FFA exhibitor and family member will need to bring a gate admission ticket picked up from a ticket sponsor or pay \$2 per person to enter.

These hangtag passes are for 4-H/FFA members and their immediate families only. Please do not abuse this privilege.



EXTENSION CALENDAR

All events will be held at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln, unless otherwise noted.

March

26

22-23 Earth Wellness Festival (for 5th Grade), Southeast Community College

24	Commercial/Noncommercial Pesticide Applicator Recertification
	Training 8:30 a.m.
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2	Lincoln Early Childhood Conference8:15 a.m3:00 p.m.
2	Composting Demonstration, Pioneers Park Nature Center's Backyard
	Composting Demonstration Area2 p.m.
2-3	Hunter's Pride Shaggy Horse Dressage Show, Lancaster Event Center
5	4-H Council Meeting6 p.m.
5	Deadline to Sign Up for April 12 Horsemanship Level Testing
5-6	Ag Awareness Festival (for 4th Grade), Lancaster Event Center
8	Extension Board Meeting8 a.m.
8	Kiwanis Karnival, Elliott School, 225 S. 25 Street5:30-7:30 p.m.
10	4-H Teen Council Meeting3 p.m.
11	Stepping On Workshop1–3 p.m.
12	4-h Horsemanship Level Testing, Lancaster Event Center - Multipurpose
	Arena
14	Commercial/Noncommercial Pesticide Applicator Initial Certification
	Training and Testing 8:30 a.m.
14	Co-Parenting for Successful Kids Class 9 a.m.—12:30 p.m.
15	All 4-H/FFA Market Beef ID's/DNA Due
16	4-H Furniture Painting Workshop9 a.m.
18	Stepping On Workshop1-3 p.m.
19	Deadline to Sign Up for April 26 4-H Horsemanship Level Testing
25	Stepping On Workshop1–3 p.m.

Teen Council 4-H'ers Practice Leadership at Lock-In

4-H Horsemanship Level Testing, Lancaster Event Center - Amy Countryman

Arena 5:30 p.m.



Teen Council members begin with introductions and setting up basic rules for the night.



The craft activity included making wind chimes.

In January, 19 4-H Teen Council members organized and led the overnight 4-H Lock-In for 48 4th and 5th graders. This year, teens chose the theme, "Spring into Summer, Fall into Winter" and divided into four committees: games, education, crafts and food. At the Lock-In attendees rotated through each of the four activities, made friends, slept a little and had lots of fun. More photos are at www. flickr.com/photos/unlextlanco/sets.

Four Teen Council members led each of the four groups of youth as they rotated through the four activities. Here's what some of these group leaders said about this year's Lock-In.

Great Learning Experience

The 2016 Lock-In was not only fun, but it was a great learning experience for both the teen planners and the youth who attended. Members of the Teen Council worked together to plan and organize games, food and lots of other big and small group activities — and then to run the activities at the Lock-In. The youth who attended had a lot of fun moving from activity to activity. They made wind chimes, played games, learned interesting



After the four activity rotations, everyone got together for group fun, including short interviews of the teens.

facts about the seasons and at the end of the night, watched movies. Best of all, they had a chance to make lots of new friends.

—Michael Zavodny

Develop Friendships

"I have volunteered at the 4-H Lock-In for 5 years, and this is my first year being a group leader. As a leader, I was able to see all the committees and what they had worked on for the 4th and 5th graders. I was also able to develop friendships with some of the kids in my group. I had one girl in particular who shadowed me almost the whole night. It was a great experience for everyone."

—Abby Babcock

Spring Affair Plant Sale, April 23



Spring Affair, the Midwest's largest gardening event, will be held Saturday, April 23, 9 a.m.–2 p.m. at the Lancaster Event Center, 84th & Havelock in Pavilion 1. More than 500 varieties of plants will be offered at the plant sale, with educational plant talks and garden vendors all under the same roof. Admission to the sale and talks is free. Plants available at the

sale are selected for regional suitability, uniqueness, demand and are provided by Bluebird Nursery Inc., of Clarkson, Neb. Gardeners will find perennials, herbs, native plants, vines and a variety of trees and shrubs. Spring Affair is sponsored by Nebraska Statewide Arboretum.

For more information, go to http://arboretum.unl.edu/ spring-affair

Super Awards at Super Fair

Recipients of the following awards will be recognized at the Lancaster County Super Fair on Aug. 4 at the VIP Luncheon.

Ag Society Hall of Fame

At the 2010 Super Fair, the Lancaster County Agricultural Society unveiled the Ag Society Hall of Fame located at the Lancaster Event Center in the Business Center. This wall formally recognizes those individuals who have dedicated time and effort to the Lancaster County Agricultural Society beyond the normal volunteer hours and have made significant contributions to the establishment, development, advancement, or improvement of the Lancaster County Fair. For application forms, call the Lancaster Event Center at 402-441-6546. Deadline for applications is May 1.

Pioneer & Heritage Farm Awards

For over a half century, AKSARBEN Foundation has teamed up with the Nebraska Farm Bureau and the Nebraska Association of Fair Managers to present the Pioneer Farm Award, recognizing Nebraska farm families who have

consecutively held ownership of land in the same family for 100 vears or more.

More recently, the Heritage Farm Award recognizes Nebraska farm families who have consecutively held ownership of land within the same family for 150 years.

To date, more than 9,000 families in all 93 counties have been honored. Recipients are presented a plaque and gatepost marker during the annual county fair in which the land is owned. Applications are online at www.aksarben.org/p/ coreinitiatives/agriculture/264 and due by April 29.

Good Neighbor Award

Since 1943, the AKSARBEN Foundation Good Neighbor Award has been recognizing unselfish acts of kindness across the Heartland. The award pays tribute to the neighbors and friends who go above and beyond to make the Heartland a better place. Recipients will also be recognized in a special feature of the Omaha World-Herald Sunday newspaper. Application is online at www. aksarben.org/p/coreinitiatives/ community/goodneighboraward and due by May 1.

UNL Animal Science Experience

Monday, April 11 • 9:30 a.m.-2 p.m. **UNL East Campus Animal Science Complex Commons**







Any high school student interested in Animal Science as a major is invited to this free event!

- Meet current Animal Science students & other prospective students • Tour the UNL Animal Science Complex
 - Learn about clubs and extra-curricular activities at UNL
 - Eat a delicious lunch at the East Campus Union • Attend an actual Animal Science class to see what it's like
- Participate in a hands-on lab experiment with an Animal Science Professor

Please register by April 4 at http://goo.gl/forms/KeVJBHjXFq For more information, contact Alli Raymond at 402-472-0204 or araymond2@unl.edu



"Whether it was the kids or the teens, everyone had a skip in their step when it came to the 4th and 5th grade Lock-In hosted by the Lancaster County 4-H Teen Council! Our theme "Spring into Summer, Fall into Winter," provided a fun topic for our games, food, crafts and education committees. Not to mention several fun group games, songs and the movies for the brave all-nighters. Kids, teens, parents and 4-H staff alike all had a great time and are very excited for next year!"

-Sheridan Swotek