4-H is a community of young people across America who are learning leadership, citizenship and life skills. Life skills include responsibility, decision making/problem solving, communicating and community service.

The 4-H curriculum, "Step Up to Leadership: Mentoring Youth" begins leadership as "...the ability to influence and support others in a positive manner for a common goal." Life skills can be used in a leadership capacity when someone influences and supports others.

The University of Nebraska-Lincoln Extension 4-H Youth Development program offers youth numerous opportunities to learn and apply leadership skills throughout the year and at fair time.

4-H Teen Council President Grace Farley says, "4-H has given me many opportunities to learn about leadership. I have received the chance to lead meetings, arrange speakers, run community events and much more through my involvement in Teen Council. These experiences allow me to learn in a hands-on way. I will be able to use these skills for the rest of my life."

4-H at Lancaster County Fair

County and state fair marks the culmination of the 4-H activity year. Many 4-H members exhibit their projects and compete in contests. 4-H has a large presence at the Lancaster County Fair with contests, animal shows and other activities starting before the fair and running all five days of the fair.

Teen Council

Lancaster County 4-H Teen Council is a leadership organization for youth in grades 7-12. More than 40 youth are involved in 4-H Teen Council this year. Meetings are held monthly, but the teens gear up into overdrive for the Lancaster County Fair. 4-H Teen Council runs much smoother and is more enjoyable if the officers and other members can work together to make plans. It is helpful, if not vital, in many situations. Teen Council runs much smoother and is much more enjoyable if the officers and others plan activities, carry out these activities themselves. They plan, organize and carry out these activities themselves. They lead — and serve on — committees which are responsible for each activity. The teens follow through with all the details, from picking up the ice cream to inventorying supplies to securing donations.

4-H Teen Council member Christina Mayer says, "As a 4-H'er, it has become abundantly clear to me that working in groups is helpful, if not vital, in many situations. Teen Council runs much smoother and is much more enjoyable if the officers and other members can work together to make plans. I'm learning to be a team player, and I like to think that 4-H has played a leading role in that development."

4-H Council

Lancaster County 4-H Council is responsible for determining long- and short-term goals and policy for Lancaster County 4-H. Comprised of adults and youth, the 4-H Council is a partnership between adults and youth who make decisions and work together.

Each year, 4-H Teen Council organizes an Ice Cream Social as a fundraiser for their program. Older 4-H'ers often help younger 4-H'ers at fair time.

Teen Council

Lancaster County 4-H Teen Council is in charge of a Cookie Eating Contest (Friday, Aug. 8 at 4 p.m. in the Fair Tent), Ice Cream Social (Friday, Aug. 8 at 5:30 p.m. in the Fair Tent) and 4-H Information Table (in the Lincoln Room). The teens plan, organize and carry out these activities themselves. They carry out these activities themselves. They carry out these activities themselves. They lead — and serve on — committees which are responsible for each activity. The teens follow through with all the details, from picking up the ice cream to inventorying supplies to securing donations.

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Plant Alfalfa in August

Tom Dorn
UNL Extension Educator

Alfalfa can be seeded either in spring or fall in eastern Nebraska. Whether it is best to plant alfalfa in the spring or fall depends on two factors, predominant weed species and soil moisture. If the predominant weed species are summer annuals such as foxtail and pigweed, it may be best to plant alfalfa in the fall—provided the soil profile has adequate moisture for growth. This allows the alfalfa to get established with less weed competition and since it greens up in early spring, it will get a head start on the annual weeds when the soil temperature is right for germination.

If the predominant weed species are winter annuals such as pennycress or downy brome, spring planting may be best. The weeds can be killed with tillage and herbicides in early spring and then the soil must come from seed when the soil temperature is right for germination.

Once the soil has adequate moisture for growth, the predominant weed species and soil moisture are known, it is best to plant alfalfa in the spring or fall. The best time for fall seeding is Sept. 10. If planting cannot be completed by that time, it is best to wait for another season.

Alfalfa needs to be planted 1/4- to 1/2-inch deep in fine textured soils and 3/4-inch deep in sandy soils. The ideal planting depth is already smooth, no-till planters have been very successful. In fact, no-till seeding of alfalfa following small grain crops has become the trend among successful alfalfa producers.

Before seedling alfalfa, whether you plant in spring or fall, do a complete soil test. Apply and incorporate lime and phosphorus fertilizer, if needed, to ensure that the seed will germinate.

How to Minimize Losses When Storing Hay Outside

Tom Dorn
UNL Extension Educator

Question: My soil test report shows a number for pH and another number for buffer pH. What does pH measure and what is the difference between pH and buffer pH?

Answer: pH is a measure of the acidity or alkalinity of a soil. When the soil solution (the water in the soil) contains equal numbers of hydrogen ions (H+) and hydroxyl (OH-) ions, the soil is neutral and the pH of the soil is 7.0. When there are more H+ ions than OH- ions, the soil is acidic, and when there are more OH- ions than H+ ions, the soil is alkaline. The scale is logarithmic. That means a soil with a pH of 6.0 is 10 times more acidic than a soil with a pH of 7.0. A soil with a pH of 5.0 is 10 times more acidic than a soil with a pH of 6.0 and 100 times more acidic than a soil with a pH of 7.0.

Soil acidity can be thought of as two types: active or soil solution acidity and reserve or exchangeable acidity. The active acidity of a soil is measured directly by a pH meter in the lab. Reserve acidity depends on several factors, such as amount and type of clay, amount of organic matter and soluble aluminum concentration in the soil. Therefore, two soils can have the same measured pH, but will require different amounts of lime to change the pH value and correct it back to a more neutral pH.

A chemical test using a buffer is performed in the laboratory to determine the amount of calcium carbonate equivalent (CCE) necessary to raise the soil pH to a desired level. This buffer solution reacts with the soil to neutralize both the active and reserve acidity. The change in the pH of the buffer can be measured and correlated to the amount of lime needed per acre to obtain the same results in the field. This is reported on the soil test report as buffer pH. A rule of thumb for buffer pH values is, for every 0.1 point below pH 7.0, it takes about 1,000 pounds of ag lime (60% CCE) to bring the soil to a pH of 7.0. If the soil is acidic up to a measured pH value of 6.5 (6.5 is considered the ideal pH for most crops).

For example, a soil with a buffer pH of 6.3 would require (7.0 - 6.3) x 1,000 pounds of ag lime per ton of pH to raise the pH to 7.0 (7,000 pounds of ag lime per acre to bring the pH in the top seven inches value up to 6.5). If the lime is incorporated deeper than seven inches, larger amounts of lime are required to neutralize the acidity because you are affecting a greater mass of soil.

For more information...
Two-Spotted Spider Mites

Injury
Tiny mites suck plant juices from the leaves of many vegetable crops, causing a discoloration of leaves due to the loss of chlorophyll. Leaves of infected plants have distinct pale-yellowish blotches. As the mite population increases, the entire leaf turns brown, dries and drops from the plant. The under surfaces of infested leaves have silken threads spun across them, often forming large webs over the plant. Plants lose vigor, leaves drop off and the plants die eventually.

Description
Adult mites have eight legs, are very small (1/60 of an inch in length), are oval and range in color from the clear to light yellow to brownish-orange. Two dark spots can be seen on the back of the adults. The eggs are spherical, a shiny pale yellow, attached to the underside of the leaves and can be seen with a hand lens. Newly hatched larvae are very small and can have only six legs. These develop into the nymph stages, which have eight legs and become adults shortly thereafter. The entire life cycle from egg hatch to adult depends on the temperature and can range from 40 days at 55 degrees F to 5 days at 75 degrees F.

Habits
Two-spotted mites overwinter as adults in soil, on tree bark, and in similar sheltered places. They become active in early spring but usually reach peak abundance in mid- to late July during hot, dry weather. Mites attack nearly all vegetable plants and are readily seen on beans, cucurbits, eggplant, tomato, and potato.

Nonchemical Control
1. Mow weeds around the garden border to reduce the mite population.
2. Wash mites off plants with a soap and water solution applied under sufficient pressure to break the webs. Or, wash plants with water, using a garden hose.

Chemical Control
1. Excessive use of the insecticides carbaryl (Sevin) kill beneficial mite predators, allowing mite populations to increase rapidly. Insecticidal soap and either pyrethrin or kethane may be used in your sprayer tank to reduce a mite population buildup.
2. Thorough coverage of leaves, especially the undersurfaces, is necessary to obtain good control.
3. Read and follow all label directions. Observe the proper days’ wait before harvest for each particular crop.

Seeding New Cool Season Turfgrass

Don Janssen, UNL Extension Educator

The best time to seed a new cool season turfgrass lawn is late August through early September. Cool night temperatures favor rapid germination and establishment. The key to success, however, is often proper site preparation. Before you disturb the soil, kill perennial and broadleaf weeds with a recommended non-selective herbicide such as glyphosate (Roundup or Kleenup). It is very effective against troublesome perennial weeds, but will kill any green, growing plant, so users need to be careful to keep it from contacting landscape ornamentals, nearby turf areas and flower or vegetable gardens. The next step is to remove the stumps, rocks, roots, buried wood or other debris. Soil that you want to make a grade change—to encourage water to run away from the house, for instance, or to eliminate a low, wet spot in the yard—first remove the topsoil and stockpile it nearby. Fill the low spot and replace the topsoil. Avoid making grade changes around established trees. Even seemingly minor changes can damage roots or weaken or kill trees.

This is also the time to improve your topsoil. Improve sandy or clay soils by working in several inches of compost or fibrous peat into them. Add one inch compost to each four inches of soil disturbed. Apply a starter fertilizer and work into the top 2 inches of the soil. Allow the topsoil to settle for a while.

To seed the area, divide the seed into two equal parts and apply half of it in one direction—say, east to west—and half at a right angle to that. rake lightly with the back of a leaf rake to mix the seed into the top 1/8 to 1/3 inch of soil—don’t bury it. Then roll the seedbed to assure good contact between the seed and the soil. Water as often as necessary to keep the area evenly moist until the grass emerges and starts to establish. Reduce irrigation intervals as the grass becomes established.

If your new lawn is to be sodded rather than seeded, site preparation is the same except that the site should be deeply watered (to a depth of 6 inches) a couple days before the sod is put down. Lay the sod within 24 hours of its harvest, if possible. Stagger the ends of the sod pieces like bricks and do not stretch the sod pieces—they will shrink as they dry and gaps will develop. Deep watering may be needed daily until the sod is well rooted.

Sod can be laid anytime the site can be prepared, but fall is an ideal time because the usually cool, moist weather is conducive to grass plant growth.

Slow-Release Fertilizers
Slow-release fertilizers are a boon to gardeners who do not want to keep tabs on fertilization schedules throughout the growing season. However, fertilizers that release nutrients slowly through a plastic resin coating can sometimes break down too fast when exposed to high soil temperatures, releasing too much fertilizer too fast and resulting in plant damage. Three-month formulations have a lightener coating than nine-month formulations and are more likely to suffer high temperature degradation. One maker of slow-release fertilizers says that the problem is solved by either burying the pellets or covering them with mulch.

Why Do Petunias Do That?
Petunias vary their growth habits according to temperature and day length. At temperatures of 62 degrees F and below, petunias will be branched, bushy, compact and multi-flowered. From 65 to 75 degrees F, day length affects growth habit. If plants receive less than 12 hours of sunlight at these temperatures, petunias will be single-stemmed and have only a single flower; with more sunlight, petunias branch and increase flowering. At over 75 degrees F, day length has no effect, and plants will always be tall, leggy and bear few flowers.

—Don Janssen, UNL Extension Educator

Converting Outdoor Flowers to House Plants for Winter

Many plants in the flower border will make excellent house plants this winter. Among the easy-to-maintain indoor plants are begonia, coleus, geranium and ivy. If they are already being grown in containers, it is a simple matter to bring them indoors. Start moving them in at night when the temperature drops below 60 degrees F to maintain their vigor and flower production. Locate plants where they receive sunlight equivalent to what they were receiving outdoors for optimum bloom. If you are planning to take some garden plants indoors to provide for early fall bloom, use a sharp knife to root prune them now to a size a little smaller than the pot. Remove all buds and flowers and cut back the top growth severely. Water well until ready to lift.

—Don Janssen, UNL Extension Educator
Enjoy Nebraska Foods!

By Alice Henneman, MS, RD, UNL Extension Educator

To determine doneness in egg dishes such as quiche, casseroles, stratas, frittatas, etc., the center of the mixture should reach 160 degrees F when measured with a food thermometer. At this temperature, the very center of a custard pie may still be liquid; however, it will firm upon standing. Avoid overcooking. At this temperature, the very center of a custard pie may still be liquid; however, it will firm upon standing. Avoid overcooking.

1. Preheat oven to 350 degrees F.
• 1/2 cup onion, chopped.
• 1/8 teaspoon salt
• 1/8 teaspoon black pepper
• 1/4 cup nonstick cooking spray.

2. Place in a 9-inch pie plate that has been sprayed with
nonstick cooking spray.

3. Bake for 20 minutes or until a knife inserted near the
center comes out clean. Let frittata stand 5 minutes
before serving.

4.  Bake for 20 minutes or until a knife inserted near the

center comes out clean. Let frittata stand 5 minutes
before serving.

5.  Bake for 20 minutes or until a knife inserted near the

center comes out clean. Let frittata stand 5 minutes
before serving.

The easiest and quickest way to dry salad greens is in a
salad spinner. A salad spinner uses centrifugal force to remove
water from freshly washed salad greens and herbs. Your

Fruit and Veggie “Bites”

“Bite” 1. Prevent cut fruit from turning brown.
Keep cut fruits, such as apples, bananas, and peaches, from turning brown by coating them with a bit of orange juice or lemon, or pineapple juice. Or use a commercial anti-
darkening product (such as Fruits-Fresh®) and follow the manufacturer’s
directions.

“Bite” 2. Make the most of your melon baller.
Melon balls, those little kitchen gadgets with a
scrap at each end of a handle about 6-inches long, can save valuable
time in preparing a salad and vegetables. Even if you never make melon balls, use a melon baller to:
Core apples and pears.
• Cut away the inner membrane from peppers.
• Scoop out the inside of a cherry tomato and make
tiny stuffed appetizers. Try stuffing tomatoes with
your favorite tuna salad sandwich mixture.
• Remove seeds and surrounding pulp from fruits and veggies like
cucumbers, tomatoes, or zucchini papaya and kiwi.
• Scoop out the insides of potatoes for twice-baked potatoes.

“Bite” 3. Take a salad spinner for a spin! Salad
dressing slides off damp salad greens and collects in the bottom of the salad bowl.
You’ll get more flavor with less
dressing (and fewer calories!) if salad greens are washed and
dried before tossing your salad with dressing.
A tablespoon of an oil and vinegar dressing may be all it takes for two cups of
dried salad greens.

“Bite” 4. Do this with radishes before refriger-
ing them.
Tossing radish tops are attached, remove them before storing. Radishes don’t keep as well
if their tops are left on. Store unwashed radishes in an open
or perforated plastic bag in a refrigerator crisper drawer
that is separate from the one in which you store your
salad greens and tomatoes. Wash radishes and trim their roots
just before using.

More Fruits and Vegetables!

Melon ballers, those little kitchen gadgets with a
scrap at each end of a handle about 6-inches long, can save valuable
time in preparing a salad and vegetables. Even if you never make melon balls, use a melon baller to:
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How would you like to come home and
have most of your meal already prepared? Or, perhaps, you’d like to avoid
staying up late or getting up
early to fix food for a special
event? Alice Henneman, extension
educator and registered dietitian with
UNL Extension in Lancaster County, will teach you
how to freeze foods for future use. You’ll receive an
extensive booklet giving specific freezing directions for
common foods. Plus, you’ll receive several recipe
ideas for make-ahead foods. No cost to attend.

Register by calling BryanLGH at 481-8886.

Freezing Foods for Future Use

Thursday, Sept. 11, 7–8:30 p.m.
Plaza Conference Center,
BryanLGH Medical Center East,
1600 S. 48th Street, Lincoln

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$Stretch Your Food Dollar by Eating More Fruits and Vegetables!

The warm summer months are a great time to increase your
fruit and vegetable intake. Fruits and vegetables like bell peppers, melons, berries, corn,
summer squash and zucchini are finals in season, and therefore, finals in stock and
less expensive! However, these savings go right into the trash, literally, if you don’t
start using them while they are most visible. Salary greens are washed and
dried before tossing your salad with dressing.
A tablespoon of an oil and vinegar dressing may be all it takes for two cups of
dried salad greens.

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FAMILY & COMMUNITY EDUCATION (FCE) CLUBS

Presidents’ Notes—Bonnie’s Bits

Bonnie Krueger
FCE Council Chair

Looks like August has made its arrival. Pray our storms are over for the year and we get beautiful rain showers and rainbows the rest of the summer.

Time to relax and enjoy family and friends. Enjoy your children and grand-children, almost time for school to begin. Vacations are sort of out of the picture because of gas prices, but we have lots of things to do right in our own backyards. County fair, beautiful parks, lakes and lots of historical places to enjoy. Have a wonderful summer.

FCE News & Events

Re-organizational Packets

Presidents of FCE clubs can pick up their packet to reorganize for 2009 after Aug. 22. There are October deadlines within the packet. If you have questions, call Lorene or Pam at 441-7180. It is time to look forward and plan an exciting and educational year for FCE.

Council Meeting, Sept. 22

The next FCE Council meeting will be Monday, Sept. 22, 7 p.m. at the Lancaster Extension Education Center. The business meeting will follow the program. All FCE members are invited to attend.

Sizzling Summer Sampler a Success

The Family & Community Education (FCE) Sizzling Summer Sampler held on July 10 was a success with 115 FCE members and friends in attendance.

The evening started with a light supper. Fifteen baskets were raffled off, raising $391 for the FCE Scholarship Fund.

President’s Notes: Bonnie’s Bits

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Leader Training, Sept. 25

The FCE and community leader training session “Long Term Care: What Is It, Where Do You Pay For It?” will be Thursday, Sept. 25, 1 p.m. at the Lancaster Extension Education Center. Extension Educator Lorene Bartos will present the lesson which will provide leaders with knowledge of care methods, cost of care, how services are financed, as well as who provides care to our nation’s elderly and disabled adult citizens. If you are not an FCE member and would like to attend call Pam at 441-7180 so informational packets can be prepared.

Food Entrepreneur Workshop, Aug. 8

The University of Nebraska—Lincoln Food Processing Center is offering a one-day seminar for all individuals interested in exploring the idea of starting a food manufacturing business. The “From Recipe to Reality” seminar will be offered Friday, Aug. 8. Pre-registration is required and space is limited. Registration deadline is July 29. There is a fee. Contact Jill Gifford at 472-2819 or jgifford1@unl.edu for more information.

Driver Safety Course, Sept. 23 & 24

The 55 ALIVE Driver Safety Program the nation’s first and largest classroom driver refresher course designed for motorists age 50 and older. The 55 ALIVE course will be presented in Lincoln as two, four-hour sessions on Tuesday, Sept. 23 and Wednesday, Sept. 24 from 12:30 to 4:30 p.m. at the Lancaster Extension Education Center, 444 Cherry Street. The course is designed to help you:

• Understand the effects of aging on driving.
• Learn driving strategies that take into account the changes we experience as we age.
• Identify the most common crash situations we face and reduce the chances of having a crash.
• Update your knowledge and understanding of today’s roads, vehicles and other road users.
• Think about how you drive and identify when driving may no longer be safe.

Boost Your Child’s Brain Power

Family relationships are important. Interacting with children can increase brain power and results in better family communications. Here are 10 things that can boost your child’s brain power (your child will love every one of them):

1. Interaction. Your consistent, long-term attention actually increases your child’s capacity to learn.
2. Loving Touch. Holding and cuddling does more than just comfort your baby—it aids brain growth.
4. Safety. Safe, healthy environments are free of lead, loud noises, sharp objects and other hazards.
5. Self-Esteem. Respect, encouragement and positive role models grow self-esteem from the beginning.
6. Quality Child Care. Trained teachers and family child care providers can make a positive difference.
7. Play. It helps your child explore the senses and discover how the world works.
8. Communication. Talking with your baby builds verbal skills needed to succeed in school and later life.
9. Music. It expands your child’s world, teaches new skills and offers a fun way to be with you.
10. Reading to your child. Show how important reading is and create a lifelong love of books by reading to your child from the beginning.

by Lorene Bartos, UNL Extension Educator

Fabric Softener vs. Fabric Conditioner

Fabric softener is designed to make the items you wash feel soft and fluffly. It also reduces static cling and helps permanent press fabrics to dry faster and wrinkle less. Fabric conditioner is designed to do all this plus it makes clothes easier to iron.

A word of caution: In liquid forms, softeners and conditioners should be added to the wash during the final stages of the rinse cycle. Pouring either product directly onto sheets, towels, clothing, etc. may cause blue-gray, greasy-looking stains to appear.

So no matter which one you choose, read and follow the manufacturer’s directions on the product’s label.

STRENGTHENING FAMILY TREASURES

Daughter/Mother Camp

A retreat designed for 6th grade girls and their mothers (or grandmothers or other adult females)

Friday, Oct. 10, 5 p.m. to Saturday, Oct. 11, 5 p.m.

This camp is 2 days and 1 night of fun, educational and confidence-building activities. As the teen years approach, this is an opportunity to:

• Enhance effective communication including expressing emotions
• Learn more about body image and sexuality
• Explore techniques to handle peer pressure and stress
• Discuss the importance of individual family values

Cost includes meals, snacks and lodging at Eastern 4-H Center near Gretna. Fee is $125 per pair.

Presented by UNL Extension. For more information or a registration form, call Maureen Bursen at 441-7180 or go to http://lancaster.unl.edu/family/guf.shtml
Flowers That Tower

Tall perennial plants in your flower beds can bring a sense of drama to your landscape. If you have the space, consider a few of these giants.

**Boltonia** *Boltonia asteroides*—This plant has showy, white, aster-like flowers in late summer. It will get 5 to 7 feet tall and may need staking. Thrives in any garden soil and spreads rapidly in moist conditions. Boltonia prefers full sun.

**Common sneezeweed or False sunflower** *Helenium autumnale*—This plant has showy yellow flowers in late summer. It will get 3 to 6 feet tall. Very adaptable, but prefers moist soil and full sun.

**False Indigo** *Baptisia australis*—This plant grows 3 to 5 feet tall and forms large clumps. Blue flowers bloom in spring. It prefers full sun to part shade.

**Goatsbeard** *Aruncus dioicus*—Stately perennial that produces creamy-white plumes of blossoms in early summer. Will grow in sun to part shade. It reaches heights of 4 to 6 feet.

**Joe-Pye weed** *Eupatorium purpureum*—Very showy plant with purple flower clusters in the fall. It will get 4 to 7 feet tall. Prefers moist soil and full sun to part shade.

**Plume poppy** *Macleaya cordata*—Handsome large perennial that grows 5 to 10 feet. Does best in rich, well-drained soil and full sun. Blossoms are creamy-white plumes that reach nearly a foot in length. Warning! This plant spreads vigorously.

**Queen-of-the-prairie** *Filipendula rubra*—This plant is very tall and wind tolerant. Reaches heights of 6 to 8 feet tall. The flowers are large, 6 to 9 inch, in pink clusters. Prefers moist-wet conditions and full sun to part shade.

**Russian sage** *Perovskia atriplicifolia*—This sage has aromatic gray-green leaves and pale blue flowers in late summer. It prefers full sun to part shade. Russian sage will grow to be 3 to 5 feet tall.

**White Mugwort** *Artemisia lactiflora*—The creamy-white flowers appear in late summer. Very attractive foliage reaches 4 to 6 feet tall. This plant grows in full sun or part shade.

**Garden Guide Things to do This Month**

By Mary Jane Frogge, UNL Extension Associate

Every weed that produces seed means more trouble next year. Control weeds before they go to seed.

- Remove old vegetable plants which have stopped producing to eliminate a shelter for insects and disease organisms.
- Hand pick beggarweeds from your evergreen and deciduous trees.
- Check deciduous trees for fall webworm. Use a broom or rake to get them out of small trees.
- Check on water needs of hanging baskets daily in the summer. Wind and sun dry them much more quickly than other containers.
- Clean up fallen rose and peony leaves. They can harbor disease and insect pests over the winter if allowed to remain on the ground.
- Mound soil over the lateral or brace roots of corn stalks for extra support against strong winds.
- Pick summer squash and cucumbers every day or two to keep the plants producing.
- Water the garden early in the day so plants can absorb the moisture before the hot sun dries the soil. Early watering also insures that the foliage dries before night. Wet foliage at night increases susceptibility to fungus diseases.
- Many herbs self-sow if the flowers are not removed. Dill produce seeds that fall around the parent plant and come up as volunteers the following spring.
- To reduce the number of pests on your fruit tree for the coming year, pick up and destroy all fallen fruit.
- Bt (Bacillus thuringiensis) is used by many gardeners to protect cole crops from chewing caterpillars.
- White flies are attracted to yellow, so use yellow sticky boards to reduce their populations.
- Do not add weeds with mature seed heads to the compost pile. Many weed seeds can remain viable and germinate next year when the compost is used.

**Broadleaf Herbicide Damage to Garden Plants**

Numerous plants can be affected by broadleaf herbicide damage. Tomato, potato, grape and redbud are very sensitive. Leaves on affected plants are cupped, thickened or leathery and develop an uncharacteristic fan shape. Severely distorted leaves often have a mosaic pattern of light and dark green areas. Leaf stems or petioles are twisted in a curly-Q fashion and the lower stem of tomatoes may develop small, light-colored bumps. Gardeners often mistake these symptoms for a virus infection, but damage is almost always caused by exposure to broadleaf herbicides. To determine whether herbicide damage is to blame, look at surrounding herbicide-sensitive plants such as potato, pepper, grape and redbud to see if they also show twisting or distortion. Virus diseases usually affect one or two plants and certainly would not be causing the damage to the diversity of plants mentioned above at the same time. Furthermore, virus diseases rarely cause the curly-Q twisting of the new growth.

Plant growth-regulating herbicides are commonly used in home lawns early in the season to control dandelions and other broadleaf weeds. If misapplied and accidentally sprayed on sensitive plants, they cause severe injury or even plant death. Unfortunately, these plants do not have to be sprayed directly with herbicides to cause damage. Some broadleaf herbicides such as 2,4-D are volatile, especially during hot weather and may drift across the yard or even from adjacent yards in concentrations sufficient to cause injury. Therefore, you do not necessarily have to be using broadleaf herbicides in your yard to suffer damage.

To reduce the chances of herbicide injury, avoid applying them near the vegetable garden. Apply the products during calm mornings and cool temperatures. Cover and protect sensitive plants if you must use herbicides.

**Supplemental images:**

- Boltonia, Boltonia asteroides
- Common sneezeweed, *Helenium autumnale*
- False Indigo, *Baptisia australis*
- Goatsbeard, *Aruncus dioicus*
- Joe-Pye weed, *Eupatorium purpureum*
- Plume poppy, *Macleaya cordata*
- Queen of the prairie, *Filipendula rubra*
- Russian sage, *Perovskia atriplicifolia*
- White Mugwort, *Artemisia lactiflora*
Environmental Focus

Steps Businesses Can Take to Prevent Pollution

Kate Johnson
UNL Pollution Prevention Program Intern

Pollution has become a topic of interest in the past 15 years or so. We know we create pollution every day but what can we do about it? Pollution Prevention is an idea that goes beyond recycling. But what exactly is it? How do you prevent pollution? Being Proactive on Pollution Pollution prevention is also known as source reduction. It is considered a “front-end” environmentalism because it attacks the pollution before it even occurs. Recyclying is a reactive approach that tries to help the problem down at the end of the process. Pollution prevention is a proactive approach which eliminates or reduces waste at the start. Most states have their own definition of pollution prevention. Nebraska’s definition is “All activities that lead to the elimination or reduction of waste quantities and toxicity at the site of generation.” In-process reusing, recycling, or reusing at the site, is included in many of these state’s definitions of pollution prevention. This type of recycling is included because if they can reuse materials instead of throwing them away, the business has to buy fewer raw materials and reduces waste. Off-site recycling is not considered pollution prevention in many states because it is not proactive.

UNL Partners in Pollution Prevention Intern Program

The University of Nebraska Lincoln Partners in Pollution Prevention (P3) Program has been helping business look beyond recycling for 11 years. During the 11 years, P3 interns have worked with 444 clients in 59 different states. During the 11 years, P3 interns have worked with 444 clients in 59 different states. P3 program has diverted over 43 million pounds of solid waste from landfills and saved clients an estimated $13.4 million through waste reduction. More information about the program is available online at www.p3.unl.edu

10 Steps for Businesses

Here are 10 easy ways for businesses to implement pollution prevention on their own.

1. Train your employees. The more informed they are of what is being thrown away, the more they will try to recycle.
2. Separate waste. This cuts down on the amount of waste that goes into the garbage. It also makes it easier to recycle.
3. Use less water. This can be done by using water-saving appliances and fixtures.
4. Use recycled materials. This can be done by purchasing recycled office supplies and furniture.
5. Use less energy. This can be done by using energy-efficient lighting and appliances.
6. Use less paper. This can be done by using electronic communication and using both sides of the paper.
7. Use less oil. This can be done by using energy-efficient appliances and using oil-based products.
8. Use less heat. This can be done by using energy-efficient appliances and using heat-based products.
9. Use less electricity. This can be done by using energy-efficient appliances and using electricity-based products.
10. Use less water. This can be done by using water-saving appliances and fixtures.

Triangulate Household Spider: A Common Harmless Spider

Barb Orgg
UNL Extension Educator

This spider mates and produces egg sacs from late spring through early fall. An egg sac is about the size of the adult spider and is made of loosely woven white silk. About 30 eggs can be seen in each. Recently, we have had a number of phone calls asking about the seriousness of this very common spider. There have been no known cases of human injury by S. triangulosa. Experts don’t consider it to be a medically important spider. No extraordinary measures are needed to control this spider. The best way to deal with web-building spiders is to knock down the webs and step on the spider or use a vacuum cleaner to remove both spider and web.

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1. Create a written environmental policy that reflects your business’s commitment to pollution prevention.
2. Select a head of pollution prevention who takes suggestions and tracks progress to ensure pollution prevention suggestions are put into practice.
3. Switch to low-flow toilets and sinks and conserve water.
4. Change to efficient compact fluorescent lights.
5. Install motion detectors for turning on lights to conserve energy.
6. Replace incandescent exit signs with more energy efficient LED exit signs.
7. Switch to non-hazardous products and cut down on the cost of disposing properly of hazardous waste.
8. Have your compressed air system checked often for leaks. Compressed air efficiency becomes quite low due to leaks.
9. Regularly check for Keep Nebraska Beautiful’s Materials Exchange Program. (picture is a visit to an electronics company in Lincoln).
**4-H Life Challenge Contests Results**

The 4-H Life Challenge contests focus on Family and Consumer Science project areas. Youth answer written questions and give an oral presentation applying what they have learned in their 4-H projects to a real-life situation. The county senior Life Challenge contest was held on June 7. Dylan Hoover was awarded the Grand Champion rosette. The county junior Life Challenge contest was held July 12 and Molly Noel was awarded the Grand Champion rosette. The state Life Challenge contest for seniors was held at UNL East Campus on June 30 and July 1. Ceira Austin, Helen Dowd, Angelica Hoover and Dylan Hoover participated. Out of 25 teams they placed third in the Foods Challenge and out of 23 teams placed fourth in the Design Challenge.

**Premiere Animal Science Event Results**

Lancaster County 4-H Livestock judging teams competed in various events at this year’s Premier Animal Science Events (PASE) on June 30 and July 1 at UNL East Campus. Congratulations to all team members. Lancaster County had one intermediate livestock judging team competing in the state contest. Team members were: Chandler Kramer, Kacie Bruss, Matthew Grimes and Rachel Johnson. The team placed in the top 10 teams overall. Finishing in the top 25 individuals were Chandler Kramer and Matthew Grimes. Chandler Kramer did an excellent job finishing in the top 5 individuals in sheep and top 10 individuals in reasons. Lancaster County had two Senior Livestock judging Teams. Team members were: Erica Peterson, Grant Schrick, Jessica Stephenson, Emilia Woeppel, Melissa Woeppel and Taylor Johnson. They all did a great job.

**District Horse Show Results**

4-H horse exhibitors participated in district horse shows held across the state the weeks of June 8th and 15th. Sixty three Lancaster County youth received purple and blue ribbons which qualified them to compete in the State 4-H Horse Show in Grand Island. Listed below are the district purple ribbon winners. Full results can be found at [http://4h.unl.edu/disthorse](http://4h.unl.edu/disthorse). Congratulations to all participants!
The Lancaster County 4-H dog club, Canine Companions, was one of the recipients of the 2008 Governor's Agricultural Excellence Awards. Each year the Nebraska 4-H Foundation, the Governor and the Nebraska Investment Authority honor those who financially reward 4-H clubs for outstanding performance. The funds awarded are intended to aid in improving the quality of the 4-H program and help prepare youth for careers in agriculture. The dog club plans on purchasing dog agility equipment for the Lancaster County Fair.

4-H Dog Club Receives Governor’s Ag Excellence Award

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• Empty your trunk—Driving around with your trunk full adds weight and reduces your fuel mileage. This weight, each 50 pounds of added weight results in a 1% reduction in fuel economy.

• Keep your vehicle clean—Dirt, mud and bugs on the exterior of your vehicle increases drag that over long distances hurts your MPG. Keeping your vehicle washed and waxed reduces your vehicle aerodynamic drag, improving your fuel economy.

• Use mass transit—Fuel consumption can be dramatically reduced by using mass transit, ride the bus.

• Share a ride or carpool—Sharing a ride or carpooling helps reduce fuel consumption.

Fuel Savings Maintenance Tips

Vehicle gas caps—About 7% of the vehicles on the roads have gas caps that are either damaged, loose or are missing altogether, causing a 147 million gallons of gas to vaporize or are missing altogether, causing 147 million gallons of gas to evaporate. If your gas cap is loose or damaged, or not tight, the gas in your tank by as much as 10%.

Note: Vehicles with computer controlled fuel injection have sensors that automatically adjust for restricted air filters, keeping your fuel mileage higher.

• Defective oxygen sensor—A worn or inoperative oxygen sensor will result in an engine that is not operating efficiently, resulting in increased fuel consumption or a decrease in fuel mileage.

• Change motor oil—Not changing motor oil or using substandard engine oils will usually cause an engine to have a decrease in fuel mileage by as much as 6%. This means that your fuel consumption will increase.

Fuel Saving MYTHS

Myth—Filling your vehicle up in the morning when the weather is hot will net you additional fuel is a false statement. Unless the fuel is stored in above ground tanks, the fuel remains cool at a fairly constant temperature and does not expand or contract with the ambient temperature.

Myth—Filling your vehicle with higher octane fuel provides better fuel mileage is a false statement.

Octane ratings do not indicate the energy content in the fuel; they only provide a guideline as to the ability of the fuel to resist detonation (engine ping). Most modern vehicles have engine controls that will allow the fuel to operate on lower than factory recommended octane levels.

Myth—The gas from all fuel stations is the same. Generally this statement is true, but a few discount independent fuel stations sell low grade fuel that is termed “slop.” All motor fuel (gasoline, diesel, jet fuel, etc.,) is transported in the same pipes. Unless the fuel is stored in above ground tanks, the fuel remains cool at a fairly constant temperature and does not expand or contract with the ambient temperature.

Myth—Fuel mileage can be improved by placing a special device in the fuel filter that will create a whirlwind, mixing the air and fuel better.

Myth—Fuels additives (octane boosters, fuel line antifreeze, etc.) improve your fuel economy. Fuel additives may help with vehicle performance, but do not improve the vehicles fuel economy. Taking advantage of the added power from octane boosters will generally reduce your miles per gallon.

Fuel type and this fuel is dumped into a slop tank and sold to fuel vendors at discounts. You might be purchasing a higher grade fuel, or lower grade fuel. Name brand fuels do add detergents or other additives to their fuels, but generally these additives do not affect the vehicles fuel mileage.

Myth—Placing a cow magnet on the fuel line near the engine will improve fuel economy is a false statement. If a magnet on the fuel line near the engine will improve fuel economy, it would not be produced. No one knows how much gas or fuel a vehicle uses.

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Dirt, mud and bugs chocks off the air and creates a “rich” mixture (too much fuel being burned for the amount of air), wasting fuel and causing the engine to lose power. Replacing a clogged air filter or air intake that will reduce fuel consumption is a false statement. Unless the fuel is stored in above ground tanks, the fuel remains cool at a fairly constant temperature and does not expand or contract with the ambient temperature.

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Bicycle Contest Top Winners

The 2008 4-H Bicycle Safety Contest was held on June 28 at the Lancaster Extension Education Center. Part of the Lancaster County Fair, the contest consists of a bike inspection, bicycle riding skills and a written quiz. Tony Hooper, junior division, and Daniel Casburn, senior division received Reserve Champion rosettes. Preston Bader, senior division, and Miranda Unverferth, junior division, received Champion rosettes. Congratulations to all who participated!

Make It With Wool Contest, Deadline Sept. 27

This contest offers both youth and adults the opportunity to promote the beauty and versatility of wool fabric and yarn. Personal creations in sewing, knitting, crocheting, spinning and weaving of wool fabric, yarn is encouraged. Categories and ages for this contest are: Preteen, 12 & under; Junior, 13-16; Senior, 17-24; Adult, 25 & over; Made for Other (any age). The District III contest will be held at the Lancaster Extension Education Center, 444 Cherry Creek Road, Lincoln on Saturday, Oct. 11, with registration beginning at 8:30 a.m. Entry deadline is Sept. 27. You may enter any district contest.

Congratulations to Lancaster County Farm Families

The Knights of Ak-Sar-Ben and the Nebraska Association of Fair Managers will recognize four Lancaster County farm families on Friday, Aug. 8, 5:30 p.m. during the Lancaster County Fair (held at the Lancaster Event Center, 84th & Havelock, Lincoln).

Titled the “Nebraska Pioneer Farm Award,” the award recognizes families who have continuously owned their farm for more than a century.

Three award recipients are from northern Lancaster County; the Hornung Family Farm (owned by Todd, Cindy Hornung and Lori Block), the Caha Farm (owned by Deborah and Mark Caha) and the Skilar Farm, (owned by Evelyn Skilar). In southern Lancaster County the Nitzel Farms (owned by Howard, Nitzel and Donna Hillgren) will be recognized.

Upcoming Arboretum Garden Tours

Mark your calendars for the following tours of Nebraska arboretums and botanical gardens scheduled for 2008. The free tours will offer a chance for tree lovers, garden enthusiasts and green industry professionals to see and learn about great plants and gardens. The tours are coordinated and sponsored by the Nebraska Statewide Arboretum (NSA) in partnership with local affiliated sites. More information is online at http://arboretum.unl.edu, or by calling 472-2971.

Thursday, Sept. 18, 9 a.m. — Noon in Lincoln—Lincoln Regional Center Arboretum.

Thursday, Oct. 23, 3-5:30 p.m. in Blair—Fall Color Tour including Steyer Park and Black Elk Park.

Thursday, Nov. 6, 3 p.m. to dusk in Nebraska City—Fall Color Tour including Arbor Lodge State Park, Nebraska City High School and NADF Arbor Day Farm.
4-H Clover College is Hands-On Learning & Fun

Held each June, 4-H Clover College is a four-day series of hands-on workshops for youth presented by University of Nebraska-Lincoln Extension in Lancaster County. This year’s Clover College, held June 17–20, featured 49 workshops and 637 total registrations! A special thank you to the 70 instructors and assistants! More photos are online at http://lancaster.unl.edu

New at Clover College was “All Rise,” a class on making kolaches and soft pretzels.

In “Flower Babies,” youth propagated several plants.

New at Clover College were two basketball classes taught by Evan Kucera, a 4-H'er and All-State basketball player.

New at Clover College was “Checkmate One.”

Youth learned beginning chess in “Checkmate One.”

In “Clover Kids 4-day Day Camp,” youth ages 6 & 7 participated in a wide range of activities such as learning about wildlife and making pancakes.

This June, the Lancaster County 4-H Citizen Washington Focus (CWF) group traveled by bus on an ambitious 15-day itinerary to Washington D.C. This year’s group consisted of 33 teens and 4 sponsors. CWF is a citizenship and leadership program for high school youth which provides a look behind the scenes at our nation’s capital.

Stops along the way included historical sights such as the Statue of Liberty, Ellis Island, Valley Forge, Gettysburg, Mount Vernon and Monticello.

The group spent five days at the National 4-H Conference Center near Washington, D.C., with delegations from other states. There the 4-H’ers held mock congressional sessions and learned how bills become laws.

Tours of the capital city included the Capitol building, the Smithsonian, the Holocaust Museum, Arlington Cemetery and all of the memorials.

In Lancaster County, CWF organizes a trip to Washington D.C. every two years, raising money for the trip during the off years. If you will be between the ages of 14–18 as of June 1, 2010 and are interested in joining the next CWF group, call Deanna Karmazin at 441-7180.

View 4-H staff member Deanna Karmazin’s trip blog with photos online at http://lancaster.unl.edu

CWF 4-H’ers Learn About Citizenship on Trip to D.C.