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NEBLINE, May 2022

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Monarchs, Migration & Milkweed Page 5

Weed Awareness Special Pullout Section

Insect and Disease Control for Organic Vegetable Gardeners

By Sarah Browning, Extension Educator in Lancaster County

Minimizing pesticide usage in the home garden is a great way to protect yourself from chemical exposure, while also protecting the environment and surface water resources. But pest control — insects, diseases and weeds — are challenging for the home organic vegetable gardener. Today, we'll focus on techniques for insect and disease control. Gardeners using organic techniques may have to adjust their expectations at the outset and begin to accept a higher level of insect and disease damage in the garden. Start by deciding how much damage can be tolerated as a threshold for determining when control is needed. Then begin implementing any (or all!) of the practices below at the beginning of the gardening season. Don't wait until pest problems appear to put control measures in place.

Photo by Phil Sloderbeck, Kansas State University, *Bugwood.org*

European corn borer in garden pepper.

Pest Prevention

Start the gardening season by using these six basic principles to minimize disease problems.

1. **Buy healthy, high-quality plants.** Many disease problems are brought into the garden accidentally through diseased plant material. Buy only healthy plants from reputable growers.
2. **Select resistant varieties.** Using cultivars (cultivated varieties) with resistance to disease, reduces damage. Examples include: Tomatoes with resistance to fusarium, verticillium and nematodes; or, cucumbers resistant to bacterial wilt. For more information on resistant cultivars, check garden catalogs, seed packages or refer to Nebraska Extension NebGuide "Selected Vegetable Cultivars for Nebraska," (G1896) *https://go.unl.edu/vegcultivars*.
3. **Rotate vegetable families.** Rotation reduces insect and disease pressure on vegetable crops by preventing a high level of pests from building up in the soil or around the garden and is particularly useful in reducing disease problems. Crops are rotated by families, so you need to know which vegetables are related. Find more information at Washington State University's resource "Using Crop Rotation in Home Vegetable Gardens," *http://bit.ly/gardenrotation*.
4. **Use good garden sanitation.** Removing diseased plants will limit the spread of disease to healthy plants. Many pathogens survive between growing seasons on diseased plant material, so removing diseased leaves, plants, fruits and vegetables from the garden as soon as you find them, slows disease spread. Keep gardens as weed-free as possible since weeds often serve as a reservoir of insect and disease problems.
5. **Avoid overhead irrigation.** Many diseases require leaf wetness for infection to occur, so plan to use drip irrigation this year to keep foliage dry and conserve water. If overhead irrigation must be used, water early in the morning so leaves are dry by nighttime. Avoid placing plants too closely together — this slows air movement through plant foliage and lengthens leaf drying time after heavy dew or rain.
6. **Mulch.** Summer mulch prevents rain-splash of soil containing fungal spores onto the undersides of leaves, which is the starting point for many fungal infections.

Photo by Whitney Cranshaw, Colorado State University, *Bugwood.org*

Scout for squash bug eggs as soon as cucurbit plants begin to vine, and destroy any found.

Insect Control

Create a physical barrier, preventing pests from getting to your plants by installing row covers. These are made using lightweight, fine-meshed fabric which can be loosely draped over crop rows and anchored to the soil at the edges. Row covers provide the greatest amount of protection if applied before insects appear. As an added benefit, they also moderate harsh summer temperatures, providing light shade. For crops that require insect pollination, row covers can be removed once flowering begins. Find more information at University of Wisconsin-Madison's article "Floating Row Cover," *http://bit.ly/rowcover*.

Preserve beneficial insects. Natural populations of predators and parasites are valuable for reducing infestations of garden pests.

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GARDEN GUIDE
THINGS TO DO THIS MONTH

By Mary Jane Frogge, Extension Associate in Lancaster County

Plan a landscaping project on paper first. Do not over plant. Be sure you know the mature size of each plant and allow for growth.

Grass clippings can be used as a mulch in flower beds and vegetable gardens if allowed to dry well before use. Never use clippings from a lawn that has been treated with a herbicide.

In May, plant marigold, petunia, ageratum and begonia transplants. All are good border plants.

Cabbage loopers and imported cabbage worms are green caterpillars. They eat large holes in the leaves of plants in the cabbage family. For control, caterpillars can be picked off by hand or sprayed with *Bacillus thuringiensis* (*Bt*), a natural, non-toxic preparation available by various trade names.

Harvest rhubarb by cutting or by grasping the stalk and pulling up and gently to one side.

To grow annuals in containers on the patio, use a lightweight soil mixture. Keep the plants well watered, because the soil dries out fast. Apply a water-soluble fertilizer according to package directions every two weeks.

Lawns maintained at the correct height are less likely to have disease and weed infestation. Kentucky bluegrass and tall fescue should be mowed at approximately three inches in height. Mow frequently, removing no more than one third of the blade at each cutting.

Watering roses with soaker hoses or drip irrigation will reduce the spread of black spot disease.

Plant ground covers under shade trees that do not allow enough sunlight to grow grass. Vinca minor or English ivy are ground cover plants that grow well in shade.

Mulch around newly planted trees and shrubs. This practice reduces weeds, controls fluctuations in soil temperature, retains moisture, prevents damage from lawn mowers and looks attractive.

In May, have successive plantings of beans and sweet corn to extend the harvest season in the vegetable garden.

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However, some level of pest infestation must be tolerated to attract and maintain natural enemy populations. Should pest control be necessary, select a low-risk pesticide to minimize injury to beneficials. Several species of mass-reared beneficial insects can be purchased from commercial suppliers for use in home gardens. However, the artificial introduction of natural enemies usually does little good in the home garden because the insects often die or disperse into areas away from your garden. Creating good conditions for natural beneficial insect populations to increase is more effective than introduction of purchased beneficials.

Photo by Whitney Cranshaw, Colorado State University, *Bugwood.org*

Adult bean leaf beetle

Traps & Mechanical Control

Once insect problems have begun, what can be done to control them? Scout the garden for insects as often as possible — daily, if at all possible. Catching insect problems in the early stages makes management easier, rather than trying to play catch-up on a full-blown infestation. When insect numbers are high, injury may be reduced, but is seldom eliminated by non-chemical methods.

- Physical barriers, such as collars placed around young plants, will help protect against cutworms. The row covers mentioned above are effective against many insects and are especially useful on non-flowering vegetables.
- Handpicking is effective against low populations of large insects such as Japanese beetles, Colorado potato beetle, tomato hornworms and others. Crush them or drop them into a bucket of soapy water.
- Some trapping methods do work, such as the use of flat boards or shingles placed on the ground near plants to attract slugs and snails. They can be collected and destroyed.
- Syringing the undersides of foliage with a strong jet of water daily for 7–10 days can help reduce spider mite infestations.

Organic Pesticides

Before using any pesticide, start by accurately identifying the insect or disease problem. Gardeners can submit pictures of plant problems to Nebraska Extension experts through our Digital Diagnostic Network, *http://digitaldiagnostics.unl.edu*.

Below are a few products useful in either disease or insect control that may be acceptable to organic gardeners. However, these products typically suppress a pest problem rather than eliminate it. And while they are less damaging to beneficial insects, that does not mean no damage. Always make sure any product purchased is labeled for use in the vegetable garden, and follow all directions on waiting periods after application before harvesting again.

- ***Bacillus thuringiensis*** — commonly referred to as *Bt* and marketed under the trade names Dipel, Thuricide and others. Consists of spores from a soil-inhabiting bacteria that kills the larvae of moths and butterflies, such as armyworm, cabbage loopers, cutworms, corn earworm and tomato hornworm. Will also kill desirable butterfly and moth larva, so apply carefully.
- **Copper fungicide** — one of the first elements used as a plant fungicide. Provides protection against infection by killing disease pathogens on a leaf or other surface before they infect the plant. Must be applied preventatively. Has no post-infection action. Many formulations of copper fungicides are available in garden stores.
- **Diatomaceous earth** – finely ground fossilized diatoms, a single-celled form of algae. Their sharp edges scratch and scrape the waxy or oily outer layer of soft-bodied insects causing them to dehydrate and die. Often used for slug control.
- **Horticultural oil** — Highly refined vegetable or mineral oil, which kills insects in several ways, but most importantly, by suffocating them. Oils act like a contact insecticide and provide no residual control, so the insects must be present and in a vulnerable stage of development for an oil application to be effective. Plant damage may occur if used when temperatures are too high.
- **Insecticidal soaps** — These products are liquid formulations of potassium salts of fatty acids and are effective at controlling some soft-bodied insects such as aphids, mites, leafhoppers and plant bugs. Requires thorough plant coverage and multiple applications. Use soaps with caution, as leaf injury is possible with certain plants.

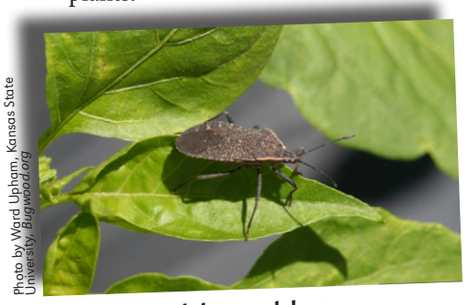


Photo by Ward Upham, Kansas State University, *Bugwood.org*

Adult squash bug

- **Kaolin clay** — finely ground natural clay product. When sprayed, creates a fine film on plant surfaces and acts as an irritant, repellent or physical barrier. Heavy use has been found to be harmful to beneficial insects and can result in spider mite infestations.
- **Neem** — made from neem tree seed extracts and contains either neem oil or the purified active ingredient azadirachtin. Effective as a contact spray or through ingestion. Acts primarily by disrupting normal insect growth and, in some insects, has anti-feeding or egg-laying properties. Quickly broken down by sunlight.
- **Spinosad** — made by fermentation of a soil bacteria and disrupts the insect nervous system, resulting in paralysis and death. Effective as a contact spray or through ingestion. Kills affected insects in 1–2 days. Toxic to bees and parasitic wasps if sprayed or they come into contact with wet plant surfaces.
- **Sulfur** — finely ground sulfur can be used either as a dust or spray to prevent diseases and is sometimes used to control spider mites. The chemical may 'burn' tender foliage if applied when air temperature is 85°F or higher. Do not apply within 20–30 days of applying a horticultural oil — plant damage may result.

An Egg-cellent Choice!

By Alyssa Havlovic, MS, RDN, ACSM EP-C, Extension Educator in Lancaster County

May is here, and it's National Egg Month. Although eggs haven't had the best reputation in the past, more recent research shows that eggs are actually a healthy component to any eating pattern.

For decades, we believed we should limit eggs due to their cholesterol content, but the latest research shows that there is no correlation between egg consumption and risk for cardiovascular disease, ischemic heart disease or stroke. Eggs are a complete source of protein and pack over 20 beneficial nutrients at only 70 calories a piece.

Nutritional Benefits for All

Eggs are a great choice for individuals of all ages across the lifespan. The 2020-2025 Dietary Guidelines for Americans (DGA) specifically recommend eggs as an important first food for infants and toddlers, as well as for pregnant and breastfeeding women. Eggs are an excellent source of choline, a critical nutrient for fetal brain development, and are one of the most concentrated food sources of choline in the American diet. Choline is not found in high quantities in many foods typically consumed by Americans, but just one large egg provides the daily choline needs for babies and toddlers, and two large eggs provide more than half of daily choline needs for pregnant women. The DGAs highlight the importance of choline and recommend eggs as a first food for babies to reduce risk for an egg allergy.

Eggs are also beneficial for adolescents and teens due to the protein and choline they provide. The high protein in eggs helps repair and maintain muscle health, therefore, supporting bone health for adolescents and adults.

Eggs also offer nutritional benefits for adults and older adults and can be part of a heart-healthy diet. Eggs are a good source of vitamin D, a nutrient most Americans fall short on, according to the dietary guidelines. Egg yolks contain two carotenoids, lutein and zeaxanthin. These carotenoids help prevent age-related macular degeneration that can lead to blindness. Another beneficial nutrient from eggs is vitamin B12. Many older adults do not consume enough vitamin B12, but just one large egg can provide 20% of daily needs.

Ways to Eat Them

In addition to the nutritional benefits of eggs, they are also quick to prepare and easy on your food budget! With rising protein food costs, eggs remain very affordable with an average cost of less than 20 cents a piece.

We may think of eggs as a traditional breakfast food, but you can eat them any time of day!

For breakfast, you might scramble or fry an egg, make an omelet, add them to a breakfast burrito, on top of toast — the options are endless! For lunch, add hard boiled eggs to a fresh salad or make an egg salad sandwich. For dinner, add them to stir fry dishes and fried rice, enjoy an egg and potato skillet meal or try curried eggs with spinach. Eggs are a great way to vary your protein choices.

Food Safety

Keep yourself and your family safe from foodborne illness by washing your hands and any surfaces or utensils that come in contact with raw eggs. When preparing dishes containing eggs, cook eggs until the white and yolks are firm or an internal temperature of 160°F. Eggs should be kept cool at 33–40°F and should be discarded after two hours if left at room temperature. For best quality, use eggs within 3–5 weeks of the purchase date. Eggs are perfectly safe to use after the "sell-by" date on the carton.

Sources:
- *https://www.incredibleegg.org/nutrition/nutrition-education-materials/*
- *https://food.unl.edu/food-calendar/may/egg-month*
- *https://food.unl.edu/newsletter/food-fun-young-children/how-do-you-your-eggs*
- *https://www.incredibleegg.org/articles/eggs-and-heart-health*

RECIPE OF THE MONTH

By Alyssa Havlovic, MS, RDN, ACSM EP-C Extension Educator in Lancaster County

Eggs are an inexpensive and nutritious protein food. Try this simple recipe for a nutrient-dense meal.

SWEET POTATOES & BLACK BEAN HASH

(Yield: 3 servings)

2 Tablespoons vegetable oil, divided
1 sweet potato, scrubbed with clean vegetable brush under running water, peeled and diced
1 medium zucchini, gently rubbed under cold running water, diced
1 medium red bell pepper, scrubbed with clean vegetable brush under running water, diced
1/2 cup corn, canned or frozen
2 cloves garlic, minced
1/2 teaspoon chili powder
1/2 teaspoon ground cumin
1/4 teaspoon smoked paprika (optional)
1 cup black beans, drained and rinsed
3 large eggs
salt and pepper, to taste

Photo by Craig Chandler, UNL Communications

1. Wash hands with soap and water.
2. In a large skillet, heat one Tablespoon oil.
3. Add the diced sweet potatoes to the pan and cook for 5 minutes.
4. Add zucchini, red bell pepper and corn to the skillet. Cook until all the vegetables are fork tender, about 15-20 minutes. Stir occasionally.
5. In a small bowl, combine one Tablespoon oil, garlic, chili powder, cumin and paprika (if using). Add spice mixture and black beans to the skillet and stir well.
6. Create three small wells in the vegetables. Gently crack an egg into each well, keeping the yolk intact. Wash hands with soap and water after cracking raw eggs. Season the eggs with salt and pepper if desired.
7. Cover the skillet with a lid and allow eggs to cook until egg whites and yolks are firm, about 4-6 minutes. Serve immediately.

Nutrition Information: *Serving Size (1/3 of recipe): Calories 255, Total Fat 10g, Saturated Fat 1g, Sodium 285mg, Total Carbohydrates 33g, Fiber 9g, Protein 11g*

Source: Nebraska Extension

It's Time for Private Well Maintenance

By Becky Schuerman, Extension Domestic Water/ Wastewater Associate

Spring is here, and that means it is time to conduct a private well maintenance check. Winter can be especially hard on outdoor systems, surfaces and landscaping that are subject to the elements. Getting in the habit of inspecting and maintaining your well system in the spring and the fall is a good habit to get into. It will help ensure everything operates efficiently and can potentially save you from shelling out money for costly repairs.

Inspection

Begin by inspecting your wellhead and area around it. The ground around your wellhead needs to slope away from it to aid in shedding water and potential contaminants away from your well. Also, make sure there are no areas that will retain stagnant water near the wellhead and there are no empty voids in the earth around the well casing. Remove near-by trees or plants with deep roots that can cause destruction to the well, water lines running from it or the electric running to it. Your inspection should also include checking that the vent screen is in place, electrical conduit, above ground casing and well cap are all intact and secure. Check all hydrants and faucets to make sure none are leaking; properly fix if necessary. Contact a licensed water well contractor to assist with any damage or issues you find.

Photo by Jon Hyngstrom, former Extension Educator

Control Runoff

Assess and divert precipitation runoff from rooflines, hard surface areas and landscaping so that it does not run toward your well, as runoff can carry contaminants to your well and, potentially, contaminate your water supply. Follow manufacturer's directions of how you use, store and dispose of products like paint, solvents, oil, cleaners, wood preservatives, batteries and adhesives, as well as pesticides and fertilizers which can put your drinking water at risk of contamination through runoff.

System & Equipment

For water equipment, review recommended maintenance procedures and filter/ media replacement. This includes: water softeners, filtration systems and water heaters. At a minimum, flush out your hot water heater annually to help eliminate bacterial growth. Whenever shocking your well, empty and fill the water heater in addition to all your water lines with the chlorinated water, allowing it to have sufficient contact time within your well system for maximum effectiveness, and then flush it. See Nebraska Extension NebGuide, "Shock Chlorination" (G07-1761) at *https://go.unl.edu/ shockclorination*

Testing

Finally, test for nitrates and coliform bacteria annually, as well as any other contaminants of concern in your area. Your local Natural Resource District, health department and a representative of a nearby community water system are good places to inquire about the water quality in your area.

FOR MORE INFORMATION

Nebraska Extension has numerous NebGuides and other publications about private wells and drinking water at *https://water.unl.edu/article/drinking-water/nebguides*.

Composting Demonstrations

Extension Master Gardeners will teach how to achieve a proper carbon:nitrogen ratio, or "green" materials vs. "brown" materials, and show you several types of structures that can be built or purchased for composting. You'll learn how to construct a compost pile, and discuss basic troubleshooting if your compost pile is not breaking down as it should.

At each composting program, two random 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 across the street from the Nature Center (look for the Extension banner). Demonstrations will be held at 10 a.m. on the following Saturdays: May 21, June 25, Sept. 24 and Oct. 22.

Cash Rent Survey

The University of Nebraska–Lincoln Department of Agricultural Economics annually surveys land industry professionals across Nebraska including appraisers, farm and ranch managers, agricultural bankers and related industry professionals. Preliminary results from the survey are divided by land class and summarized by the eight Agricultural Statistic Districts of Nebraska.

Land industry professionals responding to the annual survey attributed the rise in Nebraska farm real estate values to higher commodity prices, interest rates near historic lows, hedging against inflation and renewed use in 1031 exchanges. These forces substantially impacted farm and ranch finances across Nebraska. The financial position of many operations improved over the prior year despite rising machinery costs and input expenses. Current interest rate levels created a strong market as investors turned to land as a tangible investment as a hedge against inflation. Proposals to change capital gains taxes also spurred the usage of 1031 exchanges.

Source: Cornhusker Economics, March 16, 2022.

FOR MORE INFORMATION

Read the Cornhusker Economics full article at *https://go.unl.edu/cashrentsurvey*. For questions regarding this survey, contact Jim Jansen at 402-261-7572 or jjansen4@unl.edu.

Table 2. Reported **cash rental rates for various types of Nebraska farmland and pasture**: 2022 averages, percent change from 2021 and quality ranges by Agricultural Statistics District [a]

TYPE OF LAND		AGRICULTURAL STATISTICS DISTRICT	
		EAST	SOUTHEAST
Dryland Cropland	Average	$235/acre 7% change	$190/acre 12% change
	High Third Quality	$275/acre	$235/acre
	Low Third Quality	$185/acre	$160/acre
Gravity Irrigated Cropland	Average	$285/acre 10% change	$260/acre 9% change
	High Third Quality	$320/acre	$315/acre
	Low Third Quality	$250/acre	$230/acre
Center Pivot Irrigated Cropland [b]	Average	$330/acre 14% change	$315/acre 13% change
	High Third Quality	$365/acre	$345/acre
	Low Third Quality	$290/acre	$265/acre
Pasture	Average	$55/acre 6% change	$53/acre 8% change
	High Third Quality	$71/acre	$64/acre
	Low Third Quality	$44/acre	$41/acre
Cow-Calf Pair Rates [c]	Average	$58.35/pair 6% change	$57.40/pair 5% change
	High Third Quality	$68.25/pair	$67.35/pair
	Low Third Quality	$49.30/pair	$44.95/pair

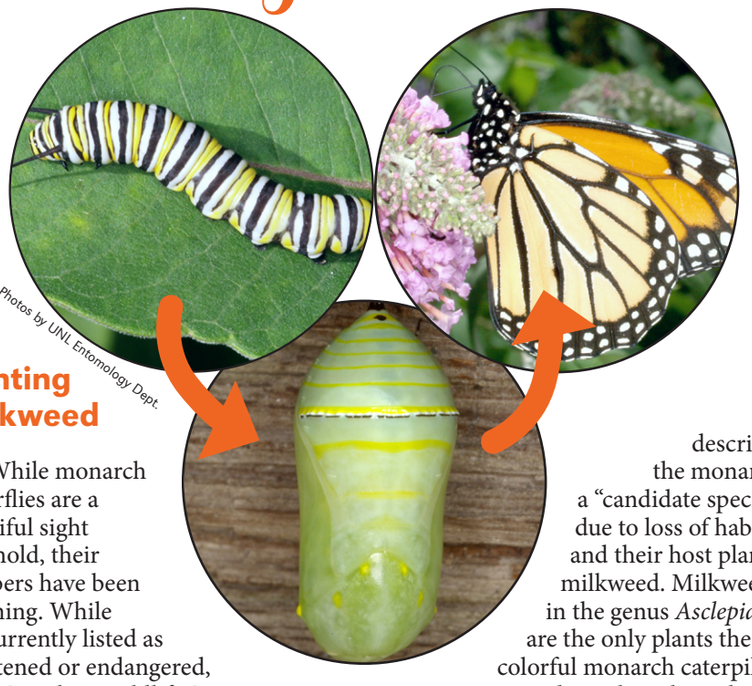
[a] Source: Reporters' estimated cash rental rates (both averages and ranges) from the UNL Nebraska Farm Real Estate Market Survey, 2021 and 2022.
[b] Cash rents on center pivot land, assumes landowners own total irrigation system.
[c] A cow-calf pair is typically considered to be 1.25 to 1.30 animal units (animal unit being 1,000 lb. animal) for a five-month grazing season. However, this can vary depending on weight of cow and age of calf.

Monarchs, Migration & Milkweed

By Kait Chapman, Extension Educator in Lancaster County

The Great Monarch Migration

The sight of a monarch butterfly flying around one's house or visiting one's flowers, brings joy to many Nebraskans. Every year, these large butterflies undertake a spectacular and long migration spanning Canada, the United States and Mexico. Monarchs are the only butterfly known to travel such a far distance to reach their southern destination for the winter. Once south, the butterflies lay eggs, and it's the new generations that hatch, undergo metamorphosis and begin the journey back north. In Nebraska, we begin to see adult monarchs on their flight sometime in May. The adults will stop at flowers to feed on nectar and provide pollination services to plants.



Photos by UNL Entomology Dept.

Planting Milkweed

While monarch butterflies are a beautiful sight to behold, their numbers have been declining. While not currently listed as threatened or endangered, the U.S. Fish & Wildlife Service describes the monarch as a "candidate species" due to loss of habitat and their host plant, milkweed. Milkweeds in the genus *Asclepias* are the only plants the colorful monarch caterpillars can eat and are also where the adult butterflies lay their eggs. Once the caterpillars are fully developed, they will travel to a secure location away from their host plant to pupate and form a brilliant green chrysalis.

As Nebraskans, we can help monarch butterfly populations by planting milkweeds and reducing the amount of pesticides we use in our landscapes. Not only are milkweed plants a source of food for monarch caterpillars, but they're also native, low-maintenance, attract many other beneficial pollinators and are home to some other unique and beautiful insects.

FOR MORE INFORMATION

For more information on monarch butterflies in Nebraska and ways to get involved in monarch conservation, visit the Nebraska Game and Parks resources at *http://outdoornebraska.gov/monarch*.

Getting Outside to Play

By Hayley Jackson, Extension Educator in Lancaster County

With spring comes longer days and warmer weather. One fun thing that comes with warmer weather is getting young children outside to explore their outdoor environment. There are numerous benefits to spending time outdoors for young children, including increased opportunities to develop their gross motor skills, provide the opportunity to connect with nature and invite children to take an interest in scientific learning. So what are some fun things you can do with children to increase their interest in playing outside? Below are a few tips and tricks to get the most out of your time outside with young children.

Pixabay

Things to Consider While Outside

- Make sure you have comfortable and weather-appropriate clothing to explore the outdoors. Ensuring your child's shoes are comfortable and provide the support to be able to run and play is important. Sandals with back straps are helpful, so children do not easily trip or fall out of their shoes. In addition, clothing should be able to get dirty! Sometimes playing outside is messy, and we want to encourage children to explore in things like dirt and mud. That is one of the fun parts about getting to play outside!
- Think outside the box when it comes to outdoor play experiences. Any activity you can do inside, you can potentially do outside as well. Does your child enjoy art experiences? One fun way to incorporate the outdoors in your art experiences involves using materials your child has collected outside in their art. Encourage your child to gather items they find on a nature walk, such as sticks, leaves and flowers. These are great materials to make a collage with!
- There are a lot of fun things to see and search for outdoors. Encourage your child to go on a "Nature Scavenger Hunt" where they are encouraged to find specific items in nature. Items such as flowers, an animal paw print, a unique looking stick, something that is the color blue, are all fun things to search for while you are playing outside.
- One way to support your child's gross motor development is to allow them to run, jump and climb in open outdoor spaces. Although it may seem frightening to encourage your child to climb on things such as trees in nature, these skills are important in helping to develop your child's ability to move their body in different ways. Encourage your child to explore the environment and take risks they are comfortable with. As the adult, you can provide support and encouragement while they explore the environment around them.

Playing outdoors in the spring and summertime is a fun way to connect young children with nature. Enjoy exploring the outdoor environment with your child as the weather gets warmer!

4th Graders Learn About "Farm to Fork" at Ag Festival

More than 350 fourth graders from nine schools in the Lincoln area attended the Agricultural Literacy Festival held March 29 and 30 at the Lancaster Event Center Fairgrounds. Students gained a greater understanding of agriculture and how it impacts their daily lives. They rotated between the following ten interactive stations: Beef, Water, Equipment & Technology, Poultry, Dairy, Corn & Soybeans, Swine, Ag Careers, Horse and Sheep.

The Ag Literacy Coalition, led by Nebraska Extension, organizes the festival with the help of Lancaster County Farm Bureau, Nebraska Corn Board, agriculture businesses, commodity associations and food industry companies. This is the 20th year the festival has been held in Lincoln.

More photos are on Flickr at *http://go.unl.edu/agliteracyfestival.*

With a cow-calf pair as examples, youth learned about the beef industry. Extension Assistant Calvin DeVries (pictured at right) organized the Agricultural Literacy Festival.

Photos: Vicki Jedlicka, Nebraska Extension in Lancaster County

Extension Assistant Kate Pulec taught 4th graders about the various uses of horses, horse anatomy and more. One fun fact is teeth are a good indicator of a horse's age.

Extension Assistant Elizabeth Thiltges (pictured at right) taught students that sheep produce wool, meat and many by-products. Youth had the opportunity to interact with three lambs.

Extension Educator Melissa Bartels presented the Corn & Soybeans station, teaching youth math facts such as an ear of corn averages 800 kernels, and a soybean pod usually has three beans.

Support Local 4-H Youth During "Give to Lincoln Day"

Lancaster County 4-H Council is one of the nonprofits the community can give donations to during "Give to Lincoln Day" hosted by Lincoln Community Foundation. Your donation on May 26 is increased by a proportional share of a $500,000 challenge match fund!

For more information or to make a tax-deductible donation, go to *http://go.unl.edu/giveto4hcouncil*.

4-H Clubs Helped at Kiwanis Karnival

About 500 people attended the Kiwanis Karnival sponsored by the Lincoln Center Kiwanis Club in April at Elliott Elementary. Seven 4-H clubs created and staffed 11 game booths. Teen Council members ran Bingo for adults. Lincoln Center Kiwanians served snacks.

Lorene Bartos, Nebraska Extension in Lancaster County Emeritus and Lincoln Center Kiwanis member, said, "It was another great event for Elliott School families, 4-H families and Kiwanis. Elliott families enjoyed the free evening of family activities and expressed their thanks. It was great to see a large crowd after two years off due to the pandemic. Approximately 70 4-H youth, leaders and family members created wonderful games and staffed them."

More photos are on Flickr at *www.flickr.com/photos/unlextlanco*.

Fusion 4-H'ers 4-H club staffed a Plinko board game.

4-H Achievement Celebration

Lancaster County 4-H and 4-H Council presented the Lancaster County 4-H Achievement Celebration on Friday, March 25. The theme was "You Make a Difference!" 4-H members, clubs and leaders were recognized for their 2021 achievements. The Lancaster County Board of Commissioners proclaimed March 25 as "4-H Achievement Day" and Vice Chair Christa Yoakum read the proclamation at Achievement Celebration. For a complete list of award recipients and link to photos on Flickr, go to *http://lancaster.unl.edu/4h/achievement*.

NEBRASKA 4-H DIAMOND CLOVER PROGRAM

The Nebraska 4-H Diamond Clover Program encourages 4-H members to engage in a variety of projects and activities. At the beginning of the 4-H year, youth choose goals from a provided list, and at the end of the 4-H year, complete a report which documents their accomplishments. Youth may progress from Level 1–6.

Level 1 – Amethyst: Brayden Belew, Payzleigh Belew, Andrea Bettenhausen, Molly Boysen, Reese Dell, Evelyn May, Grace Moyer, Max Moyer, Ava Ottemann, Eli Ramaekers, Ethan Ramaekers

Level 2 – Aquamarine: Noah Babcock, Tenley Bauman, Josiah Boysen, Acacia Carlson, Helayna DeBuhr, Anna Fousek, Parker Hansen, Dayton Jons, Evan Mittan-DeBuhr, Brooklynn Nelsen, Amorita Payne, Bailey Petersen, Alexa Smith

Level 3 – Ruby: Khloe Cuttlers, Reagan Tonkin

Level 4 – Sapphire: Nettie Lunquist, Vanessa Peterson, Emma Thomson

Level 5 – Emerald: Samuel Babcock, Aleyna Cuttlers, Kamryn Wanser

Level 6 – Diamond: Mindy Bartels, Kylie Hansen, Riley Peterson, Hannah Thomson

NEBRASKA 4-H GIVES BACK

To achieve this statewide honor, a 4-H'er or team must complete a major service-learning project that benefits their community. 4-H'ers should invest over 100 hours of service, and take up to 24 months to complete the project.

John Sump, Allison Walbrecht

NEBRASKA 4-H ANNUAL ACHIEVEMENT AWARD

The Nebraska 4-H Annual Achievement Application is a record of a 4-H member's annual achievements in 4-H.

Completed a Junior application: Noah Babcock, Emily Bauman, Reagan Breuer, Acacia Carlson, Khloe Cuttlers, Adam Gabel, Ethan Gabel, Morgan Gabel, Parker Hansen, Dayton Jons, Nettie Lunquist, Amorita Payne, Micah Pracheil, Silas Pracheil, Alexa Smith

Completed a Senior application: Samuel Babcock, Clare Bauman, Aleyna Cuttlers, Kylie Hansen

NEBRASKA 4-H CLUBS OF EXCELLENCE

Nebraska 4-H Clubs of Excellence have met criteria outlined by the State 4-H office.

Clever Clovers, Fantastic 4, Five Star 4-H'ers, Fusion 4-H'ers, Joes Clover Knights, Lancaster Leaders, Little Green Giants, Rabbits R Us, Southern Lancaster Kids

LANCASTER COUNTY 4-H COMMUNITY SERVICE AWARDS

Presented to 4-H'ers who have completed the most hours of community service.

Age 14 and over: Kylie Hansen, Mischa Lunquist, Nettie Lunquist, Riley Peterson

Age 13 and under: Khloe Cuttlers, Bailey Petersen, Vanessa Peterson, Alexa Smith, Reagan Tonkin, Kamryn Wanser, Katy Weaver

LANCASTER COUNTY 4-H COUNCIL LEADERSHIP AWARD

Open to youth in grades 10–12 who show outstanding qualities in servant leadership.

Clare Bauman, Kylie Hansen, Riley Peterson

LANCASTER COUNTY MERITORIOUS SERVICE TO 4-H

Presented to individuals or organizations who have exhibited consistent and strong support of the Lancaster County 4-H program.

Karol Swotek

LANCASTER COUNTY OUTSTANDING 4-H MEMBER

Presented to individuals 14 years of age or older who have excelled in their involvement with the Lancaster County 4-H program.

John Sump

LINCOLN CENTER KIWANIS OUTSTANDING 4-H CLUB AWARDS

Lincoln Center Kiwanis Club awards traveling trophies to the top 4-H clubs participating in the Lancaster County Super Fair. Clubs receive points based on all members' total fair exhibit and contest placings.

Category I (membership of 5–10): Everything Equine (Leader: Chelsea Sackett).

Category II (membership of 11–20) & Wayne C. Farmer Memorial Cup overall winner: Fantastic 4 (Leader: Jennifer Smith).

Category III (membership of 21 or more): Star City Cornhuskers (Leader: Stephanie Polk).

HEART OF 4-H VOLUNTEER AWARD

Rick Waldren

Lancaster County 4-H is proud to announce Rick Waldren of Lincoln as winner of the May "Heart of 4-H Award" in recognition of outstanding volunteer service.

For about 15 years, he has volunteered to drive 430 miles round-trip to a hatchery in Iowa to get the fertilized eggs used in the Lancaster County 4-H Embryology School Enrichment Program. Embryology allows third graders to witness baby chicks hatching in their classrooms. Rick makes three trips annually to coincide with the three spring Embryology sessions in schools and on EGG Cam. He is a member of Lincoln Northeast Kiwanis club, which helped establish the program in 1975 and continues to support the program. Last year, 3,784 students in 216 classrooms at 62 schools participated!

"I like volunteering because the 3rd graders involved in the Embryology Program have active learning activities about embryo development, genetic traits and poultry reproduction," Rick says. "For many students, this is the first time they experience seeing a developing embryo. Also, for many, this is the first time they experience life and death. Although it's the 3rd grade classes that monitor the incubation process; when the chicks begin hatching, the entire school gets excited and many other students come to see the baby chicks."

Rick has previously judged 4-H crop projects at several county fairs in the area and at the Nebraska State Fair.

Pre-District Horse Show, June 4

The Lancaster County 4-H Horse VIPS Committee is sponsoring a 4-H Pre-District Show on Saturday, June 4, 8:30 a.m. at the Lancaster Event Center Fairgrounds – Pavilion 3 to help youth prepare for Districts. All youth ages 8–18 are welcome — need not be in 4-H! LEC Fairgrounds shavings must be used ($7 a bag) and limited stalling will be available. Show flyer will be available at *https://lancaster.unl.edu/4h/horse*.

3 Lancaster County 4-H'ers Part of Omaha Fashion Week Virtual Student Designer Event

Three Lancaster County 4-H youth were part of 15 sewers selected statewide to participate in the Student Designer event for Omaha Fashion Week in February. Mindy Bartels, 17, sewed a black and white coat with zebra print lining. Clara Johnson, 16, sewed a full-length, pink sequin sheath gown. Dayton Jons, 10, sewed a bright, multi-colored cheetah print gathered skirt and top. Due to COVID-19 restrictions, they submitted videos of them wearing their designs to be part of a compilation fashion show video. An in-person fashion show for these student designers is planned at the Omaha Design Center in August.

4-H'ers Qualify for State Speech & PSA Contest

The Lancaster County 4-H Speech and Public Service Announcement (PSA) contest was held on March 6. More than 35 Lancaster County 4-H youth competed in this year's communication events. The following top winners will have the opportunity to represent Lancaster County at the State Speech & PSA contest on June 24 at University of Nebraska–Lincoln East Campus.

SPEECH CONTEST:

- **Intermediate (10–12 years): Amorita Payne, Kyler Plugge, Alexa Smith, Callia Thompson, Kamryn Wanser**
- **Senior (13–18 years): Acacia Carlson, Kylie Hansen**

PUBLIC SERVICE ANNOUNCEMENT (PSA) CONTEST:

- **Intermediate (10–12 years): Dayton Jons, Amorita Payne, Vanessa Peterson, Callia Thompson**
- **Senior (13–18 years): Mindy Bartels, Riley Peterson**

4-H Horse Stampede Results

The 4-H Stampede was held March 26 at University of Nebraska–Lincoln East Campus. Eighty-three youth from across the state competed in contests, including photography, art, demonstration, public speaking and horse quiz bowl. Complete results are at *https://4h.unl.edu/horse/stampede*. Here are the Lancaster County purple ribbon winners.

- **Photography Contest Elementary Division: Collin Schepers (champion)**
- **Art Contest Junior Division: Shea Frink (champion)**
- **Art Contest Elementary Division: Maria Polk (reserve champion)**
- **Demonstration Contest Junior Division: Paige Schepers (champion)**

Shea Frink's junior champion artwork

4-H Summer Camps

Nebraska State 4-H Camp near Halsey will offer several overnight camps June–August open to all youth ages 8–18 (need not be enrolled in 4-H). Sessions include Innovation Nation, Horses & High Ropes, Kravin' Waves and Wacky & Crafty. Charter bus transportation options will also be offered select weeks from UNL East Campus in Lincoln. See details at *https://4h.unl.edu/camps*.

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 9–12. This year's dates are June 12–17. Work with university faculty to explore a topic like STEM, digital media, acting, fashion or agriculture. Visit *https://4h.unl.edu/big-red-camps* for more information.

Youth Leadership Conference

The Nebraska 4-H Youth Leadership Conference is an opportunity for all youth ages 14–18 to develop and practice leadership skills. Youth do not need to be enrolled in 4-H. The conference will be held June 24–26 at the Nebraska State 4-H Camp at Halsey. More information is at *https://4h.unl.edu/leadership-conference*.

4-H Announcements
FOR 4-H'ERS AND VOLUNTEERS

See the 4-H e-newsletter at *https://go.unl.edu/Lan4Henews* for complete details. The 4-H Youth Development Program is open to all youth ages 5–18 and free to join in Lancaster County. If interested in joining or volunteering, call 402-441-7180.

4-H COUNCIL 4-H CAMP SCHOLARSHIPS
Lancaster County 4-H Council will give a select number of full scholarships to Lancaster County 4-H members to attend a 4-H summer camp near Halsey! Applicants must be age 8 or older and currently enrolled in 4-H. Recipients may receive this scholarship only once. Preference given to applications submitted by May 1, will accept through July 31. Application is available as a fill-in PDF at *http://go.unl.edu/campsch*.

HORSEMANSHIP LEVEL TESTINGS, MAY 3, 17 & JUNE 28
A 4-H Horsemanship Advancement Level testing will be held on Tuesday, May 3, at the Lancaster Event Center Fairgrounds. All of the written horsemanship level requirements must be completed and submitted to Kate Pulec before the riding portion of the level testing can be conducted. Additional level testings will be held on Tuesday, May 17 and Tuesday, June 28 at the LEC Fairgrounds. Anyone wishing to test must sign up by April 26 for May 3, by May 10 for May 17 and by June 21 for June 28 by emailing Kate at kpulec3@unl.edu or calling 402-441-7180. Held in the evening, time slots will be emailed.

DISTRICT/STATE HORSE SHOW ENTRIES DUE MAY 6, 5 P.M.
4-H'ers competing in 4-H district and state horse shows must be 10 years of age by Jan. 1 and meet level requirements. For specific requirements, entry process, link for online entries, 2 & 3-year old western pleasure affidavits and more information, visit *https://4h.unl.edu/state-horse-expo-entry*. Deadline for online entries is Friday, May 6, 5 p.m. NO LATE ENTRIES WILL BE ACCEPTED! Horse identification forms, 2 & 3-year old affidavits and completed horsemanship levels must be submitted to the Extension office by Friday, May 6.

SHEEP & MEAT GOAT WEIGH-IN, MAY 10
4-H/FFA market sheep or market meat goat exhibitors planning to participate in the performance class based on rate of gain at the Lancaster County Super Fair must have their lambs and goats weighed on Tuesday, May 10, 6–7 p.m. at the Lancaster Event Center Fairgrounds – Pavilion 1. Please email your RSVP to calvin.devries@unl.edu by Monday, May 9.

DOG VIRTUAL TRIVIA CONTEST, MAY 11–18
The Lancaster County 4-H Dog Virtual Trivia Contest will be available Wednesday, May 11, Noon–Wednesday, May 18, 11:59 p.m. Contest is open to 4-H'ers ages 8–18 — need not be enrolled in a specific project and do not need a dog. This year's contest will focus on Terrier dog breeds. This is a Lancaster County Super Fair contest held before the fair and premium event. A study guide is at *https://lancaster.unl.edu/4h/fair/virtualanimals*. Contest links for each division will be posted at this website on May 11 at Noon.

LIFE CHALLENGE CONTEST, JUNE 1
The Lancaster County 4-H Life Challenge will be held on Wednesday, June 1, 8:30 a.m. at the Nebraska Extension in Lancaster County conference rooms, 444 Cherrycreek Road, Suite A, Lincoln. Register by Thursday, May 26 by calling 402-441-7180 (there is no entry form). The contest helps youth learn more about issues related to family and consumer science and entrepreneurship. Open to all 4-H'ers ages 8–18 (by January 1 of the current year) — need not be enrolled in a specific project. This is a Lancaster County Super Fair contest held before the fair and premium event. For more information or a study packet, contact Kristin Geisert at kristin.geisert@unl.edu or 402-441-7180. There will not be a state Life Challenge contest this year.

HORSE IDENTIFICATION FORMS DUE JUNE 1
Each horse which will be shown at Super Fair must be identified on form "4-H Horse Identification Certificate" and submitted to Nebraska Extension in Lancaster County office by June 1. Forms are available at the office as a carbon copy form. If you use the online form at *http://go.unl.edu/horseID*, make a copy for yourself.

SEWING HELP SESSIONS, JUNE 2, 3 & 4
Sewing Help sessions for 4-H youth ages 8 and up will be held Thursday, June 2 and Friday, June 3 from 12:30–4 p.m. and Saturday, June 4 from 10:30 a.m.–2:30 p.m. at the Bernina Sewing Center, 5500 Old Cheney Rd, Suite 7, Lincoln. No fees or pre-registration required, just drop in. Expert sewing help is available for fitting your pattern, laying out your project, sewing it together or whatever is needed. Bring your project, sewing machine and supplies with you. Get the help you need to put your project together or for any guidance along the way. Taught by a group of knowledgeable volunteer seamstresses.

HORSE JUDGING CONTEST, JUNE 3
The Lancaster County 4-H Horse Judging Contest will be held on Friday, June 3 at the Lancaster Event Center Fairgrounds – Pavilion 3, 5 p.m. Registration will be 4:30–5 p.m. Open to all 4-H'ers — need not be enrolled in a horse project. Enter day of contest. This is a Lancaster County Super Fair contest held before the fair and premium event. The top 10 contestants in all three age groups will be recognized at Horse Awards Night. The champion in each age group must participate in both judging and oral reasons to receive a belt buckle.

PREMIER ANIMAL SCIENCE EVENT
The Premier Animal Science Event (PASE) will be held June 22–23 at UNL East Campus. For more information, visit *https://4h.unl.edu/pase*. 4-H volunteer Tyler Pickenpaugh will be coaching this year's Lancaster County 4-H livestock judging teams. Entries are due Friday, June 3. If you are interested in participating in PASE, please contact Calvin DeVries at calvin.devries@unl.edu or 402-441-7180.

STATE HIPPOLOGY AND HORSE JUDGING ENTRIES DUE JUNE 13
State Hippology & Horse Judging contest entry forms must be submitted to the Lancaster County Extension office by Monday, June 13. Lancaster County 4-H Council will pay the entry fees for Lancaster County 4-H'ers. For more information about the contests, visit *https://4h.unl.edu/horse/state-expo.* If you have questions, contact Kate Pulec at kpulec3@unl.edu or 402-441-7180.

YOUTH FOR THE QUALITY CARE OF ANIMALS (YQCA) DUE JUNE 15
4-H/FFA members enrolled in any of the following animal projects need to complete Youth for the Quality Care of Animals (YQCA) training: Beef, dairy cattle, goat, poultry, rabbit, sheep and swine. The dseadline to complete YQCA and submit certificates of completion is June 15. In Lancaster County, youth may choose one of three options to complete their YQCA requirements:

- Complete online training at *https://yqcaprogram.org.* Cost is $12. For directions and more information, visit *https://4h.unl.edu/yqca*.
- Attend a face-to-face training held Thursdays, June 2 or June 7, 6–7 p.m. at the Nebraska Extension in Lancaster County conference rooms, 444 Cherrycreek Rd., Suite A, Lincoln. To sign up for face-to-face trainings, you must go to *https://yqcaprogram.org* before the training. The training will cost $3 payable by credit or debit card on the website. Each training will be limited to 35 youth.
- Complete test-out exam at *https://yqcaprogram.org*. Cost is $36 for ages 12–14 and $48 for ages 15–18.

Youth for the Quality Care of Animals (YQCA) program has recently moved to a new online system at *https://yqcaprogram.org*. You'll notice a major change to the account structure — the opportunity to create a parent account and add children, essentially creating one family account for all your YQCA needs. On the "More Info/Parents & Youth" page, you'll find Help Documents detailing the steps to getting your web-based training certification, instructor-led training certification (face-to-face training) or test-out certification. Parents/youth, if you have a current and valid YQCA certification, please follow the steps at *https://go.unl.edu/newyqcasteps* to get yourself set up on the new site. If you have further questions, contact Calvin DeVries at 402-441-7180 or calvin.devries@unl.edu.

LIVESTOCK PREMIUM AUCTION DONATIONS NEEDED
Please remember to talk with your community businesses to get donations for the Lancaster County 4-H/FFA Purple Ribbon Livestock Premium Auction. The success of the auction is dependent on 4-H'ers to acquire donations and buyers for the auction to support scholarships for the youth of this county! For more information, email Julia Plugge, auction committee chair, at Julia.Plugge@gmail.com.

Clover College

June 21–24, 2022

Nebraska Extension in Lancaster County conference rooms, 444 Cherrycreek Road, Suite A, Lincoln

Lancaster County 4-H Clover College is four days of in-person, "hands-on" workshops full of fun and a sense of belonging. Learning topics include STEAM concepts of science, technology, engineering, art and math which can spark career interests. Youth must be at least 8 years old (as of June 21) to attend most workshops — some workshops have older age requirements. The Clover Kids Half-Day Camp is open to ages 6 & 7 (as of June 21 — must have completed kindergarten). Youth may attend as many workshops as they wish. All supplies will be provided unless otherwise noted. Youth attending workshops which overlap the lunch period should bring a sack lunch. Food will not be available (unless otherwise stated in the workshop description). If you have questions, call the Extension office at 402-441-7180 or email Lancaster4H@unl.edu.

	TUE, JUNE 21	WED, JUNE 22	THU, JUNE 23	FRI, JUNE 24
8:00–10:00	1 CLOVER KIDS 2 ROCKETRY 4 DERBY CARS 6 HORSE COURSE – A	1 CLOVER KIDS 2 ROCKETRY 18 REAL WORLD GPS/GIS 19 LLEAPING LLAMA 101 20 HYDRO-DIP PAINTING	1 CLOVER KIDS 2 ROCKETRY 34 ELECTRICITY MAGIC 35 ON THE BIKE PATH	1 CLOVER KIDS 2 ROCKETRY 4 DERBY CARS 5 GONE FISHING 47 ELECTRONICS 48 TABLE SETTING
10:15–12:15	1 CLOVER KIDS 7 HORSE COURSE – B 8 POP CAN FISHING 9 BACKYARD BUG HUNT	1 CLOVER KIDS 21 BIG POWER MACHINES 22 SEWING 101 23 POLLINATOR PARTY 24 CSI DISCOVERY	1 CLOVER KIDS 36 DISCOVER KUMIHIMO 37 COFFEE CAN CRAFTS 38 WET & WILD	1 CLOVER KIDS 5 GONE FISHING 49 PHOTOGRAPHY 50 A-MAIZE-ING CORN 51 RABBITS, RABBITS
12:45–2:45	3 KICKSTART CHESS 10 BUILD A BUDDY 11 TINKERCAD 3D 12 SLIME, JELLY WORMS – A 13 BUSY BEES	3 KICKSTART CHESS 25 BRIDGES & ROADS 26 DECORATIVE COUCHING 27 GAME ON 28 FOOD & SPORTS 29 BEAUTIFUL BOTTLES	3 KICKSTART CHESS 39 PLANT IT. GROW IT. 40 VIRTUAL REALITY BLDG – A 41 BABYSITTING KIT 42 FOLK-ART PAINTING	3 KICKSTART CHESS 52 SCIENCE KIDS 53 CAKE DECORATING 54 OZOBOT ROBOTS
3:00–5:00	14 ESCAPE ROOM 15 TEC BOX 16 SLIME, JELLY WORMS – B 17 PIZZA PARTY	30 IMPRESSIVE LEAVES 31 WILDLIFE WONDERS 32 DOUGH FUN 33 ROBOT CHALLENGE	43 WIGGLY WORMS 44 VIRTUAL REALITY BLDG – B 45 GIFTS FROM THE KITCHEN 46 LET'S BE ARTSY	NO CLASSES

WORKSHOP DESCRIPTIONS

Indicates youth will create a project which may be entered as a 4-H static exhibit at the Lancaster County Super Fair.

4–Day Workshops

1 Clover Kids Day Camp
Clover Kids will participate in hands-on activities while learning about animals, science and more! Refreshments provided for this workshop.
TUE–FRI, JUNE 21–24; 8AM–12:15PM
AGES 6 & 7 • FEE $45
Instructors: Various

2 Rocketry
Build your own rocket and launch it. Receive a rocket kit and one engine. ***Only for youth who have not previously taken this class.***
TUE–FRI, JUNE 21–24; 8–10AM
AGES 8–12 • FEE $20
Instructor: Ron Suing, 4-H Volunteer

3 Kickstart Chess!
Want to become a grandmaster? Learn basic rules to game winning strategies. This progressive program is for beginners and those beyond. Lessons are supplemented by practice and play.
TUE–FRI, JUNE 21–24; 12:45–2:45PM
AGES 8 & up • FEE $12
Instructor: James Walla, 4-H Volunteer

2–Day Workshop

4 Derby Cars
Design, paint and race your own derby car. ***Wear clothes appropriate for painting.***
TUE, JUNE 21; 8–10AM
FRI, JUNE 24; 8–10AM
AGES 8 & up • FEE $15
Instructor: Karen Wedding, Extension Staff

1–Day (4-Hour) Workshop

5 Gone Fishing!
Bring your fishing pole, line, hook and bobber for fishing fun at a nearby lake. Extra tackle is optional. Bait provided. ***Wear closed-toe shoes and sun protection. Only for youth who have not previously taken this class.***
FRI, JUN 24; 8AM–12:15PM
AGES 9 & up • FEE $5
Instructor: Calvin DeVries, Extension Assistant

1–Day (2-Hour) Workshops

6 Horse Course – A
An introduction to grooming, tacking and safety around a horse. A horse will help teach. ***Must wear closed-toed shoes.*** Same as Horse Course – B.
TUE, JUNE 21; 8–10AM
AGES 8 & up • FEE $6
Instructor: Kate Pulec, Extension Assistant

7 Horse Course – B
An introduction to grooming, tacking and safety around a horse. A horse will help teach. ***Must wear closed-toed shoes.*** Same as Horse Course – A.
TUE, JUNE 21; 10:15AM–12:15PM
AGES 8 & up • FEE $6
Instructor: Kate Pulec, Extension Assistant

8 Pop Can Fishing
Learn about casting, lures and native Nebraska fish.
TUE, JUNE 21; 10:15AM–12:15PM
AGES 8 & up • FEE: $6
Instructor: Extension 4-H Intern

9 Backyard Bug Hunt
Catch pollinators and predators that play different roles in our ecosystem. ***Must wear boots for wet/muddy exploration.***
TUE, JUNE 21; 10:15AM–12:15PM
AGES 8 & up • FEE $10
Instructor: Kait Chapman, Extension Educator

10 Build a Buddy
Find your voice and make communicating fun while building a stuffed animal!
TUE, JUNE 21; 12:45–2:45PM
AGES 8 & up • FEE $5
Instructor: Paula Peterson, 4-H Volunteer

11 Tinkercad – Create in 3D
Learn basic 3D designing and printing skills. 3D items available for pick up from the Extension office at a later date.
TUE, JUNE 21; 12:45–2:45PM
AGES 8 & up • FEE $6
Instructor: Mary Burroughs, Federal Highway Engineer

12 Slime, Jelly Worms & Twizzlers – A
Conduct experiments to learn how food meets science. Same as Slime, Jelly Worms & Twizzlers – B.
TUE, JUNE 21; 12:45–2:45PM
AGES 8 & up • FEE $10
Instructors: Trevor Kauer, UNL PhD Student, and Sara Roberts, UNL Food Innovation Center Student Services Coordinator

13 Busy Bees
Construct and paint a solitary bee hotel made with wood and reeds. View live bees! ***Wear clothes appropriate for painting.***
TUE, JUNE 21; 12:45–2:45PM
AGES 10 & up • FEE $8
Instructors: Dr. Judy Wu-Smart, UNL Research Entomologist/Professor, and UNL Bee Lab Staff

14 Escape Room
Use strategy and clues to solve scenario puzzles in order to escape the room.
TUE, JUNE 21; 3–5PM
AGES 8 & up • FEE $5
Instructors: GameSchool Project Volunteers

15 TEC Box – Tinker, Explore, Create
Think like an entrepreneur, invent a new product to solve a problem.
TUE, JUNE 21; 3-5PM
AGES 8 & up • FEE $5
Instructors: UNL Interns

16 Slime, Jelly Worms & Twizzlers – B
Conduct experiments to learn how food meets science. Same as Slime, Jelly Worms & Twizzlers – A.
TUE, JUNE 21; 3–5PM
AGES 8 & up • FEE $10
Instructors: Trevor Kauer, UNL PhD Student, and Sara Roberts, UNL Food Innovation Center Student Services Coordinator

17 Pizza Party
Create your own unique pizza and make homemade ice cream!
TUE, JUNE 21; 3–5PM
AGES 8 & up • FEE $6
Instructor: Extension 4-H Intern

18 Real World GPS & GIS
Discover the amazing world of Global Positioning Systems and Geographical Information Systems!
WED, JUNE 22; 8–10AM
AGES 8 & up • FEE $6
Instructors: Lancaster County Engineers

19 Lleaping Llama 101
Learn basic care, camelid behavior & handling. Walk llamas through an obstacle course. ***Must wear closed-toed shoes.***
WED, JUNE 22; 8–10AM
AGES 8 & up • FEE $6
Instructor: Danetta Jensen, Mythical Acres Llamas

20 Hydro-Dip Painting
Learn how to spray paint in a bucket and make two amazing water bottles to take home. ***Wear clothes appropriate for painting.***
WED, JUNE 22; 8–10AM
AGES 8 & up • FEE $10
Instructor: Karen Wedding, Extension Staff

21 Big Power Machines
Get a "behind-the-scenes" look at BIG equipment and build a simple hydraulic machine.
WED, JUNE 22; 10:15AM–12:15PM
AGES 8 & up • FEE $6
Instructors: Lancaster County Engineers

22 Sewing 101
Beginners: Use tips, tools and techniques to complete an easy sewing item. Bring your sewing machine and basic sewing kit. Some office machines available upon request.
WED, JUNE 22; 10:15AM–12:15PM
AGE 8 & up • FEE $6
Instructor: Extension 4-H Intern

23 Pollinator Party
Pollinators are fascinating! Build a bee house using duck tape and straws. Visit the Cherry Creek Pollinator Habitat behind the Extension office.
WED, JUNE 22; 10:15AM–12:15PM
AGES 8 & up • FEE $5
Instructors: Mary Jane Frogge, Extension Associate, and Extension Master Gardeners

24 CSI Discovery
Learn how evidence leads to answering questions and solving cases.
WED, JUNE 22; 10:15AM–12:15PM
AGES 8 & up • FEE $6
Instructor: Extension 4-H Intern

25 Bridges & Roads
Build fantastic bridges, asphalt and more.
WED, JUNE 22; 12:45–2:45PM
AGES 8 & up • FEE $6
Instructors: Lancaster County Engineers

26 Decorative Couching
No, it doesn't involve a sofa! Using thread as texture, this machine sewing technique adds designer details to your project. Fabric/supplies provided. Bring your sewing machine, couching/cording sewing foot (if available) and sewing tools. Some office machines and special couching foots available for use upon request. Must have basic sewing skills.
WED, JUNE 22; 12:45–2:45PM
AGES 10 & up • FEE $8
Instructor: Kath Conroy, 4-H Volunteer

27 Game On!
Play modern board games like never before by using special reasoning and critical thinking.
WED, JUNE 22; 12:45–2:45PM
AGES 8 & up • FEE $5
Instructors: GameSchool Project Volunteers

28 Food & Sports
A healthy YOU starts with good food and team play!
WED, JUNE 22; 12:45–2:45PM
AGES 8 & up • FEE $8
Instructor: Alyssa Havlovic and Kayla Colgrove, Extension Educators

29 Beautiful Bottles
Make decorated vases using a variety of techniques and embellishments.
WED, JUNE 22; 12:45–2:45PM
AGES 8 & up • FEE $10
Instructor: Nicole Miller, 4-H Volunteer

30 Impressive Leaves
Turn unique leaf shapes into an artistic project.
WED, JUNE 22; 3–5PM
AGES 12 & up • FEE $5
Instructors: Sarah Browning, Extension Educator, and Extension Master Gardeners

31 Wildlife Wonders
Learn about tracks, scat and native Nebraska wildlife.
WED, JUNE 22; 3–5PM
AGES 8 & up • FEE $10
Instructor: Elizabeth Thiltges, 4-H Assistant

32 Dough Fun
It's easier than it looks to mix and shape bread and rolls. Learn techniques and take samples home.
WED, JUNE 22; 3–5PM
AGES 10 & up • FEE $8
Instructor: Lorene Bartos, Extension Educator Emeritus

33 Robot Challenge
See what they can do and how to make them move.
WED, JUNE 22; 3–5PM
AGES 8 & up • FEE $6
Instructors: Cathy Babcock, 4-H Volunteer, and N-Bots 4-H Club members

34 Electricity Magic
Explore the flow of electricity by creating a light switch.
THU, JUNE 23; 8–10AM
AGES 8 & up • FEE $6
Instructor: Jim Wies, Extension Technologist

35 On the Bike Path
Learn bicycle safety, riding tips and more! *Bring your bike and helmet.* ***Wear closed-toed shoes — no flip flops.***
THU, JUNE 23; 8–10AM
AGES 8 & up • FEE $5
Instructor: Dena Noe, UNL Federal Credit Union Vice President of Member Experience

36 Discover Kumihimo
Explore the Japanese art of cord braiding.
THU, JUNE 23; 10:15AM–12:15PM
AGES 8 & up • FEE $6
Instructor: Cathy Babcock, 4-H Volunteer

37 Coffee Can Crafts
Make a project to beautify your space.
THU, JUNE 23; 10:15AM–12:15PM
AGES 8 & up • FEE $8
Instructor: Extension 4-H Intern

38 Wet & Wild
Learn how precipitation affects groundwater, build a cool rain gauge.
THU, JUNE 23; 10:15AM–12:15PM
AGES 8 & up • FEE $8
Instructor: Becky Schuerman, Extension Associate

39 Plant it. Grow it.
All about plants; seeds, soil and water.
THU, JUNE 23; 12:45–2:45PM
AGES 8 & up • FEE $8
Instructor: Elizabeth Thiltges, 4-H Assistant

40 Virtual Reality Building – A
Create and present a building model in virtual reality using SketchUp. Take home your own Google virtual reality headset. Same as Virtual Reality Building – B.
THU, JUNE 23; 12:45–2:45PM
AGES 8 & up • FEE $10
Instructor: Sneha Bhoir, 4-H Volunteer

41 Babysitting Kit
Create a babysitting kit to promote a preschooler's development.
THU, JUNE 23; 12:45–2:45PM
AGES 8 & up • FEE $8
Instructors: Jaci Foged and Hayley Jackson, Extension Educators

42 Folk-Art Watercolor Painting
Learn watercolor painting techniques using bright colors and black sharpies.
THU, JUNE 23; 12:45–2:45PM
AGES 8 & up • FEE $8
Instructor: Caitlyn Schmidt, Blessed Sacrament School Art Educator

43 Wiggly Worms
Learn how worms turn garbage into healthy food (called vermicompost) for plants and flowers. Create your own worm habitat with your new worm friends!
THU, JUNE 23; 3–5PM
AGES 8 & up • FEE $10
Instructor: Pam Cuttlers, 4-H Volunteer

44 Virtual Reality Building – B
Create and present a building model in virtual reality using SketchUp. Take home your own Google virtual reality headset. Same as Virtual Reality Building – A.
THU, JUNE 23; 3–5PM
AGES 8 & up • FEE $10
Instructor: Sneha Bhoir, 4-H Volunteer

45 Gifts From the Kitchen
Using jars, create food mixes all tied up to be homemade gifts.
THU, JUNE 23; 3–5PM
AGES 8 & up • FEE $6
Instructor: Extension 4-H Intern

46 Let's Be Artsy!
Learn the aluminum foil monoprint technique to create prints on watercolor paper.
THU, JUNE 23; 3–5PM
AGES 8 & up • FEE $6
Instructor: Caitlyn Schmidt, Blessed Sacrament School Art Educator

47 Electronics Light & Sound
Create different sounds and lights with an electronic circuit board.
FRI, JUNE 24; 8–10AM
AGES 8 & up • FEE $5
Instructor: Jim Wies, Extension Technologist

48 Terrific Table Setting
Create an awesome centerpiece and learn how to participate in the 4-H Table Setting contest at the Super Fair.
FRI, JUNE 24; 8–10AM
AGES 8 & up • FEE $6
Instructor: Extension 4-H Intern

49 Focus on Photography
Bring your phone or camera to take pictures. Learn to take, choose and prepare better photos.
FRI, JUNE 24; 10:15AM–12:15PM
AGES 8 & up • FEE $10
Instructor: Michelle Huber, 4-H Volunteer

50 A-maize-ing Corn
Pop it. Taste it. See it germinate.
FRI, JUNE 24; 10:15AM–12:15PM
AGES 8 & up • FEE $6
Instructor: Extension 4-H Intern

51 Rabbits, Rabbits
Learn with live rabbits; their care and showmanship.
FRI, JUNE 24; 10:15AM–12:15PM
AGES 8 & up • FEE $5
Instructor: Extension 4-H Intern

52 Science Kids
Have fun learning STEM with hands-on activities!
FRI, JUNE 24; 12:45–2:45PM
AGES 8 & up • FEE $8
Instructors: UNL Interns

53 Cake Decorating
Learn decorating techniques and create your own designs.
FRI, JUNE 24; 12:45–2:45PM
AGES 8 & up • FEE $8
Instructor: Mary Burroughs, Federal Highway Engineer

54 Ozobot Robots
Explore computer programming and robotics using Ozobots.
FRI, JUNE 24; 12:45–2:45PM
AGES 8 & up • FEE $6
Instructor: Elizabeth Thiltges, 4-H Assistant

Clover College ONLINE Registration

Registration will ONLY be available online! Walk-in or mail-in registrations will NOT be accepted at the Extension office.

Classes fill up quickly!

Registration opens Wednesday, May 4 at noon for currently enrolled 4-H members.

In late April, currently enrolled 4-H families will be emailed a link and access code to register, which will activate on May 4.

Registration opens Wednesday, May 11 at noon for non-4-H youth.

***Registration link will be posted at* http://lancaster.unl.edu/cc.**

REGISTRATION TIPS:

- An email address and a debit or credit card will be required to complete registration. There are no additional online or credit card processing fees, only the cost of the chosen session(s).
- To speed the process during registration, determine your class choices ahead of time.
- To receive reimbursement for 4-H Activity Certificates after registering online, bring Certificates and your Clover College online confirmation to the Extension Office.
- As in the past, there are no refunds, except if a workshop is canceled.

Nebraska Extension in Lancaster County
444 Cherrycreek Road, Ste. A, Lincoln, NE 68528
402-441-7180 • lancaster.unl.edu

Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln cooperating with the Counties and the United States Department of Agriculture.

Nebraska Extension educational programs abide with the nondiscrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.

NEBLINE

Subscriptions via mail are free to Lancaster County residents.
There is an annual $5 mailing and handling fee to addresses in zip codes other than 683—, 684—, 685—, 68003, 68017 and 68065.

Would You Prefer Digital?
E-newsletter and PDF versions are at *lancaster.unl.edu/nebline*

Subscribe to Digital or Print Versions
Subscribe/unsubscribe to the print and/or digital versions by going to *lancaster.unl.edu/nebline* or by calling 402-441-7180.

EXTENSION CALENDAR

All events held at the Nebraska Extension in Lancaster County conference rooms, 444 Cherrycreek Road, Suite A, Lincoln, unless otherwise noted.

April

26 **4-H EGG Cam Day 15 Candling,** *go.unl.edu/eggcam* ..... **1 p.m.**
26 **4-H Horsemanship Advancement Level Testing,** *Lancaster Event Center Fairgrounds*
28 **Pesticide Applicator Nebraska Dept. of Ag. Walk-In Testing** ..... **9 a.m.–2 p.m.**
28 **4-H Leader/Volunteer Training** ..... **9 a.m. & 6:30 p.m.**
30 **4-H Spring Fling Horse Dressage Schooling Show,** *Lancaster Event Center Fairgrounds*..... **8 a.m.–5 p.m.**

May

1 **Preference Given to 4-H Council Camp Scholarship Applications Submitted to Extension by this Date**
2–3 **4-H EGG Cam Chicks Hatching,** *go.unl.edu/eggcam*
3 **4-H Horsemanship Advancement Level Testing,** *Lancaster Event Center Fairgrounds*
3 **4-H Council Meeting**..... **6 p.m.**
5 **Pesticide Applicator Nebraska Dept. of Ag. Walk-In Testing** ..... **9 a.m.–2 p.m.**
6 **Lancaster County 4-H Deadline for District/State Horse Show Entries, ID, Level Tests**
7 **4-H Photography Workshop** ..... **9 a.m.**
10 **4-H/FFA Sheep/Meat Goat Weigh-In,** *Lancaster Event Center Fairgrounds – Pav. 1*..**6–7 p.m.**
13 **Extension Board Meeting** ..... **8 a.m.**
17 **4-H Horsemanship Advancement Level Testing,** *Lancaster Event Center Fairgrounds*
19 **Pesticide Applicator Nebraska Dept. of Ag. Walk-In Testing** ..... **9 a.m.–2 p.m.**
21 **Composting Free Demonstration,** *Pioneers Park, across from the Nature Center*..**10–11 a.m.**
30 **Extension Office Closed for Memorial Day Holiday**

EXTENSION NEWS

New Ag Educator


Melissa Bartels

Water and Integrated Cropping Systems Educator Melissa Bartels recently moved from serving Butler and Polk counties to serving Lancaster, Cass and Otoe counties. Her focus will be working with producers in the area and helping them find research-based answers to their crop production questions. Melissa helps lead several Extension programs such as Weather Ready Farms and the annual Nebraska Cover Crop and Soil Health conference. She also hosts the CropWatch podcast and is on the statewide Ag Literacy Festival team.

Growing up in Waverly, Melissa was heavily involved in horse 4-H in Lancaster County. When she aged out of the program, she served as a 4-H leader, volunteered at horse shows and later, judged at local fairs.

Melissa earned a bachelor's degree from Nebraska Wesleyan University in Biology, and master's and doctor's degrees from the University of Nebraska-Lincoln in Plant Pathology. While in college, she worked in the USDA Agricultural Research Service's sorghum plant pathology and wheat virology labs. After graduation, she worked for the seed industry for about four years before joining Nebraska Extension in 2018.

Melissa looks forward to helping producers in her home county. You can reach her at 402-441-7180 or mbartels6@unl.edu, as well as follow her on Twitter at @Crops_MelissaB.

New Early Childhood Educator


Hayley Jackson

Hayley Jackson recently joined the Lancaster County Extension Office as an Early Childhood Educator and will serve Lancaster, Cass and Otoe counties. She specializes in supporting early childhood educators working with children whose ages range from birth to 8 years old. Hayley is part of the Lincoln Early Childhood Network as well as a member of the statewide Pyramid Leadership Team. She will also contribute to Extension's statewide Early Childhood website at *http://child.unl.edu*.

Hayley is taking over Early Childhood Educator Jaci Foged's previous duties so Jaci can lead a multi-state grant focusing on the Cultivating Healthy Intentional Mindful Educators (CHIME) program.

Originally from Lincoln, Hayley earned a bachelor's degree from Arizona State University in Human Development & Family Studies. She then moved to Fort Collins, Colo. and graduated with a master's degree in Human Development & Family Studies, with a concentration in Early Childhood. Currently, Hayley is in the doctoral program at the University of Nebraska–Lincoln in the Child, Youth and Family Studies department. Hayley has over 15 years of experience teaching, coaching and leading early childhood programs, including coaching the Malone Early Achiever's Preschool Program and working at the University of Nebraska–Lincoln Children's Center as the Assistant Director.

Hayley is excited about joining the Extension team. You can reach her at 402-441-7180 or hayley.jackson@unl.edu.

LANCASTER COUNTY
Weed Authority

2022 Weed Awareness

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 • lancaster.ne.gov/320/Weed-Control-Authority

Redcedars Are Invasive, But NOT Noxious

Eastern redcedars (*Juniperus virginiana* L.) are quickly becoming one of the more talked-about species causing concern for landowners. Many times the question is asked, when will redcedar be designated a "Noxious Weed"? The answer will always be, it WON'T, because it is a native plant to Nebraska, and native plants are not be listed on the state's Noxious Weed list. Only non-native plants may be considered for listing.

While considering a plant "noxious" will not automatically make it go away, recognizing it is invasive and beginning to properly manage it, is important. Native plants have always been here, and typically the thing that has changed is management, or lack of management.

History

First observed at Roanoke Island, Va. in 1564, and described by the early colonists as "the tallest and reddest cedars in the world," the Eastern redcedar quickly became prized for building purposes. Finding the heartwood to be rot-resistant, the colonists used it to construct furniture, rail fences, poles, coffins and log cabins.

It is famously known for its fragrant oil, which is a natural insect repellent. Because the scent repels moths, the aromatic wood has been used for centuries in the construction of chests, closets and wardrobes to protect woolen clothing. Redcedar sawdust or wood chips may also be used in kennel bedding to repel fleas and minimize odors.

Concern

While almost everyone agrees redcedars are invasive and causing concern in pastures and rangelands everywhere, management seems to vary from landowner to landowner. The trees have been planted in shelterbelts throughout the state for many years, and serve a valuable purpose in that setting.

Redcedars have both male and female trees. The female trees produce the seeds which causes spreading. The challenge we face is, we can't, at this time, identify the male from the female until it is 4–7 years old. In a shelterbelt, the trees may be 4–7 feet tall by then, and no one wants to remove them at that point. When the seeds are eaten by birds and deposited where they aren't wanted, redcedars become a concern.

Negative Impacts

At a minimum, redcedars can be a nuisance, particularly in open fields and abandoned properties. Worst case, they have the capacity to negatively impact certain ecosystems by crowding out other species.

Redcedar encroachment is often ignored because of the initially slow process of the encroachment. Most landowners admit to seeing redcedars for years and not properly managing them, but the problem gets out of control. Once redcedars are established, they expand quickly, converting rangelands into redcedar woodlands, and have major negative impacts, including:

- Reducing forage for livestock and wildlife by 75%.
  - 80% decline in profitability for ranchers.
  - Reduces funding for public K–12 education generated through grazing leases.
- Increases the risk that wildfires pose to society.
- Displacement of upland game animals.
- Displacement of many grassland bird species at 25% redcedar cover.
- 75% reduction in small mammal diversity at 40% redcedar cover.
- Host for cedar-apple-rust, a fungus that affects the health of apple trees.
- 90% reduction in plant diversity underneath redcedar woodlands.
- Up to a 40% decline in streamflow.
- Shallow roots take up most of the moisture in woodland understory, causing the other deciduous trees to lack water.

Benefits

In a controlled environment and in the right setting, redcedars are a landscape asset worth having. Despite the negatives, they have plenty of good qualities, including:

- Resistant to extremes of drought, heat and cold.
- Tolerant of a wide range of soils — poor, dry soil, alkaline soil and dry, rocky outcrops, as well as wet, swampy land.
- Tolerant of windy conditions, so much so that the species was planted as windbreaks to offset the dust bowl conditions of the 1930s.
- Salt tolerant, which means it can be used near roads, driveways and sidewalks. It can tolerate brackish, marshy sites in the southeastern part of Virginia and coastal sand dunes that are subject to salt spray.
- A significant source of food and shelter for wildlife. The blue fruits on the female trees are consumed by a wide variety of wildlife, including the Cedar Waxwing songbird which is named for this tree.
- A moderate- to long-lived evergreen. Some specimens have been known to live more than 500 years. Large specimens are often found in old cemeteries and other older, undisturbed properties.

Management

Redcedars need to be managed aggressively like any invasive. Control is relatively easy when the trees are small, since they will not regrow when cut below the bottom branch at, or near, ground level. Young seedlings can be regularly mowed or dug out. Older trees can be cut with a chainsaw. Some spot treatment methods with herbicides can be used with limited success.

One of the control methods that kept redcedars in check for many years was fire. As human populations increased and spread across the country, controlled fires ceased being a viable option. When we stopped having prairie fires is when redcedars began to spread. Any aggressive plant will seize the opportunity when humans change the way we manage. Prescribed fire is still one of the best ways to manage large infestations.

Sources:
- *Nebraska Department of Agriculture*
- *Nebraska Invasive Species Project*
- *Piedmont Master Gardeners – Pros and Cons*

TAKE 2

Two minutes to **read about** two invasive plants which are working to establish themselves in Lancaster County

Scouring Rush/Horsetail
(*Equisetum hyemale* L.)

Scouring rush is sometimes sold as an ornamental and sometimes can be considered invasive. This plant is a perennial and native to North America, dating back to ancient times. Scouring rush is so invasive and difficult to control, it is very important to prevent it from becoming established.

Description

Scouring rush is evergreen with leafless, hollow, segmented stems that have ash-colored bands. Stems grow to about 1/2 inch in diameter and reach up to 5-feet tall.

Range & Habitat

Scouring Rush is a common plant that occurs across Nebraska, where it is native. Habitats include wet areas such as riverbanks, field drainages, meadows, roadsides, and low areas in pastures and prairies. This plant is usually found in degraded habitats and less often in higher-quality, natural areas.

Means of Spread and Distribution

This plant spreads primarily by spores and aggressively spreading rhizomes. Each stem is fertile, having small, rounded cones containing reproductive spores at the tips. Widely distributed in North America.

Uses and Values

Because the stems are rough and durable (due to their high silica content) they were called "scouring rushes" because early pioneers used them to scrub pots and pans.

Impact

This plant can spread aggressively, especially in locations where the soil is poorly drained. It has few problems with pests and disease organisms.

Because of its tall stems and tendency to form dense colonies, Scouring rush provides excellent cover for various kinds of wildlife, including wetland birds, small mammals, reptiles, amphibians and insects.

Management

A sound management plan of foliar herbicides will take a commitment of several years to ensure the population has decreased significantly and is not a serious problem. Lasting control of scouring rush is difficult to achieve because of the high level of food reserves stored in the rhizome.

Toxicity

Scouring rush is toxic to livestock and can kill animals that eat large amounts of it. While it is rare for an animal to consume sufficient quantities of fresh scouring rush to cause serious illness or death, it is much more common when cut and dried in hay. In high densities, scouring rush reduces crop yields by producing chemicals that suppress the growth of neighboring plants. Along roadsides, it can restrict water flow, cause pooling and increase ditch maintenance costs.

ID and Control

For help with identification or control recommendations, contact your local county weed control superintendent.

Sources: Illinoiswildflowers.info *and* Maine.gov.

Yellow Flag Iris
(*Iris pseudacorus* L.)

Yellow flag iris is a new invasive to Lancaster County, and the first patch that escaped from its ornamental planting was recently discovered in southeast Lincoln. Yellow flag iris was thought to be just another pretty flower until it started moving across the state. It is believed to be first introduced as an ornamental in the early 1900s at Cook Ranch near Agate Fossil Beds in western Nebraska. It is native to Europe, western Asia and northern Africa.

Whether alteration of the river flow by nature or by manmade bridges, the yellow flag iris now crowds out native vegetation and has formed a monoculture in some areas in the state.

Description

Yellow flag iris is an aggressive, perennial plant that germinates from seed, spends the first year or more as a rosette, and in the second year or later, bolts to a height of 2–6 feet as a mature plant. Showy, yellow to pale-yellow flowers are present June through late August.

Habitat

The preferred habitat is in shallow water and wet places along rivers, lakes, ponds and in wetlands. While being found across Nebraska, the heaviest infested area of large, dense colonies is found along the Niobrara River channel in Sioux County.

Means of Spread and Distribution

This plant grows from a rhizome and spreads primarily by both rhizomes and seeds.

Impact

This invasive iris forms dense monoculture stands over very large areas, crowding out other species and restricting water movement.

Management

A sound management plan of foliar herbicides is necessary to manage this species and will take a commitment of several years to ensure the population has decreased significantly and is not a serious problem. Cattle have been shown to be effective in controlling the plant during the early growth stage with no noticeable effects to the cattle.

Toxicity

The mature plant is toxic to animals and fish, since yellow flag iris contains glycosides which can poison. It is generally avoided by livestock while actively growing. Hand pulling is **not** recommended — it causes skin irritation in humans after handling plants or seeds. Appropriate protective clothing including gloves, long sleeves and long pants should be worn, and direct contact with the plant should be avoided.

ID and Control

Yellow flag iris is on Nebraska's Invasive Plants Watch List and its spread is being monitored.

For help with identification or control recommendations, contact your local county weed control superintendent.

Lancaster County Weed Control 2021 Review

The Lancaster County Noxious Weed Control Authority serves the citizens of Lancaster County to protect effectively against designated noxious weeds which constitute a present threat to the continued economic and environmental value of lands in Lancaster County.

Our office implements the mandates of the State of Nebraska Noxious Weed Control Act by setting forth management objectives which includes plans, methods or practices utilizing a variety of techniques for the integrated management of noxious weeds. In establishing a coordinated program for the integrated management of noxious weeds, it is the County's intent to encourage and require all appropriate and available management methods, while promoting those methods which are the most environmentally benign, and which are practical and economically feasible.

Noxious Weed Program

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

Phase 1: Prevent the development of new noxious and invasive weed infestations.

Phase 2: Provide education and public outreach on noxious and invasive weed control.

Phase 3: Provide ongoing management of State of Nebraska and Lancaster County designated noxious weeds, as well as the City of Lincoln Weed Abatement program.

Nebraska's Noxious Weed Control Act states: It is the duty of each person who owns or controls land to effectively control noxious weeds on such land.

Noxious Weeds in County Roadsides

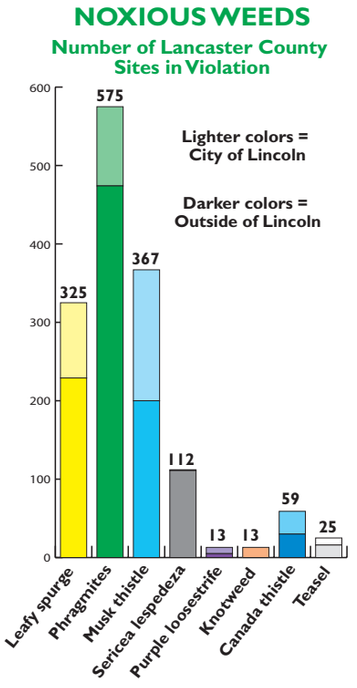
Landowners are encouraged to control noxious weeds along property they own. If not controlled by the adjacent owner, Lancaster County Weed Control will control the perennial noxious weeds such as phragmites, sericea lespedeza and leafy spurge in the county roadsides.

Lancaster County works closely with landowners with specialty crops and offers, free-of-charge, "NO SPRAY ZONE" signs when an agreement is signed. The agreement requires the landowner to control all the noxious weeds in their adjacent right of way.

City of Lincoln Weed Abatement Program

Lancaster County Weed Control Authority is responsible to carry out the administration of the City of Lincoln's Weed Abatement program since entering an interlocal agreement with the city in 1996.

The City of Lincoln's 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. Our inspectors complete inspections based on pre-selected properties due to their history, request from the public and by observing severe yards while conducting other inspections. When a property is found to be in violation, the owner of record is notified with a legal notice. If the property remains uncontrolled at the expiration of the legal notice, the Weed Control Authority will hire a contractor to cut the property. Landowners are responsible to pay the cost of control, plus an administrative fee. If the cost of control remains unpaid, a lien is placed against the property until paid.



City of Lincoln Landfills

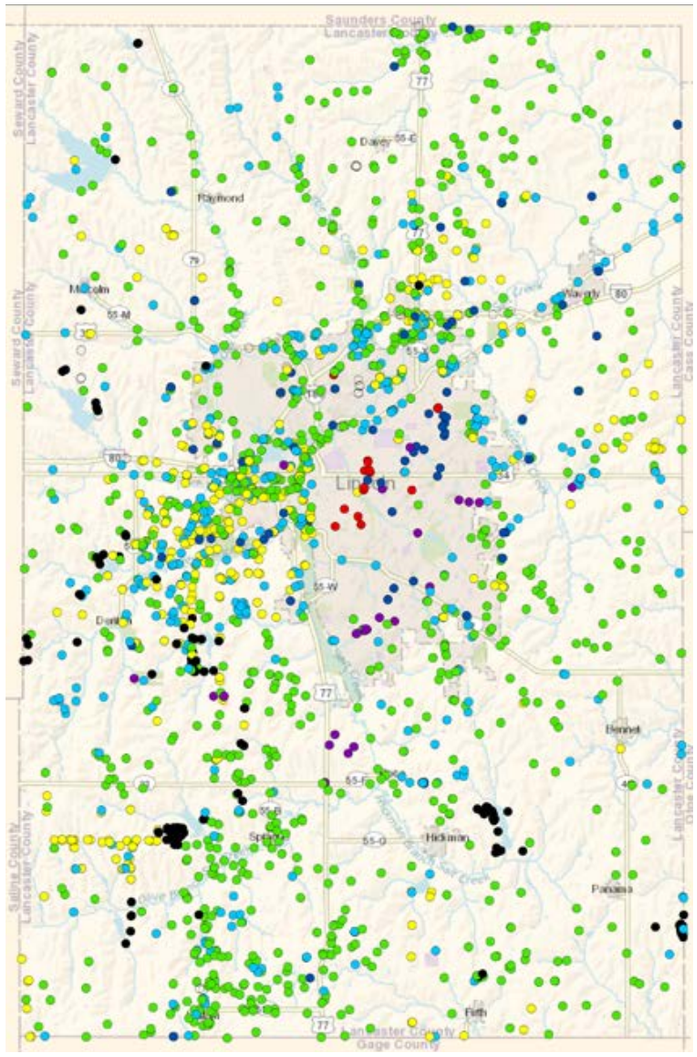
The Weed Control Authority is responsible for managing noxious weeds at the 48th Street and the Bluff Road landfills. To track the spread of noxious weeds and the effectiveness of the control, the landfills are annually inspected and GPS mapped prior to treatment.

Lancaster County Abandoned Cemeteries

Mowing and 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.
- Dave Miller for mowing Jordan.
- Larry England for mowing the Poor Farm.
- Clark Liesveld and Boy Scouts of America Troop 64 for mowing Dietz.
- Terry Briley for mowing Evangelical.
- Troy Henning for mowing Highland Precinct and Uphoff.



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 Danni McGown.

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.

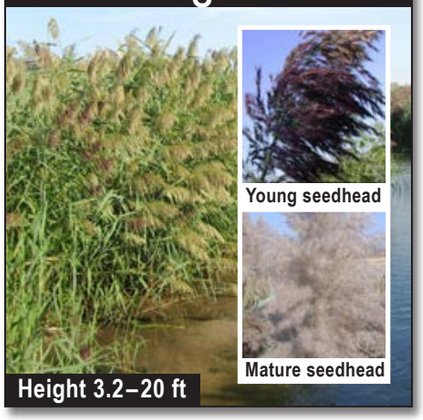
Play Clean Go
STOP INVASIVE SPECIES IN YOUR TRACKS.
PlayCleanGo.org

Musk Thistle

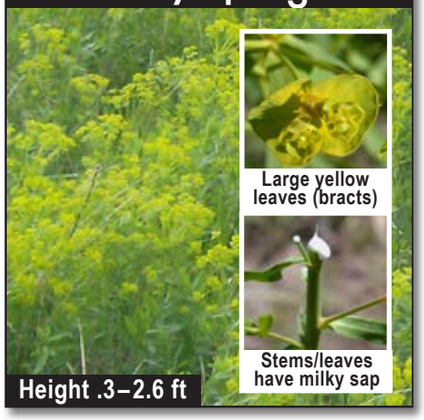
Canada Thistle

Plumeless Thistle

Phragmites



Leafy Spurge



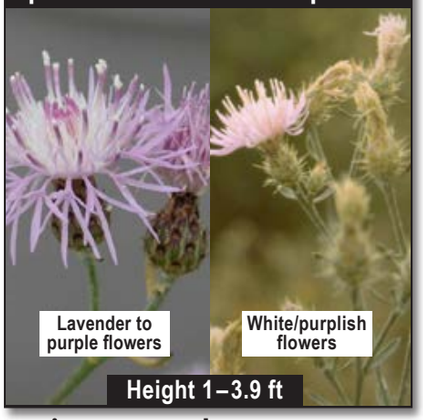
Sericea Lespedeza

Japanese & Giant Knotweed

Purple Loosestrife

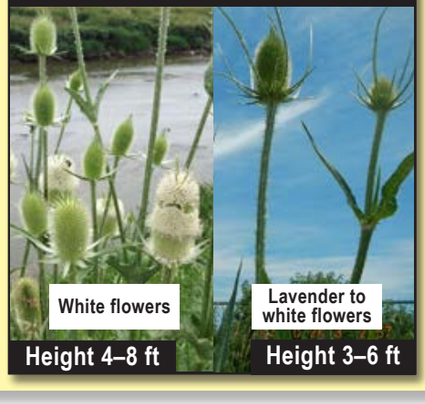
Saltcedar

Spotted & Diffuse Knapweed



Lancaster County's Noxious Weeds

Cutleaf & Common Teasel



Good neighbors control noxious weeds — If you have questions or concerns about noxious weeds, please contact your local county noxious weed control authority, Nebraska Weed Control Association (www.neweed.org) or Nebraska Department of Agriculture.