Rising Energy Prices Cause Some Irrigators to Consider Changing Energy Source

Tom Dorn
Extension Educator

Extended drought across much of Nebraska in recent years, complicated by rapidly increasing energy prices, has put Nebraska’s farmers in an economic squeeze. Some irrigators are exploring the economic feasibility of switching energy sources. A thorough economic comparison calculates fuel, operating and ownership costs.

Estimated Irrigation Fuel Cost Differences

The University of Nebraska Biological Systems Engineering Department has analyzed hundreds of pumping plant test results and developed the Nebraska Pumping Plant Efficiency Curve (NPC) (see Table 1, page 11). This criteria indicates the useful work one should expect per unit for each of the energy sources in irrigation.

Using the NPC, irrigators can estimate expected energy consumption for each alternative energy source whenever the lift, system pressure and pumping rate are known. Multiplying the estimated energy consumption by the fuel price provides an estimate of energy cost for each fuel source, thereby giving an indirect comparison of prices for alternative energy sources.

One can compute price factors using the NPC to compare each energy source to the others. For example, the expected work output per gallon of liquid propane (LP) is 6.89 while the work output of diesel is 12.5. For the energy cost to be equal between these two fuel sources, LP should be priced at 6.89/12.5 = 55.1% of the cost of diesel.

Table 2 (see page 11) presents equivalent price factors for the common irrigation energy sources. To compute equivalent energy prices for irrigation pumping, select an energy source on the left margin with a known price per unit (dollars per gallon, dollars per kWh). In that row, find the price factor in the cell under the second energy source. Multiply the known cost per unit of energy selected by the price factor to find equivalent energy cost per unit of the second energy source.

For example: If irrigation diesel is $1.00 per gallon, the price per gallon for LP that results in the same energy cost for pumping is $1.60 x 0.551=$0.88 per gallon. Interpretation: If LP can be purchased for less than $0.88 per gallon, the energy cost per hour is less for LP than diesel. If LP is higher than $0.88 per gallon, the energy cost is higher for LP than diesel at $1.60 per gallon.

Factoring Operating & Ownership Costs

Operating costs are dominated by the fuel cost component, but repair and labor costs are also a part of the operating costs. Ownership costs include: return on capital investment, taxes, insurance and depreciation. The annualized cost of an irrigation system depends on design. Different systems have different costs. For example, a center pivot sprinkler system likely will have a higher initial cost and a higher pumping cost per inch of water delivered to the field, than a gated pipe system. However, due to improved irrigation efficiencies, a center pivot system nearly always requires less total water pumped to meet crop needs and fewer labor hours to irrigate as compared to a gated pipe system. The question is, will the savings in inches of water pumped plus savings in labor offset the higher pumping cost per acre-inch due to higher system pressure and higher ownership costs of the center pivot versus the gated pipe system.

The energy source selected dictates the type of power unit needed. The purchase price and expected service life is quite different when comparing spark ignition and diesel engines. The lower purchase price, lower maintenance costs and longer service life for electric motors can be a big plus when considering switching to electric power. However, the cost of bringing in three-phase power, annual hook-up charges and potential for load control during peak electrical demand periods, must be considered as well.

Water Conservation Strategies

The drought has prompted a renewed interest in water conservation practices in crop production. University of Nebraska Cooperative Extension has extensive resources on these practices which can be accessed online at lancaster.unl.edu/ag or lancaster.unl.edu/irrigation or at the Lancaster County Extension office.

No-Till Farming

There has been increased statewide interest in learning to use no-till farming methods which save both fuel and soil water. Extension has more than 75 educational publications on the topic.

Improved Irrigation Management

Many crop producers are overwatering. Proper irrigation management can maximize water and energy efficiencies. UNL Cooperative Extension’s “Irrigation Management Home Study Course” can be ordered online at http://unl.edu/homesudy/irrigation/irrigationindex.htm. Chapters include: measuring soil water, crop water use, irrigation efficiencies and scheduling irrigations.

Alternative Crops/Limited Irrigation

Aided by University of Nebraska research and extension personnel, some farmers in western Nebraska are planting alternative crops requiring less water. Others are adopting strategies that produce optimum yields under limited irrigation. Recent studies in the Panhandle have demonstrated with proper management, it is possible to produce 80 percent of normal yield with only six inches of irrigation.

Extension Irrigation Engineer Dean Yonts, at the Panhandle Research & Extension Center near Scottsbluff, can be contacted at (308) 632-1238.
2005 All-America Selections Winners

Established in 1932, the All America Selections (AAS) makes awards on a yearly basis for the new vegetable and flower varieties that it feels exhibit qualities that are superior to contemporary varieties. The awards are based on the votes of a council of professional judges, who have studied the new varieties at more than 50 trial sites scattered across the United States and Canada. Although the All-American Selection variety awards are not perfectly adapted to all gardens, your chances of success are greater when you select an award winning variety. Here are the 2005 winners. Give them a try.

Gaillardia aristata 'Arizona Sun' Flower Award Winner

This gaillardia is red and yellow. Each 3 inch single flower is mahogany red with yellow. Each 3 inch single flower blooms gleam with brilliant coral petal. The flower color and quality are superior to other zinnias. In addition to the color, ‘Magellanic Coral’ plants are brimming with luminous blooms. Consistent flower production is an improved quality. Earliness to bloom is another exceptional trait. From sowing seed to first bloom requires only 6 to 9 weeks. Mature zinnia plants will reach about 1 1/2 inches tall and spread 15 to 19 inches, depending upon growing conditions. Like all zinnias, ‘Magellanic Coral’ will perform best in a full sun garden. This AAS winner is adaptable to container gardening.

Zinnia ‘Magellanic Coral’ Flower Award Winner

‘Magellanic Coral’ blooms are radiant. They illuminate the garden. The fully double, dahlia flowered 5 to 6 inch blooms gleam with brilliant coral petals. The flower quality and color are superior to other zinnias. In addition to the color, ‘Magellanic Coral’ plants are brimming with luminous blooms. Consistent flower production is an improved quality. Earliness to bloom is another exceptional trait. From sowing seed to first bloom requires only 6 to 9 weeks. Mature zinnia plants will reach about 1 1/2 inches tall and spread 15 to 19 inches, depending upon growing conditions. Like all zinnias, ‘Magellanic Coral’ will perform best in a full sun garden. This AAS winner is adaptable to container gardening.

Eggplant ‘Fairy Tale’ Vegetable Award Winner

‘Fairy Tale’ is a petite plant with decorative miniature eggplants. The fruit appearance is as huluous as the taste. ‘Fairy Tale’ is a non-GMO cultivar, white with violet stripes. The fruit are sweet, not bitter, with a tender skin and few seeds. The elongated oval eggplants can be picked when quite small at 1 to 2 ounces or they can be left on the plant until double the weight, and the flavor and tenderness remain. ‘Fairy Tale’ eggplants are recommended for marinating and grilling whole. The harvest can begin in just 49 to 51 days from transplanting. The petite plant reaches less than 3 feet tall and wide, perfect for container gardening. An eggplant has not won an AAS award since 1939, so ‘Fairy Tale’ is truly an exceptional new variety.

Vinca ‘First Kiss Blueberry’ Flower Award Winner

The first blue-flowered Vinca is an AAS winner named ‘First Kiss Blueberry’. The large 2 inch single blooms have a darker eye which accentuates the violet blue color. For decades breeders have been diligently working towards a blue Vinca. Now ‘First Kiss Blueberry’ fills the color void. Gardeners will look for ‘First Kiss Blueberry’ plants to add to their collection. Proven to be heat and drought tolerant, mature plants will have about 11 inches tall and spread 16 inches, given adequate growing conditions. Easy to grow, this Vinca and other Vinca are grown in patio containers or combination planters.

Winter Squash ‘Bonbon’ Vegetable Award Winner

‘Bonbon’ is a squash with a distinctive shape; they are oval with a pointed blossom end. In addition to the flavor, ‘Sugary’ plants are disease resistant and appear with a noticeable lack of cracked fruit. Look for ripe fruit on the strong semi-indeterminate vines within 60 days from transplanting into warm, prepared garden soil or large containers. Plants are vigorous and may need pruning to contain growth. ‘Sugary’ should set a new standard for ‘cherry’ size tomatoes with sweet flavor. (MIF)

Caring for Easter Lilies

We can thank Louis Houghton, a World War I soldier, for the popularity of the Bermuda lily, better known as the Easter lily, in this country. In 1919, he brought a suitcase full of hybrid lily bulbs from the southern coast of Oregon and gave them to family and friends to plant. The climate there was ideal for growing this lily, a native of the Ryukyu Islands of Japan, and by 1945, 1,200 west coast growers were producing bulbs for the commercial market. Up until that time, first Bermuda, and then Japan, dominated the U.S. export market.

Today, ten growers, most located along the California-Oregon border, in an area known as the Capital of the World, “produce 95 percent of all bulbs grown in the world for the United Easter lily market. They produce almost 12 million bulbs, shipping them to commercial greenhouses in the U.S. and Canada. Despite a sales window of only two weeks, Easter lilies are the fourth largest crop in wholesale value in the U.S. potted plant market, according to the U.S. Depart- ment of Agriculture. Poinсет- tias, mums and azaleas, rank first, second and third. The cultivar most com- monly grown for U.S. markets is the ‘Nellie White’. It is named for a lily grower’s wife and has large, white, fragrant trumpet-shaped flowers. When buying a lily, look for a plant with flowers in various stages of bloom from buds to open or partially opened flowers. Foliage should be dense, rich green in color, and extend all the way down to the soil line. This is a good indication of a healthy root system. Look for a well-proportioned plant, one about two times as high as the pot. You also should check the flowers, foliage and buds for signs of insects and disease. At home, keep your lily away from drafts and drying heat sources such as appliances or heating ducts. Bright, indirect light is best with daytime temperatures of 65 to 75° F. Water the plant only when the soil feels dry to the touch, but do not overwater. To prolong the life of the blossoms, remove the yellow anthers (pollen-bearing pods) found in the center of each flower. Do not throw away you Easter lily after it is done blooming. You can save the bulb and plant it outdoors. Easter lilies can be replanted outside after the blooms are gone. Plant the Easter lily outdoors as soon as the ground can be worked. Select a sunny site with well-drained soil. Set the top of the bulb six inches below the soil surface. Cut off the old flowers, but leave the stem intact. Leave the stem intact back the stem until it dies down in the fall, then cut it off at the soil surface. After the leaf surface freezes in late fall, mulch the soil and do not remove the mulch until new growth begins in the spring. (MIF)
How Do Honey Bees Survive the Winter?

Unlike other insects that go dormant during Nebraska’s cold winter, honey bees stay active in their hives even when temperatures are below zero. How do they do this?

The temperature in a properly managed hive never falls below 63°F. To maintain this temperature, worker bees form a tight cluster and surround the queen bee. By using stored honey as fuel, the workers shiver to generate metabolic heat. The bees on the outside of the cluster, insulate the cluster while the innermost bees generate heat. They continually rotate their position, alternating their role as a heat producer and heat retainer. It isn’t unusual for a bee hive to lose two-thirds of its population between late summer and the following spring, but the beekeeper’s goal is to keep the queen and some bees alive and healthy until spring arrives warm in the spring. A strong honey bee hive needs at least 55-60 pounds of honey at the beginning of winter. Beekeepers usually check their hives in March to make sure there are adequate food reserves to last until mid-April. Another management technique that will reduce honey consumption is for beekeepers to place a winter wrap around each hive in November (see photo) and remove the wraps in mid-April. If you are interested in keeping bees, but don’t exactly know where to start, come to a Beginning Beekeeping Workshop on Saturday, March 12 (information at right).

Beginning Beekeeping Workshop

Learn to:
- manage honey bees by understanding their biology and behavior
- identify the best Nebraska honey plants
- install packaged bees
- manage honey bee diseases
- harvest honey and beeswax
- prepare your crop for market
- locate hives for best survival and production

Upcoming Workshop

**Everything Homeowners Need to Know About TERMITES**

**THURSDAY, MAY 19, 6:30–9:30 P.M.**

Lancaster Extension Education Center, 444 Cherry Creek Road, Lincoln

Attendees will:
- Learn to identify termites and their damage
- Learn unbiased information about effective treatments, based on research results
- Learn why treatments cost so much
- Receive up-to-date reference materials
- Be informed consumers and make better decisions

Cost: $25

Call 441-7180 for more information.

For more information, call Barb Ogg at 441-7180

Nominations are Being Sought for the 2005 Lincoln-Lancaster County Environmental Awards

Do you know of an individual, business, community group, school or youth group who deserves to be recognized for their environmental stewardship efforts? If so, nominate them for a Lincoln-Lancaster County Environmental Award. Awards are given in the following categories:

- **Pollution Prevention** — awards for preventing pollution and waste resulting from creating.
- **Waste Reduction and Recycling** — reductions in the amount of waste sent to the landfill.
- **Water Conservation** — reduction in water use, using water conservation techniques.
- **Cleanup/Beautification** — improvement in an area’s visual quality.
- **Residential/Commercial Development** — reducing waste during construction, using drought tolerant landscaping, energy efficient or green building techniques.
- **Environmental Education/Awareness** — new or unique efforts for innovative environmental education programs; increasing awareness about local environmental issues.

Nominations may be made in more than one category if appropriate. Deadline for nominations is March 18. To nominate someone, call Harry Heafer at 441-8035 or Gene Hanlon at 441-7043 for a nomination form. Or, complete the nomination form online at www.ci.lincoln.ne.us/city/Health/environment/kllcb/awards.htm. The Lincoln-Lancaster County Environmental Awards are co-sponsored by the Lincoln-Lancaster County Health Department and Lincoln Public Works and Utilities Department with generous support from many donors. (BPO)
Private Pesticide Applicator Certification, March 3 and 16

Federal and state law states a private pesticide applicator must be certified and licensed to buy, use or supervise the use of, restricted-use pesticides to produce an agricultural commodity on property they own or rent or on an employer’s property if the applicator is an employee of the farmer. No certification is needed if one will only be using general-use pesticides.

Four Private Applicator training sessions have been held previously but two additional sessions will be held in March. These are scheduled for Thursday, March 3 from 8:30 -11:30 a.m. and Wednesday, March 16 from 1:30 - 4:30 p.m.

There is a $15 fee collected at the training session. When the Nebraska Department of Agriculture receives the application from the training session, private applicators will be billed $25 for a license fee. This fee covers the three-year license period. (TD)

Pesticide Disposal Collection, March 16

The Nebraska Department of Agriculture, in cooperation with University of Nebraska Extension, the Environmental Trust Fund, the Nebraska Agri-Business Association and the Nebraska Department of Environmental Quality, will be holding a pesticide disposal collection day on Wednesday, March 16 at the Farmers Cooperative Development Center, 444 Cherrycreek Road, Waverly. Anyone with outdated or unwanted pesticides may bring them to the site from 8 a.m. until noon.

Pesticides should be brought in their original containers with label intact if possible, but pesticides which no longer have readable labels will be accepted. No pre-registration is required. There is no charge for up to 1,000 pounds of product from individuals or farms. A small fee will be assessed for the amount over 1,000 pounds. Once received, the pesticides will be packed and packaged for shipment to a certified incinerator for disposal.

Remember to protect yourself and your surroundings when handling waste pesticides. You may need to wear personal protective equipment or, as a minimum, unlined neoprene or nitrile gloves. If the pesticide container has been damaged, pack it in another container that will hold the product if the first container should rupture while being transported. Use a container that can be left at the collection site if it becomes contaminated.

Three main categories of pesticides will be accepted:

• Unused, unneeded, old or damaged pesticides (includes insec-toxics, herbicides, fungicides, rodenticides and fungamts).
• Pesticides of all types (agricultural crops, livestock, homes, lawns, gardens, structural, commercial), including those in aerosol containers.
• Farmer-supplied electrical transformers containing PCB’s from renovated irrigation systems.

Since different wastes need to be handled and disposed of differently, products that fit in one of the categories above are the only ones accepted. Products NOT accepted include:

• Pesticide products in pressurized cylinders
• Waste oil or oil filters
• Antifreeze
• Paints, varnishes and thinners
• Cleaners and solvents

The Waverly site is one of only about 20 sites across Nebraska selected for this pesticide collection program in 2005. Don’t miss the opportunity to dispose of unwanted pesticides! (TD)

“Native Grasses and Wildflowers” Rural Living Clinic, March 10

University of Nebraska Cooperative Extension is presenting “Acreage Insights - Rural Living Clinics” to help acreage owners manage their rural living environment. Upcoming workshops (listed with Lincoln dates) are:

• Create a Prairie With Native Grasses and Wildflowers — Thursday, March 10, 7-9 p.m.
• Acreage Landscape Management — Thursday, April 14, 7-9 p.m.

In Lincoln, clinics will be held at the Lancaster Extension Education Center, 444 Cherry Creek Road. The workshops will also be offered in Omaha and Fremont.

Wildflowers in an acreage landscape create a natural, informal appearance and provide a changing palette of colors throughout the growing season. Native grasses reduce soil erosion and enhance wildlife habitat. At "Create a Prairie with Native Grasses and Wildflowers," learn how to incorporate a wildflower planting, the necessary steps in establishment and how to manage the planting in years to come.

Pre-registration is $10 per person and must be received three working days before the program. Late registration is $15 per person. Note: If a minimum number of registrations are not received, clinics will be cancelled and registered participants will receive a full refund.

For more information or for a registration form, call the extension office at 441-7180 for a brochure or go online at lancaster.unl.edu/rural/Programs/AcreageInsightsClinics.htm.

Glyphosate, Rose by any Other Name ...

Tom Dorn
Extension Educator

Monsanto chemical company first developed the non-selective systemic herbicide, with the chemical name N-(phosphonomethyl) glycin, otherwise known as the isopropylamine salt form of glyphosate in the 1970s and marketed it as Roundup. Eventually, the patent ran out on glyphosate and other chemicals began manufacturing it. I recently did a search and was able to identify 59 brand names of glyphosate labeled for agricultural crops, sold by 16 different companies. This did not include products sold primarily for lawn and garden use and did not include products containing a second herbicide in combination with glyphosate.

Most glyphosate is currently on the market today is still in the form of the isopropylamine salt. Moreover, most manufacturers sell a formulation that contains the isopropylamine salt with three pounds acid equivalent per gallon, the same amount of acid equivalent found in Roundup Original. There are a few brands of glyphosate that differ in their acid equivalent content. Always read the product label when shopping for the best buy. Other formulations of glyphosate have been developed as well. Monsanto produces an ammonium salt of glyphosate (Roundup Ultra-Dry) which has 65 percent acid equivalent by weight. Monsanto also produces a monopotassium salt of glyphosate (Roundup Original Max, Roundup Ultra Max, Roundup Weather Max and RT Master II) all contain 4.5 pounds acid equivalent per gallon.

Syngenta produces a diammonium salt of glyphosate found in Touchdown and a monopotassium salt of glyphosate found in Touchdown Hi-Tech. These contain three pounds and 4.17 pounds acid equivalent, respectively.

Nufarm Americas sells a mixture containing 2.7 pounds acid equivalent isopropylamine salt plus 0.3 pounds acid equivalent monoammonium salt of glyphosate (Credit Duo and Credit Duo Extra). Do all brands of glyphosate that contain the same acid equivalent have the same efficacy against weeds? The answer would be a qualified yes. If the label directions regarding additives are followed, equal performance can be expected. While the acid equivalent is the same, the so-called inert ingredients are not the same in many cases. Inert ingredients do not have herbicidal properties by themselves, a portion are the carriers and a portion are additives included to enhance the efficacy of the active ingredient. Many generic brands of glyphosate lack the additives found in more expensive brands. So one should be additive-conscious you may need to add to the spray tank to enhance the effectiveness of products lacking those products and consider this cost along with the cost of the glyphosate. Read product label directions regard additive recommendations or talk to your chemical supplier. (TD)
Pruning Shrubs in the Landscape

Pruning is the most important maintenance practice for shrubs in the landscape. Rarely will you find a shrub in your landscape that does not require some pruning each year. Proper pruning will help the shrub produce a more attractive, healthy, well-proportioned plant. Also, pruning will often increase flowering and extend the usefulness of your shrubs.

Shrubs should be examined on an annual basis with some pruning carried out each year. Too many homeowners neglect their shrubs and fail to prune for several years. Shrubs become overgrown, lose their shape and vigor, and require heavy pruning to reduce the size of the plant, and in many cases permanent damage occurs.

**Why Prune?**

Pruning is a necessary practice to maintain healthy, vigorous shrubs and to keep them within desirable size. The first step in pruning is to remove all dead, broken or diseased branches. This is necessary to maintain the health of the plant.

1. **To rejuvenate old, overgrown shrubs** requiring heavy pruning to reduce the size of the plant.
2. **To remove branches** misshaped, crowded, rubbing or dropping on other branches or plants. This might be prevented maintenance, removing these branches before injury occurs by rubbing or crowding other branches and causing loss of vigor and death by crowding.

3. **To prune to shape** and maintain proper balance. This prevents shrubs from becoming overgrown and prevents the need for severe pruning to reduce the size of overgrown shrubs.
4. **To stimulate flower and fruit** development. Many flowering shrubs will produce more flower buds the following season if old spent flowers are removed from the plant when they lose their attractiveness. Azalea is an example.

5. **To rejuvenate old, overgrown shrubs** to restore their shape and vigor. When shrubs become overgrown heavy pruning is necessary to restore their normal shape and vigor. Forsythia is an example.

6. **To reduce plant size** to prevent crowding, or shading other plants.

When to Prune

Many people have a misconception that the only time to prune is during the winter when plants are dormant. Most landscapes will include different plants, which will require pruning throughout the year. Never hesitate to cut out tall, fast-growing or unlimbed shrubs while they are growing. If tip buds are pruned on new growth, lateral growth occurs and reduces the upward growth.

Knowing when to prune is just as important as knowing how to prune. To insure proper response of the plant to pruning, the flowering and fruiting habits of the plants must be known. As a general rule shrubs that flower before July 1, should be pruned immediately after flowering. These plants develop flower buds during the summer and will flower the following season. Azalea, Forsythia, Deutzia and Crabapples are some examples.

Shrubs that have flowers after July 1, should be pruned in the winter or early spring before growth starts. These plants develop flower buds in early spring. Althea, P.G. Hydrangeas, Hybrid tea roses, are some examples of plants that bloom after July 1.

Shrubs that are pruned for their fruits — such as Holly, etc., should not be pruned until after their fruit has lost its beauty regardless of when they flower.

Evergreens, broadleaf and narrow leafed types, may be pruned anytime the wood is not frozen. Narrow leafed evergreens will lose new shoots on the older wood, so don’t cut toward the base of the shrub beyond the living foliage portion of the branches. A good time to prune evergreens is early December so that the prunings can be used to make Christmas decorations.

Late summer or early fall (August and September) pruning should be avoided. Pruning encourages new growth to develop which will not harden sufficiently to withstand winter freezes.

**Prune Shrubs When They Are Young**

Beginning pruning plants when they are young and small. Early spring causes the plant to develop a compact limb system near ground level. A compact branching system is difficult to achieve if pruning is done at a later age. On small plants prune back limbs to stimulate growth of basal branches.

**Do not shear:**

Shearing destroys the normal shape of most shrubs. To reduce the size and to produce a more compact growth, cut out the undesirable longer limbs from inside the plant. Do not cut all limbs at the same heights.

Practice proper cutting techniques:

In making small cuts in heading back or thinning, cut the branch at different lengths, 1/4 inch above an active bud.

For some shrubs, removing the branch back to ground level is desirable. New shoots should be reduced to about 1/2 to 2/3 of their length to encourage lateral shoots to develop.

When removing limbs over 1 inch in diameter, cut back flush to the trunk, a large limb or to a side limb. These precautions are not always necessary on limbs smaller than 1 inch. (DJ)

**Understand Liability**

Issues Before Raising Livestock

You’ve finally managed to buy the acreage you always dreamed of owning. Not a real farm perhaps, but large enough to raise a few hogs, a goat or two and the horse the kids always wanted.

Sounds like the dream of a lot of new country residents. As with most things, however, there are potential downfalls to animal ownership, not the least of which is the liability an owner has if an animal strays and/or trespasses on another’s property. Live stock owners are liable for expenses incurred by the landlord if the animal causes property damage. If the landlord is an owner of the stray animal, the livestock owner is responsible for any costs incurred, including any maintenance costs.

If you are the landlord and someone’s livestock trespasses upon your property, you may take custody of that livestock. If you do, you are required to notify the owner that you have custody of the animal. If you do not know who owns the livestock, you must make a reasonable effort to determine the owner’s identity.

If your livestock strays upon a road or highway and is the cause of an accident, you are liable for damages, including medical expenses.

For further information about liability and livestock, talk to your insurance provider. (DJ)

**Prune Trees Correctly To Maintain Proper Growth**

Proper tree pruning is essential in developing trees with strong structures and desirable form.

When pruning, you will require a high level of care to maintain their safety and aesthetics. Young trees that receive appropriate pruning measures require little corrective pruning when they mature. Pruning should be done with an understanding of how trees respond to treatment. Improper pruning can cause damage that will last for the life of the tree, or worse, shorten the life of the tree.

Pruning removes dead branches and crowded or rubbing limbs. Routine thinning doesn’t necessarily improve a tree’s health; heavy pruning can be a significant health hazard for the tree.

Pruning can be done at any time during the year, but growth is maximized if pruning is done when the tree is active and最容易 if it takes place before spring growth.

There are certain principles to be considered when pruning young trees. Always have a purpose before you cut a limb. Proper techniques is essential. Learn where and how to make the cuts before picking up the pruning shears. Waiting to prune a tree when it’s mature can create the need for large cuts that the tree cannot easily close.

Pruning cuts should be made just outside the branch collar where the branch attaches to the trunk. For small trees, most cuts can be made with hand pruning shears. The scissor type, or by-pass blade hand pruners are preferred over the anvil type. Cuts larger than a half inch in diameter should be made over the anvil type. Cuts larger than a half inch in diameter should be made with pruning shears. For most young trees, the strength of the branch depends on the relative sizes of the branches. The branch angles and the limb spacing. These factors vary from tree to tree.

As a general rule it is recommended to make larger cuts with a clean food-grade plastic or glass container with a tight-fitting, screw-on cap. The container may be a plastic or glass container that previously held beverages, such as a 1 litre soft drink bottle or a water jug, punch or milk jug. Also, you can buy a new plastic container for water, and specifically for sporting goods departments.

Prepare a sanitizing solution by mixing one teaspoon of household liquid chlorine bleach per gallon of tap water. Prepare enough sanitizing solution to fill the container. Pour the solution into the container and let it stand for two minutes. (DJ)

Drain the container and fill it with potable tap water suitable for drinking and cooking. Place the cap on the container and attach a label describing the contents and when it was prepared. Store in a cool, dry place away from direct sunlight. Repeat the sanitizing procedure and replace the water supply every six months. (DJ)

**Storing Water for an Emergency**

Note: This is part of a series of articles related to rural water issues.

If you want to store water for an emergency, start by selecting a clean food-grade plastic or glass container with a tight-fitting, screw-on cap. The container may be a plastic or glass container that previously held beverages, such as a 1 litre soft drink bottle or a water jug, punch or milk jug. Also, you can buy a new plastic container for water, and specifically for sporting goods departments.

For further information about livestock, liability, talk to your insurance provider. (DJ)
Easter, the U.S. egg industry observes more egg tips and trivia.

Department of Agriculture Poultry & Egg Division. See below for time of year, refrigerators across America are stocked with Easter to be fun, but is underscored with a serious intent. Since, at this time of year, refrigerators across America are stocked with Easter, which should be used within a week of hard-cooking, the observance is both timely and appropriate.

This recipe is courtesy of Mary Torell of the Nebraska Department of Agriculture Poultry & Egg Division. See below for more egg tips and trivia.

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Cool 'n Crunchy Egg Salad
(Serves 6)

4 ounces cream cheese, softened (about 1/2 cup)
2 tablespoons mayonnaise
1 tablespoon sweet pickle relish
4 hard-cooked eggs, chopped
1/2 cup carrots, finely chopped
2 tablespoons pimientos
1 tablespoon chopped green onions, chopped

Lettuce leaves and/or tomato slices, optional

In a medium bowl, stir together first 3 ingredients of recipe. Stir in remaining ingredients until evenly coated with flavors. Serve on lettuce leaves and garnish with tomato slices, if desired.

Nutritional Analysis per serving of 1/6 recipe without optional ingredients:
Calories: 242; Protein: 21 gm; Fat: 41 gm; Carbohydrate: 379 mg; Sodium: 248 mg; Cholesterol: 150 mg.

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Eating Well as We Age, Part 2

Mary Torell
Public Information Officer,
NE Department of Agriculture
Poultry & Egg Division

Eating Well as We Age

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Public Information Officer,
NE Department of Agriculture
Poultry & Egg Division

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Public Information Officer,
NE Department of Agriculture
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Public Information Officer,
NE Department of Agriculture
Poultry & Egg Division

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Public Information Officer,
NE Department of Agriculture
Poultry & Egg Division

Eating Well as We Age, Part 2

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Mary Torell
Public Information Officer,
## 2004 Annual Report

A noxious weed control plan was developed that guided the operations of the Weed Control Authority for the year. This plan was approved and supported by the Weed Control Authority. A summary of these activities follows.

### Inspection Activity

There were 6,592 inspections made of 3,029 sites on 20,829 acres during the year. We found 2,498 violations on 5,900 acres. Violations dropped 280 from last year.

### Lancaster County Noxious Weed Control Program

We found 1,067 infestations on 4,986 acres. The number of infestations decreased by 119 and acres decreased by 1,708. There were 122 more purple loosestrife infestations found. The number of infestations found by noxious weed is shown below. Of these sites, 882 were controlled by landowners. The Authority controlled 30 sites on 112 acres.

### City of Lincoln Weed Abatement Program

We found 1,431 violators as a result of 1,681 complaints. This was 161 less violations and 239 less complaints than in 2004. Voluntary compliance of landowners remained at 93 percent. Forced cutting had to be performed on 109 sites at the cost of $11,817. Of these, 88 sites had to be specially assessed for $14,218.

## Extent of Noxious Weeds in Lancaster County

### Noxious Weed Acers by Land Use

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Infested Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-ag</td>
<td>31%</td>
</tr>
<tr>
<td>Pasture</td>
<td>65%</td>
</tr>
<tr>
<td>Cropland</td>
<td>5%</td>
</tr>
<tr>
<td>Railroads</td>
<td>1%</td>
</tr>
<tr>
<td>Roads</td>
<td>0%</td>
</tr>
</tbody>
</table>

All land uses have infestations of noxious weeds. Approximately 13.5 percent of the non-agricultural acres are infested. Non-ag land, which includes the City of Lincoln and rural lots, is second in the amount of a noxious weed infestations with over six percent of the area being infested. Cropland infestations are found mostly in alfalfa fields and idle cropland. The most visible infestations are on roadways and railroads. Yet they have less than one percent of the total infested acres. There has been an aggressive control effort on these transportation corridors resulting in a sharp drop in the acres infested.

About four percent of the land area is infested with noxious weeds. Musk thistle makes up 94 percent of the noxious weed infested area. Musk thistle has been found in almost all the sections in the county. Leafy Spurge does not cover a lot of acres, but it has been found on over 400 sites and in one out of seven sections.

## Expanded Cooperation Efforts

The Lancaster County Weed Control Authority joined with ten other counties in eastern Nebraska and other partners in forming the Lower Platte Weed Management Area to address the eight noxious weeds and other invasive weeds. The first target effort is three weeds invading riparian areas along the Platte River and upstream. These three weeds are purple loosestrife, phragmites and salt cedar.

### Prevention Activities

Inspectors were trained to be alert to noxious weeds and potential noxious weeds. We made 15 weed-free forage inspections and certified as being noxious-weed free.

### Awareness Activities

A Weed Awareness insert was published in the February issue of the Lancaster County Extension Newsline newsletter. The Authority Web site was maintained and updated. There were 40,814 hits, an increase of almost 14,000 hits from the previous year. Around 400 informational mailings were made to landowners in addition to the 2,500 violation notifications. An exhibit was displayed at the state fair and other locations.

## Weed Control is Everyone’s Business

Noxious weeds and other vegetation which offer vector or rodent harborage, contribute to health problems and the aesthetics and overall appearance of the City. Landowners need to be aware of their noxious weed control and weed abatement responsibilities. Others need to understand the importance of a strong weed program and provide public support.

Almost every ownership parcel outside of developed residential lots has or had one or more kinds of noxious weeds present. The key to noxious weed control is not allowing the plants to seed. This requires persistence and follow-up. Most of the public and private landowners understand this and are keeping their noxious weeds under control.

It is the job of noxious weed control authority staff to make landowners aware and to assist in the job of controlling noxious weeds. Many landowners are accomplishing control without any assistance or contact from the authority. The authority carries out a strong information and awareness program along with an extensive inspection program to encourage voluntary compliance of the Nebraska Noxious Weed Control Act. The Authority has also provided the inspection and administration of the City of Lincoln’s weed abatement program since entering into an inter-local agreement with the City in 1996. Weed abatement is a part of the Health and Safety Chapter of the City Code dealing with uncontrolled or uncultivated growth of weeds, brush, vines, grasses or other vegetation which offer vector or rodent harborage, contribute noxious pollutants to the atmosphere or unreasonably interfere with the use and enjoyment of abutting public or private property.

The measure of a successful weed control program is the acceptance and voluntary compliance of the landowners. There continues to be a high level of voluntary compliance with the Noxious Weed Control Act and the City of Lincoln’s Weed Abatement Ordinance. This voluntary compliance was obtained with a decreased number of legal notifications.

Following is the Lancaster County Weed Control Authority's 2004 Annual Report.

---

Russell Shultz
Superintendent

### Weeds of Concern

- **Leafy Spurge**
  - Found in almost all sections in the county. Leafy Spurge does not cover a lot of acres, but it has been found on over 400 sites and in one out of seven sections.

- **Musk Thistle**
  - Found mostly in alfalfa fields and idle cropland. The most visible infestations are on roadways and railroads.
  - Less than one percent of the total infested acres.

- **Purple Loosestrife**
  - Found in almost all sections in the county. Purple loosestrife infestations make up 94 percent of the noxious weed infested area.

- **Canada Thistle**
  - Found in almost all sections in the county.

### Prevention Activities

- Training inspectors to be alert to noxious and potential noxious weeds.
- Increasing weed-free forage inspections and certifications.

### Awareness Activities

- Publishing a Weed Awareness insert in the February issue of the Lancaster County Extension Newsline newsletter.
- Updating the Authority Web site.
- Increasing website hits by almost 14,000.
- Sending 400 informational mailings to landowners.
- Displaying an exhibit at the state fair.

### Legal Notifications

- Decreased in number.
- Acceptance and voluntary compliance since entering into an inter-local agreement in 1996.

### Weed Abatement Program

- Started in 1996.
- Encouraged voluntary compliance by landowners.
- Forced cutting performed on 109 sites at a cost of $11,817.

### Inspection Activity

- Conducted 6,592 inspections.
- Found 2,498 violations.
- Violations decreased by 280.

### Lancaster County Noxious Weed Control Program

- Found 1,067 infestations on 4,986 acres.
- Number of infestations decreased by 119.
- Acres decreased by 1,708.

### City of Lincoln Weed Abatement Program

- Found 1,431 violators.
- Found 1,681 complaints.
- Voluntary compliance remained at 93 percent.

### Numbers and Results

- **Inspections**: 3,992
- **Sites Inspected**: 1,772
- **Violations**: 1,431
- **Owner Controlled**: 1,067
- **Authority Controlled**: 882
- **Violations Dropped**: 280 from last year
- **Voluntary Compliance**: 93 percent

### City of Lincoln Weed Abatement Program

- Found 1,431 violators.
- Found 1,681 complaints.
- Voluntary compliance remained at 93 percent.
- Forced cutting performed on 109 sites at a cost of $11,817.
- 88 sites specially assessed for $14,218.

- **Infestations Found**: 1,067
- **Acres Infested**: 4,986
- **Sites Infested**: 2,500
- **Violations Dropped**: 280 from last year
- **Voluntary Compliance**: 93 percent
Saltcedar Added to Nebraska’s Noxious Weed List

In order to protect Nebraska’s economy and the quality of its land, Nebraska Department of Agriculture Director Merlyn Carlson found it necessary to designate saltcedar as a noxious weed in Nebraska. The designation took effect on January 1, 2005.

Saltcedar is a dense, deciduous shrub or small tree that has the potential to significantly affect native vegetation throughout much of Nebraska. A native of Eurasia and north Africa, it was introduced into the United States as an ornamental.

Ornamental Plantings
Saltcedar has been sold for many years as various tamarrisk species, also called tamarix. Seeds of ‘Pink Cascade’ and other selections of Tamarix can escape to waterways in the state. It is no longer legal to sell the seeds or plants of tamarix in Nebraska since it was the seeds or plants of tamarix state. It is no longer legal to sell for many years as various tamarrisk species, also called tamarix. Seeds of ‘Pink Cascade’ and other selections of Tamarix can escape to waterways in the state. It is no longer legal to sell the seeds or plants of tamarix in Nebraska since it was designated a noxious weed.

Existing plantings are also considered illegal and need to be removed.

Identification
Saltcedar is a deciduous tree (or shrub) with long slender branches and deep pink flowers. It grows to 6–26 feet tall. The branches often thicken many feet wide. The narrow leaves are small and grayish green, often overlapping and crowding on the stems. Although the leaves have the appearance of an evergreen, they are actually deciduous. The deep pink to almost white flowers crowd in many slender spikes, forming dense masses at the top of the branches. The flowers are about 1.5mm across, and have five petals. The seedpods are pinkish red to greenish yellow and will break into three to five parts when mature. A tuft of fine silky hairs adorns the tip of the tiny seeds.

The saltcedar’s bark is a reddish brown while the wood is soft and white. The smooth bark ridges and furrows with age. Tamarix have a deep taproot and extensive lateral rhizomes, which profusely branch upon contact with water.

Detrimental Impacts
Saltcedar has invaded riparian areas throughout the West. As an aggressive colonizer able to survive in a wide variety of habitats, saltcedar often forms monotypic stands, replacing willows, cottonwoods and other native riparian vegetation.

The stems and leaves of mature plants secrete salt, forming a crust above and below ground that inhibits other plants. Saltcedar has a long taproot that allows it to access deep water tables and interfere with natural aquatic systems. Saltcedar is an enormous water consumer. A single large plant can absorb 200 gallons of water a day. Saltcedar’s high water consumption further stresses native vegetation by lowering ground water levels and can also dry up springs and marshy areas.

Infestations also have detrimental impacts on wildlife. Saltcedar seeds have almost no protein and are too small to be eaten by most animals. In addition, its scale-like leaves offer little suitable forage for browsing animals. Studies indicate saltcedar is not favored by wildlife.

A single mature saltcedar may produce hundreds of thousands of seeds between April and October. The seeds are then dispersed by wind and water throughout the growing season. The seedlings are tolerant of water, saline soils and drought and may grow as much as a foot a month.

What makes non-native invasive plants such as saltcedar different from other introduced species is their ability to take advantage of disturbances to the native plant community to expand their limits. Once established, non-native invasive plants can spread rapidly because of the lack of natural enemies that keep plant populations balanced in their native range.

Foothold in Nebraska
Saltcedar has been documented throughout Nebraska. Infestations have been found along the Platte River from Wyoming to the Missouri River. Also, saltcedar is found along many of Nebraska’s southwest reservoirs as well as Lake McConaughy. Smaller infestations have been found on the Republican and Missouri Rivers.

Only two infestations are known in Lancaster County. Undoubtedly this number will increase as more monitoring is done and the public becomes more aware. A few ornamental plantings have been observed in Lincoln. Any sightings of saltcedar (ornamental or wild) should be reported to the Weed Control Authority at 441-7817.

Removal of Ornamental Plantings
The most effective control method is cutting down the shrub or tree and painting the stump surface immediately afterward with an herbicide (cut stump treatment). Herbicide must be applied within 10–15 minutes of cutting to prevent excessive resprouting from the stump. Follow up herbicide application is needed to treat sprouts from the root system. This usually will only be necessary for 2–4 years. All branches and trunk pieces must be removed from the site to prevent sprouting. Tamarisk branches touching wet ground have been known to sprout and send down new roots.

Saltcedar, or tamarisk

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Lancaster County Weed Control Web site

Purple Loosestrife is Invading Lincoln’s Streams

Purple loosestrife infestations in Lancaster County nearly doubled last year, from 120 to 251. It is a serious threat to Nebraska’s wetlands and waterways. Displacing native wetland vegetation, purple loosestrife degrades wildlife habitat, displaces rare plants and animals and chokes waterways. As native vegetation is displaced, rare plants are often the first species to disappear. Prior to 2001, when purple loosestrife was designated a noxious weed in Nebraska, ornamental purple loosestrife (lythrum) had been planted in many local yards. Recent studies prove ornamental Lythrum cultivars, which were once thought to be sterile, can and do produce viable seed. A mature purple loosestrife plant can produce over two million seeds. The seeds are so small they are readily transported by rain runoff to drainages and streams where they will germinate in a saturated soil condition. In nearly all cases, Lythrum spreads via pollen and seed transfer without the gardener’s knowledge. Loosestrife, a relative of the willow, is a nonnative invader. Once in a wetland, it spreads rapidly and is very difficult to control. Even though we think most purple loosestrife plantings are sterile, some cultivars are not. The Lancaster County Weed Control Authority has notified almost 200 homeowners they need to remove their ornamental lythrum plantings. Recently, many Lincoln homeowners have removed lythrum plantings from their yards. The Lancaster County Weed Control Authority has notified almost 1,000 homeowners they need to remove their ornamental purple loosestrife plantings. These homeowners and many others have voluntarily done so. Even though we think most purple loosestrife plantings have been removed, a plentiful supply of seeds have been transported to low lying areas and will remain in the soil until conditions are right for them to germinate. Many Lincoln homeowners have removed lythrum plantings from their yards. The Lancaster County Weed Control Authority has notified almost 1,000 homeowners they need to remove their ornamental purple loosestrife plantings. These homeowners and many others have voluntarily done so. Even though we think most purple loosestrife plantings have been removed, a plentiful supply of seeds have been transported to low lying areas and will remain in the soil until conditions are right for them to germinate.

Homeowners Need to Remove Lythrum Plants

As of 2001, state law bans the sale, offering for sale, distribution, planting or cultivation of purple loosestrife. This ban covers both Lythrum salicaria and L. virgatum. There are no exceptions for cultivars, hybrids or so-called sterile varieties. Sale violations of purple loosestrife should be reported to the Department of Agriculture. Plants may have been purchased and planted legally before 2001, but are now illegal and should be removed. Lythrum plants have many horticultural names, some of which are:

- Rose Queen
- The Rocket
- Morden Pink or Rose
- Morden’s Gleam
- Dropmore Purple
- Columbia Pink
- The Beacon
- Fire Candle
- Azorupureum
- Happy
- Roseum Superbum
- Purple Sprîl
- Mr. Robert’s or Robert’s
- Lady Jackville

Currently, about 31 states have laws prohibiting Lythrum importation or distribution because of its aggressively invasive characteristics.

Control Methods

Any control method you select should be repeated for several years to catch missed plants and those reestablishing from seed or regrowth from root parts.

Hand Pulling/Digging
Small young plants can be hand pulled, especially those rooted in loose soil. Be sure to get the entire root.

Herbicide Application

Careful use of herbicide is the most effective, efficient and least destructive means of removing large purple loosestrife plants. Currently glyphosate is the most effective active ingredient for killing loosestrife. It comes in two forms: (1) “Roundup” for use on dry sites and (2) “Rodeo” for use on wet or standing water sites. Glyphosate must be applied in late July or August to be most effective. It can be sprayed onto loosestrife foliage in a one percent solution. Glyphosate is a nonselective herbicide, however, and will kill any green foliage that it comes in contact with. Great care must be taken to avoid treating non-target plants. Follow all label instructions when using herbicides.

Taylor Park

Above Holmes Lake

Purple Loosestrife is Invading Lincoln’s Streams

Weed Awareness

Lancaster County Weed Control Web site

www.ci.lincoln.ne.us/cnty/weeds

Current Weed Inspections Search

You may access information on the Web site about any active inspection made by the authority. All inspections are shown for sites with infestations not yet under control. You may search for individual sites by entering the address of the parcel, the parcel ID number or the owner’s name. You may also look at all the inspections for a weed problem: musk thistle, plumeless thistle, Canada thistle, leafy spurge, purple loosestrife or weed abatement in Lincoln.
**Federal Act Establishes a Weed Grant Program**

The Noxious Weed Control and Eradication Act of 2004 amends the Plant Protection Act to direct the Secretary of Agriculture to establish a Weed Grant Program to provide federal funding and technical assistance to weed management entities to control or eradicate noxious weeds. It also:

- Sets forth criteria for making grants to weed management entities and for the selection for funding of weed eradication projects. Directs the secretary to give special consideration to states with approved weed management entities established by Indian tribes.
- Authorizes the secretary to enter into agreements with weed management entities for funding of weed eradication activities that take into consideration various factors, including: (1) the severity of the noxious weeds problem or potential problem; (2) the likelihood that the activities will prevent or reduce the weed problem or increase knowledge about resolving the weed problem; (3) the extent to which the activities will provide a comprehensive approach to the control or eradication of noxious weeds; and (4) the extent to which the activities will improve the overall capacity of the United States to address noxious weed problems, and (5) the extent to which the activities promote cooperation and participation between States that have a common interest in preventing the spread and eradicating noxious weeds.
- Authorizes the secretary to enter into a cooperation agreement with weed management entities to encourage a rapid response to outbreaks of noxious weeds.
- States the assistance authorized under this Act is meant to supplement, and not replace, other assistance available for control or eradication of harmful, invasive weeds on public and private lands.
- Authorizes appropriations for fiscal year 2005 through 2009. Limits funding for administrative costs to five percent of available funds.

**Nebraska Act Creates Grant Eligibility**

The 2004 unicameral amended the Nebraska Noxious Weed Control Act. The amendment provides additional cash fund support for the Nebraska Department of Agriculture’s (NDA) responsibilities under the Noxious Weed Control Act. This is done by providing a series of transfers from the Noxious Weed Control Cash Fund to the Noxious Weed Control Cash Fund and directs a portion of revenues from future sales of the weed book to the noxious weed program.

Additionally, the amendment assigns two new weed management authorities to the NDA to enhance tools for responding to noxious weeds and invasive plants. Specifically, the amended act authorizes the director to: (1) temporarily designate plants as noxious weeds and (2) to administer a grant program to encourage the formation of multi-stakeholder weed management entities and other types of partnerships that have weed control authorities to proactively address noxious weed control concerns and emerging invasive plant problems. The grant program is specifically funded but the director is authorized to seek grants and other revenue sources. The amendment was also included at the request of the Nebraska Department of Agriculture that would provide federal pass-through funds to encourage eligible projects similar to those enumerated in the bill.

**New Weed Control Legislation**

**Federal Act Establishes a Weed Grant Program**

- When attempting to control musk thistle or plumeless thistle, it is imperative to prevent seed production. They are biennial weeds that reproduce only by seed. Each plant is capable of producing up to 20,000 seeds. The key to managing musk thistle is to prevent all plants from going to seed. Infestations occur in the summers of one year but size of the infestations vary considerably due to climate conditions. Growth rate conditions can be favorable in the fall, like we received in the fall of 2004, favor the germination of musk thistle seeds near the soil surface at these sites. These plants will flower the next spring if the plants are not controlled that fall or the next spring.

**Control Steps**

1. **Spray** the areas with past infestations in March and April for seedlings and rosettes. A seed bank has built up in the soil at these sites. These seed will remain viable for eight or more years waiting for the right conditions to germinate.

2. **Plow** the areas with past infestations in the fall. If crops are grown in the fall, they provide competition and minimize the survival of musk thistle plants that add to the effectiveness of killing the plants present but also help to prevent future germination. Some of these herbs that will provide residual control are Escort, Tordon 22K and Telor. Grazonone P.41, a combination of Tordon and 2,4-D, also may be used. Follow label directions. Be alert to the blooming of the flower stem in May. Use 2,4-D along with a residual herbicide.

3. **Scout** these areas weekly and provide needed follow-up control until late fall. Be alert to the flowering of the musk thistle plants acting as annuals due to a cool spring.

**Mechanical Control**

Severing the root of musk thistle a couple of inches below the soil surface will kill the plant. The entire root does not have to be removed. Hand cutting or mowing has to be done at weekly intervals to be effective. Fire has not proven to provide effective control. The plants survive prescribed burning, but can be easily found and controlled by other means after the burn.

Maintaining a good, healthy stand of grass is very effective prevention.

**How to Control Leafy Spurge**

- Leafy spurge (Euphorbia esula) is a perennial plant ranging in size from 3-36 inches in height. A native of Europe and Asia, leafy spurge emerges early in the spring and gets a head start on competition in a race for space, sunlight, nutrients and water. Prolific seed production and an extensive root system give the plant a huge competitive advantage and make consistent, long-term control difficult.

- Monitoring of areas with known or potential leafy spurge infestations is critical; adequate control is possible if management procedures are implemented in the early stages of infestation, before the root system gets fully established. A highly effective spring application, achieved with 100 percent eradication of spurge, but infestations can be reduced to manageable levels with the use of herbicides.

**Strategy**

The control of well-established leafy spurge stands must be considered a long-term management program. A landowner must develop a perennial annual program to prevent the spread of larger stands, eliminate smaller infestations and prevent the spread of leafy spurge to uninfested areas. The extensive leafy spurge root system allows the plant to recover from depths of 15 feet or more for several years. No single treatment will eradicate this weed. A sequential annual treatment program can provide long-term control.

- If you have achieved a high level of control, remaining isolated patches can be spotted treated, resulting in a less costly control program. This plant spreads by underground roots and there is always a fringe area of younger plants that do not bloom. There are also roots underground that extend laterally beyond the younger plants. A 15-foot perimeter should be treated to eliminate leafy spurge patches to control seedlings and younger rosettes. Treated patches should be watched carefully for any regrowth and/or seedlings and retreated.

**Plateau (imazapyr)**

Plateau applied in the fall at 8-12 ounces per acre can provide up to 90% control of leafy spurge one year after treatment. The label recommends application from late August to early October for maximum control prior to a killing frost. Plateau should be applied with a methylated seed oil (MSO) and a wetting agent. The addition of 28 percent UAN liquid fertilizer to Plateau plus the MSO has occasionally increased long-term leafy spurge control. Plateau is safe to use around a variety of trees, many wildflowers and some legumes. Plateau is only available through county weed control authorities that have it available. The closest county authority that has it available is Jefferson County. For information, contact John McKee, Superintendent, 313 South K Street, Fairbury, NE: 68352, (402) 729-3602, jeffcoweed@diodecom.net

**Chemical Control**

Currently, the three most effective herbicides are Tordon 22K, Plateau and Glyphosate (Roundup and others). Before using any leafy spurge control product, read and follow label directions. Check label for permitted uses on your site.

**Tordon (picloram)**

Tordon has been an effective herbicide for controlling leafy spurge. Tordon applied at two quarts per acre from flowering to fall row cover can provide 75 percent or more leafy spurge control the first year after treatment. A less expensive option for leafy spurge control is repeated annual treatments of Tordon. One pint per acre plus 2,4-D at one quart (four pounds per gallon concentrate) applied in June, during flowering, can be quite effective. Tordon is a restricted-use pesticide requiring an application license to apply. Note label precautions. Overdrive herbicide from BASF can be tank-mixed with Tordon to offer improved control. A unique formulation of deflufenoxuron and dicamba, Overdrive enhances and complements the activity of picloram, reduces the costs of needed active ingredient, while improving long-term control of leafy spurge. Plot studies (1) show a 4-6 ounce per acre application of Overdrive mixed with 8-16 ounces per acre of picloram results in improved leafy spurge control.

**Mechanical Control**

Severing the root of musk thistle a couple of inches below the soil surface will kill the plant. The entire root does not have to be removed. Hand cutting or mowing has to be done at weekly intervals to be effective. Fire has not proven to provide effective control. The plants survive prescribed burning, but can be easily found and controlled by other means after the burn.

Maintaining a good, healthy stand of grass is very effective prevention.

**Prevention**

Infestations occur somewhere there is a seed bank in the soil and the conditions are right for germination and growth. Healthy vegetation provides competition and minimizes the survival of musk thistle seedlings. Care should be taken not to spread seeds from infested sites or to use forage or seeds contaminated with noxious weed seeds. Equipment should be cleaned before leaving an infested site if it is possibly contaminated. Only weed-free certified forage and seed should be used.
Workaholism — Its Affect on Children

Take a moment to think about each of these questions...

• Are you a perfectionist?
• Do you drive to gain approval and success through your work?
• Do you work long hours for fear of being laid off?
• Do you have a hard time saying no to work requests?
• Do you find it almost impossible to rest and relax?
• Are you driven to gain approval and success through your work?
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FEC Scholarship Applications Due April 1

A $300 scholarship provided by the Lancaster County FCE Council is available for a graduate of a high school in Lancaster County or a permanent resident of Lancaster County majoring in family and consumer science or a health occupation. This is open to full-time students beginning their sophomore, junior or senior year of college in the fall of 2005 or who have completed two quarters of study in a vocational school. Applications are due April 1 in the extension office. (LB)

Blossoming Bedrooms — Clean and Fresh

A room springs to life when it’s clean! Here’s how to bring your bedroom into the springtime light.

FRESH BEDDING — Lauder comforters, sheets, blankets and pillows. Read and follow care label instructions.

SUNNY WINDOWS — For sunshine-ready windows, clean them with an all-purpose glass cleaner. Lauder or dry clean the curtains. To remove odors, apply fabric refresher on the window treatments. Or, you can give them a good vacuuming. Then apply a fabric refresher to remove odors. Clean hard-surface flooring with dry, disposable floor wipes or use an all-in-one mopping unit.

SHINY FURNITURE — Trap the dirt with furniture wipes pre-moistened with polish or cleansing conditioners.

FINE FLOORS — Vacuum carpets. Use a carpet deodorizer to remove odors. Clean hard-surface flooring with dry, disposable floor wipes or use an all-in-one mopping unit.

SCENT OF SPRING — Bring the scent of spring into the bedroom. Choose cleaning products with soothing fragrances. Add scented candles to the bedroom’s décor.

WORKSHOP NEWS & EVENTS

Time to Work on Health

Take a moment to think about each of these questions...

• Are you a perfectionist?
• Do you drive to gain approval and success through your work?
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March
Shelly Everett

Lancaster County 4-H is proud to announce Shelly Everett, winner of March’s “Heart of 4-H Award” in recognition of outstanding volunteer service. Shelly has been the organizational leader of The Malcolm Clovers 4-H club for four years.

Michelle Wise (a 4-H parent) and The Malcolm Clovers nominated Shelly, saying, “Shelly has encouraged each member to participate in the county fair and has gone out of her way to help anyone who needed it. Shelly has been an inspiration to my daughter as well as others. She has also seen to it that all the girls have had the opportunity to be an officer and know how to successfully run that office.”

“I like being a 4-H volunteer because I love working with young children,” says Shelly. “Our group has learned so much through the years and they really enjoy showing their projects off to the county fair. I remember ‘fun’ when I was in 4-H in Clay County. I also love working along side such wonderful parents as my project leaders for our club.”

In addition to volunteering for 4-H, Shelly is also in the Malcolm Parent/Teacher Organization, coaches her daughters’ soccer and volleyball teams, and helps with C.C.D. classes at St. Mary’s and Joseph’s in Valparaiso. She lives in Malcolm with her husband Craig and daughters Payton and Maddy.

Congratulations to Shelly! Volunteers like her are indeed the heart of 4-H!

COMPUTER SERVICE CORNER

Cookies for City Impact

Two weeks before Christmas, the Extreme Green 4-H club wasn’t at the mall shopping for gifts. Instead, they spent their time baking and decorating cookies—not for themselves, but for those who wouldn’t usually get Christmas goodies. They donated at least 10 plates of cookies to City Impact for use in their mission work. The goodie bags included rosettes, sugar, peanut butter blossoms and lollipop cookies.

—Submitted by Amanda, club news reporter

Pet Pals Participate in "Holiday of Trees"

For the second year in a row, the Pet Pals 4-H Club created homemade ornaments and decorated a tree for Heritage League of Lincoln’s "Holiday of Trees" which raises funds for various community projects. Club members had great fun making the ornaments, and the tree received many compliments.

Star City Llamas in Star City Parade

For the 7th year in a row, the Star City Llamas 4-H Club participated in Lincoln’s Star City Holiday Festival parade. Their entry theme was sledding. Club members dressed up as muntins and club parents dressed up as ski hats. The llamas were costumed as snowy hills with small sleds slung on their backs. The miniature wagon (a four-wheeler pulling a garden trailer) was disguised as a giant mug of hot cocoa—complete with marshmallows and “steam” created by a fog machine.

Submit your 4-H news to Vicki at the extension office or vicki@unl.edu. Nominations of co-volunteers welcome.

Unicameral Youth Conference

The 2005 Unicameral Youth Conference will be held June 12-15. Youth gain a basic understanding of civic life, politics and Nebraska government while interacting with State Senators, legislative aides, policy experts and lobbyists.

Application deadline is March 1 for returning applicants and mentors and April 1 for first time applicants.

Leader Training, March 14

"Winter 4-H Warm-up," a satellite broadcast for 4-H leaders and interested volunteers, will be held Monday, March 14 at 7 p.m. For more information, call 441-7180.

New 4-H Wristbands

Green, silicone wristbands embossed with "4-H Makes a Difference" are available for sale as a fundraiser for Citizen- ship Washington Focus (CDF). Cost is $3 apiece. To purchase, contact a CWF member or the extension office at 441-7180.

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Speech & PSA Contest Registrations Due March 28

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PSA Contest, April 5

Due to the growing number of participants in this contest and the taping of the district winners, the PSA contest will be held at the Lancaster Extension Education Center on Tuesday, April 5 at 6:30 p.m. PSA’s must be 60 seconds; topic is 4-H. Empha- sis is on the presentation of a PSA for radio. Contestants must give their PSA in person, no prerecorded tapes allowed.

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Speech Contest, April 10

This year’s Speech Contest will be held at the State Capitol (note: date is CONFIRMED) on Sunday, April 10 at 1 p.m.

Topics can be anything, but a 4-H theme should be maintained. Length depends on division:

• Novice (ages 8–9): 2 min. or less
• Intermediate (ages 10-11): 2–3 min.
• Intermediate (ages 12–13): 3–5 min.
• Senior (ages 14–19): 5–8 min.

DIJF Out for CWF

Bruegger’s Bagels, Feb. 21-27

Bruegger’s Bagels supports the fundraiser of the 4-H Citizenship Washington Focus Trip

Please present this certificate when making a purchase at any Lincoln area Bruegger’s Bagels from Monday, Feb. 21st - Sunday, Feb. 27th

A full 20% of any food or drink purchases made at Bruegger’s Bagels during this time will be donated to the 4-H Citizenship Washington Focus Trip.

Breakfast Lunch Sandwiches Soups Salads Coffee Cappuccino

1205 "Q" Street 474-6001
6891 "A" Street (Clocktower) 486-4994

This certificate may be photocopied. Participant may use a certificate more than once in given week. Certificate must be given to cashier. Valid with any other coupons or offers. Certificates may be handed out in or around a Bruegger’s Bagels location. Valid during above dates only. Cannot be used to purchase gift certificates. Pretty good as far as small print goes.

Submit your 4-H news to Vicki at the extension office or vicki@unl.edu. Nominations of co-volunteers welcome.
Achievement Night

Lancaster County 4-H Achievement Night was held Feb. 1 at the University of Nebraska-Westbrook Music Building. The evening was presented by 4-H Council with generous support from University of Nebraska-Lincoln and the UNL Hixson-Lied College of Fine and Performing Arts. 4-H ers, 4-H clubs and 4-H leaders were recognized for their 2004 achievements. Lancaster County 4-H congratulates these youth who work throughout the year on their 4-H projects and commit themselves to excellence! We also thank the 4-H leaders who volunteer their time and talents! For a complete list of award, scholarship and pin recipients (as well as additional photos) visit online at lancaster.unl.edu/4H.

2004 Outstanding 4-H Club Awards

The Lincoln Center Kiwanis Club presents Outstanding 4-H Club Awards to the top 4-H clubs participating in the Lancaster County Fair. There are three categories based on number of club members. One category winner is awarded the Wayne C. Farmer memorial cup as the overall Outstanding 4-H Club for the year. Clubs receive points based on all members' total county fair exhibit and contest placings. The following clubs were recognized at a recent Lincoln Center Kiwanis meeting as well as at 4-H Achievement Night:

**2004 Outstanding 4-H Club Awards**

Happy Go Lucky 4-H club of Bennet is the Category III winner (clubs with 13 or more members). The club’s 50 members were enrolled in 21 projects and entered 261 total exhibits at the Lancaster County Fair. Happy Go Lucky has won the award 15 times in this category since 1989. John Bruss is club organizational leader.

Clovers & Company 4-H Club of Lincoln is winner of Category II (8–12 members). The club’s nine members were enrolled in 18 projects and entered 70 total exhibits at the County Fair. This is the fourth year Clovers & Company club is winner of this category. Kay Clint is club leader.

Shimmering Shamrocks 4-H Club of Lincoln is winner of Category I (7 members or less) — and winner of the Wayne C. Farmer trophy as overall Outstanding 4-H Club for the year. At the 2004 Lancaster County Fair, the club’s seven members were enrolled in 32 projects and entered 115 total exhibits. The club is winning this award for the second year. Becky McHenry is club leader.

AWARDS BOOKS

Animal Science: Kyle Pedersen
Citizenship & Civic Education: Karen Clinch
Communication & Expressive Arts: Kyle Pedersen
Environmental Education & Earth Science: Kyle Pedersen
Healthy Lifestyles: Laura Cassel
Personal Development & Leadership: Grace Farley
Plant Science: Kyle Pedersen
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COLLEGE SCHOLARSHIPS

Lincoln Center Kiwanis (pictured at left): William Davis (left), Joel Keralis (right)
Lancaster County 4-H Council: Noelle Badeer, Ryan Cheney, Elizabeth Fry, Monica Fujan, Paige Moser, Marie Spomer
Lane Community: Kyle Schachenmeyer
4-H Teen Council: William Davis, Monica Fujan

4-H CAMP SCHOLARSHIP

New this year! Joyce Vahle Scholarship (pictured at right): Abbey Spencer

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Lincoln’s Volunteer Tax Assistance Program

Many families that apply for EITC pay someone to complete their tax forms. This can often cost between $50 and $150 and can be more. Paying for tax preparation takes away from the value of the EITC.

Volunteers throughout Lincoln are now offering free federal and state tax return preparation through the Volunteer Income Tax Assistance (VITA) program. The VITA is a national program providing free assistance to low-income, elderly, limited English proficient and disabled individuals for basic assistance preparing their tax returns and cannot afford the services of a paid tax preparer.

According to Miriam Bede, a tax specialist with the Internal Revenue Service, “The VITA program has provided free tax assistance to the Lincoln community for over 30 years. The volunteers are the heart of this program and represent the diversity present in this community.”

Vietnamese, Arabic, Hispanic, Indian, Russian and Bosnian speaking volunteers will be available at some locations for translation and tax preparation.

Volunteers are taught basic tax preparation techniques and technology, enabling them to easily handle most returns or at least know where to find the answer in the IRS quick reference guides. Volunteers are trained to prepare basic Forms 1040 tax returns, including, Social Security deductions, claims for the Earned Income Tax Credit, other tax credits and the comparable state tax forms. Volunteers do not prepare businesses or complex tax returns.

Free electronic filing of the Federal Tax return will also be available at some locations. Electronically filed taxes greatly increase the speed of a tax return and help in reducing error returns. Combined with direct deposits, the refunds can be received within 10 to 14 days.

What You Need to Bring to Tax Preparation Sites:

• A photo identification.
• Social Security Cards (or Individual Taxpayer Identification Number) for yourself, spouse and dependent listed on the return.
• All wage and earnings statements (W-2).
• Any interest and dividend statements (Form 1099).
• A copy of last year’s return (if available).
• Child care provider name, address, and tax ID number.
• A sample check if you want direct deposit of your refund.
• Any other information concerning income and expenses for 2004.

Lincoln VITA Program Tax Sites and Hours

All sites operate until April 15 and provide electronic filing unless noted. No appointment necessary!

Lincoln Action Program — 110 12th St.
• Mondays, 1-4 p.m.
• Tuesdays, 10 a.m.-1 p.m.
• Fridays, 9:30 a.m.-12 p.m.
• Saturdays, 9:30 a.m.-12 p.m.

U.S. Bank — 56th & “O” Street
• Tuesdays, 10 a.m.-1 p.m.
• Wednesdays, 9 a.m.-1 p.m.
• Thursdays, 1-4 p.m.
• Saturdays, 9:15-12:30 p.m.

Anderson Library — 3635 Touzalin Ave.
• Mondays, 10:30 a.m.-3:30 p.m.
• Tuesdays, 10-12:30 p.m.

Easley Library — 1530 Superior St.
• Mondays, 9:30-5:30 p.m.
• Tuesdays, 1-4 p.m.
• Thursdays, 1:30-4:30 p.m.
• Saturdays, 9 a.m.-1:30 p.m.

Salvation Army — 2625 Potter St.
• E-filing closes 2/22/05
• Mondays, 1-4 p.m.
• Tuesdays, 1-4 p.m.
• Wednesdays, 10:30 a.m.-1 p.m.

Hawthorne Elementary School — 300 S. 48th St. (E-filing closes 2/4/05)
• Mondays, 1-4 p.m.
• Tuesdays, 1-4 p.m.
• Thursdays, 1-4 p.m.
• Saturdays, 9 a.m.-4 p.m.

Hispanic Center — 2300 “O” St. (No E-filing)
• Mondays, 1-4 p.m.
• Thursdays, 10-4 p.m.
• Saturdays, 10-1 p.m.

Asian Community Center — 140 S. 27th St. (No E-filing)
• Mondays-Fridays 9 a.m.-5 p.m.

### 2003 EITC Statistics for Nebraska and Neighboring States

<table>
<thead>
<tr>
<th>State</th>
<th># of Recipients</th>
<th>$ Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nebraska</td>
<td>348,382</td>
<td>$131,799,154</td>
</tr>
<tr>
<td>South Dakota</td>
<td>52,772</td>
<td>$16,742,713</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>32,970</td>
<td>$6,052,241</td>
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<tr>
<td>Colorado</td>
<td>245,363</td>
<td>$80,336,134</td>
</tr>
<tr>
<td>Kansas</td>
<td>167,194</td>
<td>$52,040,309</td>
</tr>
<tr>
<td>Missouri</td>
<td>441,932</td>
<td>$72,478,556</td>
</tr>
<tr>
<td>Iowa</td>
<td>164,600</td>
<td>$26,519,935</td>
</tr>
<tr>
<td>National Totals</td>
<td>21 million</td>
<td>$37.5 billion</td>
</tr>
</tbody>
</table>

These millions of dollars of unclaimed EITC credits would be spent on the local economy in these communities. Educating workers about EITC and providing free tax assistance possibly will bring millions of dollars into the community, which then circulate through the local economy by strengthening neighborhoods, assisting small businesses, and stimulating local economic development.

For more information, call 1-800-TAX-1040 or go to [www.irs.gov](http://www.irs.gov).

### Why EITC Is Important

Many families eligible for the Earned Income Tax Credit do not claim the credit. According to the Internal Revenue Service and Public Policy Priorities, recent surveys indicate 15 to 25 percent of families fail to claim the EITC credits that go unclaimed by low to moderate-income workers represent millions of dollars of lost revenue.

### Eligibility Requirements

To claim the credit on your 2004 tax return, taxpayers must meet the following requirements:

• Must have earned income.
• Must have a valid Social Security number.

• Investment Income is limited to $2,650.
• Your filing status cannot be “married filing separately.”
• Generally, must be a U.S. citizen or resident alien all year.
• Cannot be a qualifying child of another return.
• Cannot file Form 2555 or 2555-EZ (related to foreign earned income).
• Legal immigrants can qualify for the EITC, as long as they meet the eligibility requirements.

For earned income eligibility requirements to claim EITC or any other information on the EITC, visit [www.irs.gov/erict](http://www.irs.gov/erict) or call 1-800-TAX-1040.

### Get Money Back from Your Taxes: Earned Income Tax Credit

[Web site: lancaster.unl.edu March 2005](http://lancaster.unl.edu)

[Image 1](#)

[Image 2](#)

[Image 3](#)

[Image 4](#)
Irrigation Costs
continued from page 1

To simplify comparing alternative energy sources or irrigation distribution systems, the program is structured with eight scenarios laid out in a notebook. The user must
specify lift, system pressure, area to be irrigated, fuel type and fuel price (user defined areas are indicated in blue). To compare ownership cost for different types of systems, the actual cost of various components such as engine, pump, and distribution lines should be cost specified.

### Table 1. The Nebraska Pumping Plant Performance Criteria (NPC)

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>hp•h* (energy unit)</th>
<th>1 hp•h/1000 ft³ (energy unit)</th>
<th>Energy units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>16.66</td>
<td>12.5</td>
<td>gallon</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>11.50</td>
<td>8.66</td>
<td>gallon</td>
</tr>
<tr>
<td>Propane</td>
<td>9.20</td>
<td>6.89</td>
<td>gallon</td>
</tr>
<tr>
<td>Natural gas</td>
<td>62.00</td>
<td>42.7</td>
<td>1000 ft³ (MCF)</td>
</tr>
<tr>
<td>Electricity</td>
<td>1.0</td>
<td>1.0</td>
<td>1000 Wh (W)</td>
</tr>
<tr>
<td>LP Gas</td>
<td>1.18</td>
<td>0.85</td>
<td>kW</td>
</tr>
</tbody>
</table>

*hp•h (horsepower hours) is the work accomplished by the power unit with drive losses included. 
1 hp•h/1000 ft³ of water is equivalent to 0.0000033 cu ft of water per second. 
Electricity: 1 kW • hour = 3.6 x 10⁶ ergs

Note: This table compares energy prices based on the Nebraska Pumping Plant Performance Criteria. It provides an estimate of energy cost per 1000 ft³ of water pumped at the Nebraska Agricultural Youth Institute. The factors for natural gas assume 925,000 BTU per 1,000 cubic feet (mcf). To convert price per therm to equivalent price per gallon, multiply the price per therm by 3.6.

Use of commercial and trade names does not imply approval or constitute endorsement by the University of Nebraska-Lincoln. All meals, lodging and transportation expenses for students is transportation to and from the Institute. Applications are due April 15. If interested, contact extension at 441-7180 for an application.

### Nebraska Agricultural Youth Institute

**Applications Due April 15**

High school juniors and seniors are invited to take part in the Nebraska Agricultural Youth Institute (NAYI) which will be held July 10-14. The NAYI is to help build leadership skills, explore new aspects of agriculture and encourage young people to become more involved with and remain in agriculture. The Institute takes place at the University of Nebraska-Lincoln. All meals, lodging and activities are sponsored by the Nebraska Department of Agriculture. The only expense for students is transportation to and from the Institute. Applications are due April 15. If interested, contact extension at 441-7180 for an application.

### Animal Science Youth Field Day April 2

The Southeast District Animal Science Youth Field Day will be Saturday, April 2, 9-3:00 p.m. on UNL East Campus at the Animal Science Complex. All high school youth ages are invited to participate — no cost to attend. Fun activities will increase your science-based knowledge of animals. The event is sponsored by UNL Cooperative Extension. Pre-registration not required, but requested — call Deanna at 441-7180.
It started as an idea. Marty Cruickshank, 4-H staff member in charge of the Lancaster County 4-H horse program, saw a need for a club aimed at youth who want to participate in a 4-H horse project but don’t have access to horses.

“See a horseless club as a great way for kids who probably will never have a horse but have a love for the animal to learn about horses and hopefully have the opportunity to ride a little,” said Cruickshank. “It’s also a chance for kids who are thinking about getting a horse to be around horses and find out if they really do want to take on the commitment. Kids and their parents can find out how to take care of a horse and what type of equipment is needed.”

Enter Jen DeBusk. She recently moved to Lincoln from California. She wanted to help with 4-H but didn’t feel ready to head up a riding club. Cruickshank mentioned the need for a horseless club and DeBusk bit immediately. DeBusk volunteered to be club organizational leader.

“I was a horse-crazy kid, so I completely understand kids who love horses. I wanted to share what I know with them,” said DeBusk. “I totally empathize with kids who don’t have horses. There are different reasons why they can’t have horses — usually financial or time constraints. But this club gives them a way to learn about and be around horses.”

The Lincoln Broomtails 4-H club is the first horseless 4-H club in Lancaster County, and only the second one in Nebraska. They started meeting in January 2004 at the Best Dodson Wait library. Members researched horse breeds, styles of tack and riding clothes. In March, the club attended the Nebraska 4-H Horse Expo as a group.

DeBusk owns a Mustang. Libby, Club members use Libby to learn ground skills such as grooming, leading a horse, putting on a halter, and safety around horses. During the 2004 Lancaster County Fair, Libby was a club project. The Broomtails decorated their club area and participated in the herdsmanship contest (in which clubs are judged on cleanliness of stall areas, attention to safety, care of animal and courteousness of members). Members took turns feeding and watering Libby. During the Western Horse Show, they handed out ribbons to winners. 4-H parent Kay said, “The members are learning what it realistically takes to take care of a horse. They haven’t done it full time, but they’ve done most of the steps.”

Last October, members of the Riding Wranglers 4-H club invited The Broomtails out to ride their horses. The Wranglers led the horses as Broomtails members rode, some for their first time. The Wranglers also gave a mini-clinic about the differences between English and Western horses, tack and riding.

The Broomtails visited a tack shop, “Tack ‘n Togs,” in December. Owner Marge Davenport showed club members different types of saddles, bridles and other equipment. “We try to do a hands-on activity each month,” explains DeBusk.

The Lincoln Broomtails currently has ten members, and is always open to new members. For more information about The Broomtails club or 4-H Horse program, call Marty Cruickshank at 441-7180. 4-H is part of UNL Cooperative Extension.

Can You Guess It?

Did you guess it from the February NEBLINE?

The answer was raspberries.