8-1999

The NEBLINE, August 1999

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Lawn areas subject to heavy foot traffic may be thin due to compaction. Mow newly seeded bluegrass until it stops growing and becomes dormant in late fall (early to mid-November). Mow newly seeded bluegrass at a height of 2 to 2 1/2 inches as soon as it reaches 3 to 3 1/2 inches in height.

Late summer lawn care practices

Don Janssen
Extension Educator

Turfgrass management in late summer and early fall is extremely important. Proper practices can help maintain a vigorous lawn or revive a declining lawn. These practices include mowing, fertilization, dethatching, aeration, weed control and seeding. Mowing produces a neat, well-groomed appearance. However, improper mowing causes many lawn problems. The cool season grasses, such as Kentucky bluegrass, perform best in the cool weather of spring and fall. Bluegrass lawns are typically mowed at a height of 3 inches during the hot, stressful summer months. Lower the mower blade as temperatures cool in late summer. Mow bluegrass at 2 to 2 1/2 inches during fall. Mow often enough so that no more than 1/3 of the total blade surface is removed. Continue mowing the lawn until it stops growing and becomes dormant in late fall (early to mid-November).

Mowing doesn’t hurt the grass, it encourages spreading and promotes a thicker lawn. Late summer and fall is an excellent time to fertilize lawns. Apply 1 to 2 pounds of actual nitrogen per 1,000 square feet. Thatch is the layer of dead and living plant material that forms between the soil surface and green foliage. When thatch is present in amounts greater than 1/2 inch, dethatching may be beneficial. Vertical mowers and power rakes, available from many rental companies and garden centers, thin the grass and lift the thatch to the soil surface. The debris is then raked from the lawn and discarded. Thatch removal can be done in late August or September. Allow at least four weeks of good growing weather following dethatching. This gives the turfgrass time to recover before it becomes dormant in the late fall. Apply fertilizer after dethatching to promote recovery of the turfgrass.

Soils in late August or September with a machine that has hollow metal tubes or tines that remove plugs of soil from the lawn. Avoid spike-type devices that simply punch holes in the turf. Break up the soil cores by raking or mowing after aerating. Then apply fertilizer to promote recovery of the turf.

Perennial broadleaf weeds, such as dandelions and plantain, can be controlled with the application of broadleaf herbicides from mid-September to early November. Most broadleaf herbicide products consist of a mixture of two or three of the following chemicals: 2,4-D, dicamba, MCPP and triclopyr. Fall applications of broadleaf herbicides are safer and more effective than spring or summer applications. During the fall, perennial weeds translocate carbohydrates down to their roots. If a broadleaf herbicide is applied to the weeds, it will also be translocated to the roots, resulting in the complete destruction of the weeds. With gardening activity winding down in the fall, the risk of injury from herbicide drift to vegetable and flower gardens, fruits and ornamentals is also reduced.

Late summer or early fall is an excellent time to establish new lawns or overseed severely damaged lawns. Seeding may begin in mid-August and should be completed by September. (DJ)
Control of ground ivy in the lawn

A common weed found in many lawns is ground ivy. Ground ivy is a low growing, creeping perennial. It spreads by seed and by the stems which root at the nodes. The leaves of ground ivy are round or kidney shaped with scalloped margins. The stems are four sided. Flowers are small, bluish purple, and funnel shaped. Ground ivy thrives in damp, shady areas, but also grows well in sunny locations. A member of the mint family, ground ivy is also known as creeping Charlie.

Control of ground ivy in lawns is difficult. The control strategy depends upon the degree of infestation. Turfgrass areas that have become completely overrun with ground ivy may need a major renovation. The small amount of grass is simply not worth saving. The ground ivy needs to be destroyed and the areas seeded in late summer. Glyphosate (Roundup, Kleenup) is a non-selective herbicide that can be used as a spot treatment to control ground ivy. Non-selective herbicides kill nearly all plant material that they come in contact with. Efforts to eliminate ground ivy should begin in early August. This allows adequate time to kill the ground ivy and prepare the area for seeding. The best time for late August or September. Apply glyphosate to the ground ivy infested areas. Wait 10 to 14 days and then treat the areas a second time if the ground ivy has not been completely killed. Once the ground ivy has been effectively controlled, the areas can be seeded.

Turfgrass areas that contain some ground ivy, but are mainly grass, can be treated with selective herbicides. These materials will selectively kill the ground ivy, but not harm the turfgrass. Products which contain 2,4-D are effective on ground ivy. To achieve control, make 2 or 3 applications in the fall. Fall applications are generally more effective than spring applications. Also, there is lower risk of injury to desirable garden plants from herbicide drift with fall applications. The first application can be made in mid-September, a second in early October. As always, when using pesticides, read and follow label directions carefully.

Homeowners that have Kentucky bluegrass, have another option. They can use a mixture of 3 teaspoons of Borax and 1 gallon of water. Two or three applications may be needed. This mixture should be sprayed on bluegrass lawns only. Once the ground ivy has been effectively controlled, the homeowner needs to use good mowing, fertilization, watering and cultivation practices to obtain a dense, healthy, competitive stand of Kentucky bluegrass which should help prevent future weed infestations. (MM)

Tips on watering lawns

We’re deep in summer now, and whatever the weather has been up to now, the worst is likely yet to come for lawn grasses. Hot, dry weather calls for careful watering of lawns. How much they need depends on rainfall, of course, but also on the soil under your lawn.

Your lawn will use about a half-inch of water per day from the upper 12 inches of soil in your yard. In general, coarse and sandy soils may not hold much more than that – 1/2 to 1 1/2 inches of water in that upper foot. Heavy soils may hold up to 3 inches. Translated into water needs, that means lawns on sandy soils may need to be watered every other day during dry spells. Lawns on heavy soils, however, may need watering only once a week.

Watering should supply sufficient moisture to wet the soil to a depth of 6 to 8 inches. That’s to encourage normal root development. Light sprinkling – even if it’s done more often – means most of the water is lost to evaporation and little moisture gets down to the grass roots. As a result, the roots don’t grow as deep, nor develop as well, and that leaves the grass even more subject to drought stress. It is difficult to get water to soak into the 8-inch depth in one application on heavy soils. Water until runoff occurs, then switch to another area until water is soaked in; go back and water again until runoff stops.

Keep up the procedure until the required amount is put on, then back off until you observe the beginning of visual drought symptoms in the grass: gray-green color or foot-printing. Then repeat the cycle.

Use cans to determine how much water is being applied in terms of the number of inches per hour. Avoid watering in the late evening because of increasing the possibility of disease problems. The best time to water is either early morning (3 a.m. for automatic lawn sprinklers), until noon. Advantages are less demand on the water system, reduction of disease probability, less evaporation and less wind, promoting better moisture distribution. (Dj)

Chives and garlic chives

Two of the most attractive plants for a flower border are also two of the most useful herbs in the kitchen. Chives will provide the cook with a source of a mild onion flavor and garlic chives have a mild garlic flavor. Both plants are easy to grow and productive from spring until hard frosts.

Chives and garlic chives are members of the onion family. They prefer sunny sites with good drainage and will thrive with little attention. Chives are hardy perennials which grow into clumps that are 12 inches high and six or more inches wide. In early summer, established plants will produce clusters of flowers, usually light purple, which are also edible. Cut these before seeds form. Shear the plant at any time to harvest the foliage. It will quickly put out new growth.

Chives can be dried or potted up for winter growth indoors. Garlic chives are also hardy perennials. The foliage is flat rather than hollow and grows to about 12 inches high. The flower stalks grow up to 30 inches high, topped with greenish white flower heads which are quite showy. The mild garlic flavor of the foliage is useful in many foods. As with chives, garlic chives are harvested by shearing the leaves back to the plants base. Chives and garlic chives can be propagated by dividing the leaves into clumps or from seed. To divide a clump, cut it back, dig it up and divide it into three to six new plants. Replant the divisions, water them and they soon will be producing new leaves. If using seed, sow them in their permanent growing location or start them indoors. (MM)

Many of us need reminders. That is the purpose of this calendar. Check the calendar each month and follow the recommendations if they are necessary in your landscape situation. (MM)

1999 Garden Calendar

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What’s living in your mulch?

Barb Ogg
Extension Educator

There are many reasons to use mulch to surround your plantings in your yard. Not only is it an attractive ground cover, but it prevents moisture loss and prevents the growth of weeds. Many people do not realize that mulch is the preferred habitat for some pests that may move inside the house later. The more mulch or wood chips you have, the more likely there will be pillbugs, sowbugs, millipedes and crickets living in it. Predators that feed on these critters, like spiders and centipedes, will also be found in the mulch. This summer, we have heard from many people who have milli- pedes invading their home. Without exception, every caller admitted to having large quanti- ties of wood mulch close to their house. Undoubtedly, the cool, very wet spring and early summer weather has had some effect on the bug population. Mulch, millipedes and these other pests are more of a problem in the fall of the year. One way to use mulch and still reduce the likelihood of pests invading the house is to simply use it farther away from the house. Another strategy might be to use a lost or damaged door to the outside is opened or closed. Bats are often attracted to open doors, and by sealing any other possible access routes, especially daylight hours above areas

where bats emerge, using duct tape or staples. A strip of netting at least two feet wide, hung one to four inches in front of bat exit holes, and extending at least two feet below the lowest exit point (see illustration), will allow the bats to emerge, but later they will fail to find their way back. Thus the netting acts as a simple one-way exit only until repositioning can make the exclusion perma-
nent. During cool periods in the fall or spring, allow at least a week.

Other methods... Harmless repellent devices will seem ideal, but none are known to be effective. The U.S. Environmental Protection Agency once fined a Chicago manufacturer $45,000 for misleading claims involving an ultrasonic device. All ultrasonic sound devices have thus far tested by reliable bat experts have proven ineffective and some may endanger people or even attract bats. Naphthalene flakes

continued on page 11

Monarch butterflies and Bt corn

A study by a university re-
searcher was recently published indicating that Bt corn pollen killed monarch butterfly larvae. The media latched onto this information and it was widely circulated in the press-implying that these genetically altered crops are bad for this insect. But, as you might suspect, there is more to this story.

Cornell University John Losey and his colleagues conducted the experiment in their laboratory. They collected corn pollen from Bt corn and non-Bt corn plants and dusted the leaves with the two types of pollen. After monarch larvae fed on these leaves for four days, the experiment was terminated. Larval mortality, weight and milkweed leaf consumption was measured. Results from this lab study indicated that 24% of the larvae that fed on the Bt pollen-coated leaves died vs 0% of those that ate non-Bt pollen-coated leaves or uncoated milkweed leaves. But, the larvae that survived were less than half the size of those larvae which fed on leaves with no pollen. One problem with this study is the actual pollen dosage which caused the mortalit-

Environmental Focus

Household hazardous waste collections:
September 25 and October 23

Lancaster County residents can bring household hazardous wastes to the following collection sites:

9 a.m. - 3 p.m., Saturday, September 25, Pfizer Animal Health, 601 West Cornhusker Highway
9 a.m. - 3 p.m., Saturday, October 23, Lincoln - Lancaster County Health Department (LLCHD) 3140 “N” Street, south parking lot

Items that you can bring for disposal:

* Solvents: mineral spirits, turpentine, paint strippers and thinners, oil-based paints, varnishes.
* Pesticides: weed killers, garden sprays, wood preservatives, roach powder, rat poisons. You may also bring banned products, like DDT, chlordane, 2,4,5-T, pentachlorophenol, silver benenate.
* PCBs: Ballasts from old fluorescent fixtures and capacitors from old appliances including radios, motors and televisions.
* Leaves: Products in their original container and keep the label intact. Open, leaking or rusted containers should be placed in a clear plastic bag during transport. Do not mix chemicals.
* batteries contain heavy metals but can now be recycled locally.

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Harmless repellent devices will seem ideal, but none are known to be effective. The U.S. Environmental Protection Agency once fined a Chicago manufacturer $45,000 for misleading claims involving an ultrasonic device. All ultrasonic sound devices have thus far tested by reliable bat experts have proven ineffective and some may endanger people or even attract bats. Naphthalene flakes

continued on page 11

Another problem with this lab study was, it was not a very realistic representation of what actually happens in the field. Monarch butterfly females locate milkweed plants by sight and lay their eggs on small milkweed plants 3-18 inches in height. They prefer plants in open areas, such as fence rows, ditches and pastures—not in cornfields. The most likely scenario is that Bt pollen drifts and lands on milkweed plants outside the cornfield. Corn pollen is relatively heavy—70% of the pollen will be within 20 feet of the field margin. A study conducted at Iowa State University showed more pollen landed on milkweed plants located closer to the field edge and the highest concentra-

continued on page 11

Water treatment equipment considerations

Can water treatment equipment be purchased in anticipation of possible water quality problem? The answer depends on knowing the amount and type of contaminants to be removed. It is highly unlikely that a person would have this information prior to an actual contamination. No single water treatment method treats all water prob-

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continued on page 11
Wheat growing information on the web

Wheat growers have access to a wealth of research-based information about growing wheat in Nebraska via the Nebraska production agronomy web site provided by Lancaster County Extension.

Step 1: Determine when to start with the ag/acreage front page (at http://www.lance.unl.edu/ag/acreage)
Step 2: Click on the soils page, then one can then enter the Nebraska production page web site at the welcome screen; a bar chart appears with several choices, clicking on the crops icon brings up the crop production page. At this point, one may select from several topic areas of interest. Clicking on small grains accesses extension information on the culture of wheat and other small and grainy varieties. It also allows you to access information that has been conducted by university researchers.

Calibrating a handheld sprayer
Pesticides must be applied at the recommended concentrations. The pesticide label always states a recommended dosage of chemical to apply to a given area, the control for a specific pest. By calibrating the sprayer, one can ensure that the chemical application will be done according to label directions. In order to apply the recommended amount of chemical through a sprayer, one needs to know three things: the quantity of total spray output that is being applied per unit area, the recommended amount of product or active ingredient (a.i.) to apply per unit area (acres, 1000 square feet).

Seed alfalfa in August
The best time for fall seeding alfalfa in eastern Nebraska is during the month of August, provided adequate soil moisture is available. At this time of year, soil moisture looks very favorable and many producers prefer to seed in the fall rather than spring because weed problems are usually not as great in the fall.

A fall seeding avoids the spring weed problems of foxtail, pigweed and other summer annuals that can destroy a new crop. In Lancaster County we do have to consider the weeds that will cause a problem for a fall seeding if they have a history in that field. The cardinal rule has always been that you should not seed alfalfa into a weed problem! Pinoxaden and dicamba have become very competitive over the years to fall seeded crop such as alfalfa and wheat. Therefore, if either of these weeds are a problem in that field, don’t seed there.

The best time for fall seeding alfalfa is late September to early October. The best time for fall seeding alfalfa in eastern Nebraska is during the month of August, provided adequate soil moisture is available. At this point, one may need to interrupt the pattern of regular scouting and soil moisture assessments in order to make an accurate determination as to the date alfalfa should be seeded in the fall. September 10 in Lancaster County. If it cannot be completed by that time, it is best to wait for another season.

One of the best times to seed alfalfa has been reported to this office. Our investigations have revealed that the most probable cause is the seed bed is too loose. It doesn’t matter if it’s a spring or a fall seeding, those who plant alfalfa until mid to late September to plant alfalfa. This is most often too late because the plants do not have a chance to become established before the first killing frost. The latest alfalfa should be seeded after early September in Lancaster County. If it cannot be completed by that time, it is best to wait for another season.

Fall preparation to sodseed pastures
Hay meadows and pastures provide higher quality feed and are more productive if they have high yielding, high quality legumes growing in them. Legumes, like alfalfa, birdsfoot trefoil and red clover can be added to many hay meadows and pastures to make them more valuable.

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The actual time required for any of these crops to reach maturity, will vary with the variety in question and the weather. For a given variety, the total moisture required will remain about the same as predicted regardless of the weather. It is, after all, the accumulation of growing degree days that determines the stage of maturity and crop water use is largely dependent on temperature.

An alternative way to look at this would be to figure out what is the minimum fall tillage that would carry the crop through to maturity. The silty clay loam soils in southeast Nebraska hold about 1.6 to 1.8 inches of available water per foot of soil, respectively. If we assume we have a 4 foot root zone, we have about 7 inches total available water holding capacity in the root zone. Research has shown that 60 percent of the available moisture in the root zone can be depleted at crop maturity with reducing grain yield. We, therefore, can utilize about 4.2 inches of the available moisture without hurting yield.

Having discussed the above, we can now predict the day when a full profile on a silty clay soil would carry the various crops through to maturity. For a medium season corn, the target date would be about when half of the corn kernels have hardened. For grain sorghum, it would occur about one week after the soft dough stage. For soybeans, it would be at or just before the full seed fill stage. If you use these guidelines, be certain to check your soil at field capacity in the top four feet on the target date. If not, you will need to continue to irrigate until you have applied enough water to have filled the profile. For example, if the soil would have held another 1.5 inches on the target date, it will take a total of 1.5 inches of rainfall plus irrigation, in addition to the available soil moisture to finish out the crop.

Predicting the last irrigation for corn, milo and soybeans
Predicting the last irrigation is an important decision for irrigators. To carry the crop through to maturity without reducing yield, one can ensure that the output is being applied per unit area, the recommended amount of product or active ingredient (a.i.) to apply per unit area (acres, 1000 square feet).

When to shut off irrigation
When to shut off irrigation is an important decision. There are some general rules of thumb that can help you make this decision. Irrigators may use various decision aids to help them make this decision. Irrigators may use various decision aids to help them make this decision.

Farm Views
The Nebraska Production Ag Crops web site (at http://www.lance.unl.edu/ag/acreage) creates a new, shorter home page address: www.lance.unl.edu
One of the important decisions irrigators must make this time of year is when to turn off the irrigation system for the season. Ideally, you will want to stop irrigating far enough ahead of maturity so the crop will extract as much moisture from the soil as possible, without hurting yield. This makes maximum use of the moisture present in the root zone, minimizes the amount of water pumped and gives you the driest possible soil at harvest time, which minimizes soil compaction and harvest problems.

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Don’t spill when you fill

Gas-powered mowers and chore-performing outdoor power products like chipper/shredders, tillers and edgers are perfect time savers for keeping our surroundings neat and green. But when it comes to the simple act of refilling, gas spillage is often overlooked. Careless refilling leads to spilled gasoline and evaporation which releases hydrocarbon emissions into the atmosphere.

In fact, fuel spillage and evaporation are responsible for up to one-third of all fuel emissions, most of it preventable.

Don’t leave your fueling habits up in the air. Remember these helpful fuel handling tips:
—Don’t spill when you fill. Use a funnel or non-spill nozzle. Take a little more time and be careful.
—Leave room for expansion. Fill gasoline containers and power equipment fuel tanks to only one-fourth full so that tanks don’t overflow from expansion as the result of temperature changes.
—Tighten gas caps. When fuel cans or power equipment fuel tanks aren’t being used, tightened caps will prevent evaporation. Make sure both gas and oil caps are tight when equipment is tipped over for routine maintenance.
—Transport and store properly. Find a cool place, out of direct sunlight, to store fuel tanks for expansion. Use replacement fuel cans. (DJ)

Festival of Color

Gardeners who like to see what plants look like before they plant them will enjoy the various ideas for their landscape or have questions about their lawn and garden, may want to attend the 1999 Festival of Color near Mead. Nebraska. This outdoor lawn and garden open house will be held on Saturday, August 28 (rain or shine) at the University of Nebraska’s John Sebastian Anderson Turfgrass and Ornamental Research Area. This area is part of the University’s Research and Development Center. Demonstrations, displays, guided tours and “how to” sessions will run from 10 a.m. to 4 p.m. and 7 to 9 p.m.

Whether you’re an experienced gardener or just getting started, there will be plenty of information at Festival of Color. Demonstrations will be presented throughout the day, each lasting about 30 minutes with three different choices at any given time. Some of the demonstration topics include: tree and shrub planting and pruning, home irrigation systems, lawn care, perennial flowers, flowerbeds and lawn care, composting, ornamental grasses, water gardening and propagating houseplants. In addition, there will be guided tours led by university staff on selecting trees and shrubs to grow, selecting wildflowers and selecting the right turfgrass. For those who prefer to sit and relax, to gather information, there will be a tent set up where programs on landscape water management and making wreaths and centerpieces will be given. The Backyard Farmer panel will also be present to answer questions.

There will be all-day demonstrations on beekeeping, how to plant and grow blueberries and biodegradable plastic in the landscape. The Festival of Color is not just for the gardeners. This event has been organized to be a family event. Young and old alike will enjoy the outdoor model train which has been landscaped and will be running as well as a walk through the children’s garden. Also of interest to children, will be the Festival of Fun Family Center where young people will learn about soil and water conservation and earn prizes. Participants will also have the opportunity to walk through the organization tent with representatives of many organizations and a dairy with clinic to house who bring weed, insect and disease samples. A number of product vendors will also be in attendance, as well as food vendors. This will be the seventh year for Festival of Color and it has grown to attract thousands of people for a day of fun and information. This event is open to the public and is presented free of charge. A donation of $2.00 per person or $5.00 per family would be very much appreciated to help defray the rising cost of presenting this program. (DJ)

Develop regular lawn equipment maintenance schedule

Air pollution comes from many sources. One of the smallest is exhaust and fuel emissions from gasoline powered engines such as those in lawnmowers, riding tractors, string trimmers, tillers and other types of outdoor power equipment. Fuel spillage and evaporation also contribute to pollution.

The industry is doing its part to reduce air pollution by manufacturing new generations of outdoor power equipment that operate with low-emission engines and cordless electric power. You, too, can do your part to reduce air pollution emissions by handling fuel properly and keeping your equipment in good working order. Here are some easy do-it-yourself steps to keep power equipment more air-friendly. (Always check your operator’s manual for specific recommendations on maintenance.) If you’re not adept at such tasks, seek help from your local outdoor power equipment service shop.
—Change engine oil seasonally and recycle old oil.
—Replace spark plug, air filter and check for proper carburetor adjustment. A properly tuned engine burns fuel more efficiently, thereby reducing emissions.
—Be sure to use replacement parts recommended by the manufacturer.
—Avoid spilling gasoline when you’re refilling the tank. Also, keep fuel tanks and containers sealed tight, leaving approximately one-fourth of the tank for expansion. 
—Tighten loose nuts, bolts and belts for a quieter mower.
—Sharpen mower cutting blades and keep decks clear of all grass clippings.
—Replace worn-out equipment with the latest models offering low-emission engines that run 70 percent cleaner than 1990 models. Electric or rechargeable battery power also are available.
—By using a regular maintenance schedule a responsible first step in helping to keep air a little cleaner while you keep your equipment running smoothly. (DJ)

Acreage Insights

Tractor safety tips (part 8)

Tractors are one of the most important pieces of equipment on a farm, yet they are also among the most dangerous. More deaths are caused by tractors than by any other type of farm accident. It is, therefore, imperative that tractor owners routinely check their tractors and keep in mind the following safety guidelines:

On a conventional style tractor with proper ballast, 35 percent of the weight is in the front and 65 percent in the rear. If the front end is too heavy, the tractor will be difficult to turn as the tires dig into the soil. If the front end is too light, the tractor can turn as quickly as expected and there is an increased chance of a rear rollover.

When crossing hills, if the operator is leaning significantly toward the uphill rear tire, the tractor is on too steep a slope. A all that is required to overturn a tractor is a hole on the downhill side, a bump on the uphill side or both. More deaths occur from side rollovers than rear rollovers. If on too steep a hill, the operator should stop the tractor and look around to determine the safest means of getting off the hill. The operator can either turn out and back up or turn and drive down the hill. There may be a fence or ditch at the bottom so the operator must back up the hill. Or there may be an obstruction of some type at the top of the hill, thus turning and driving down the hill is safer. If a back up or driving down is not possible due to obstructions, back up slowly in the same wheel tracks from the direction the operator came until it becomes possible to either safe or back up the hill. The operator knows the surface he/she drove over, but the operator may not know if the terrain is passable if he/she continues forward. Even small changes in the terrain can be the difference between life and death. (DJ)

Hay storage

Even the best (shod or covered) storage conditions allow about 25 percent of the hay’s dry matter to be lost after one year. Most nutrients maintain nearly constant concentrations when hay is properly stored, although carbohydrates concentration declines rapidly.

Hay stored outdoors is subject to losses from weathering. Weathering reduces the dry weight of hay and changes its composition. Weaning reduces the feeding value of hay to 15 to 25 percent, in addition to any dry matter losses.

Weathering occurs not only on the tops and sides of packages stored outside, but also where hay contacts moist ground. Research has shown that storing bales on crushed rock versus the ground, reduces the weathered portion from 11 to 23 percent of the original bale weight. Thus, outdoor storage loses can be low if good packages are made and they are stored on a well-drained site.

To reduce storage losses, be sure the package is dense and evenly formed, especially with covers. Water can get in and cause damage to the package. Water rainfall to run off rather than settle in depressions and soak into the store. Store packages on a well-drained site with air spaces between packages to allow drying after rain. Round bales can be butted end-to-end with little increase in loss from storage. Do not stack round bales unless they are covered with plastic. (DJ)

Learn at your convenience

—24 hours a day, 7 days a week—

NUFACTS (audio) Information Center
NUFACTS audio message center offers fast, convenient, personal information.
—Call 1-800-822-9447 ext. 7188; for the rest of Nebraska call 1-800-832-5447. When directed, enter the 3-digit number of the message you wish to hear.

Acreage & Small Farm Insights Web Site
Visit our Internet web site at: http://www.manz.uel. nebraska.edu/ianr/dodge/acreage/index.htm to learn about Extension programs, publications and links to other acreage and small farm information.

"Part-time Farming” video

"Part-time Farming” will help develop your country environment and improve your quality of life. For just one hour of "Part-time Farming" provides tips that will save you costly mistakes and precious time. Call 402-441-7180 to order your copy.
President Clinton issued a National Food Safety Initiative in July 1997. NFSE has always placed a high priority on teaching limited resource consumers how to stay healthy by handling food safely. Incidents of foodborne illness nationally and locally have intensified educational efforts. In Lancaster County, NEP graduates have made positive food safety behavior changes as indicated by the National EFNFP Evaluation Reporting System. In 1998, 80% of program graduates demonstrated improved food safety practices, compared with 67% nationally (Data reported by USDA EFNFP, July 98). Past data from Lancaster County indicates the following increases over the past five years: 61%-1994, 68%-1995, 76%-1996, 78%-1997 and 80%-1998.

Impact:
NEP families and agencies have benefited as follows:

1) We use a leave raw meat and leftovers on the counter before we learned about food safety. Residential treatment program participants "Just wanted to say thanks for your program's attention to our food safety question. You were a big help." Lincoln Agency
2) Refugees families learned how to prepare food properly so they don't run the risk of becoming sick because it wasn't handled safely. Catholic Social Services
3) Senior citizens at the Asian Center learned how to package and freeze smaller portions of a whole turkey for later use. A WIC client changed her procedure for using dirty dish cloths both at home and in her place of employment. She took an extra copy of the food safety information to her employer.
4) Food safety has been taught to 1,598 youth from October 1998- May 1999 in Lancaster County. The Nebraska Department of Health's Glitter germ activity was presented to 888 Lincoln Public School students living in limited resource neighborhoods. "I'm going to wash my hands before I get sick." Third grade student.
5) I'm very impressed with the hand washing lesson. It will prevent spreading illness. We don't wash our hands enough around here." Teacher. "I did not know that you had to refrigerate leftover pizza. I thought that you could leave it out until the next morning." Student while playing "Don't Get Bugged.
6) Food Safety is integrated into almost every educational program presented to adult and youth audiences by NEP staff.
7) Educational resources and teaching techniques include:

Focus on Food
Alice Henneman, RD, LDN, Extension Educator

Q: What's an easy way to remove the skins from tomatoes?
A: Here's a quick way to remove the skin from tomatoes:
1) First, wash tomatoes thoroughly under running water.
2) Then, cut a small "x" in the bottom of tomatoes without cutting into the flesh.
3) Dip tomatoes one by one in boiling water for 15 to 30 seconds or until skins start to crack.
4) Plunge immediately in ice water.
5) Remove tomatoes when cool and slip off skins with a sharp knife. (AH)

Italian Bean and Tuna Salad
(Makes 6 main dish servings)
1) can (17 ounces) cooked Baby Lima beans, rinsed, drained
2) can (16 ounces) Dark Red Kidney beans, rinsed, drained
3) can (15 ounces) Great Northern or Navy beans, rinsed, drained
4) cherry tomatoes cut into fourths
1/2 small cucumber, cut lengthwise into halves, seeded, sliced
1/3 cup chopped green or red pepper
1/4 cup thinly sliced red onion
Basil Vinaigrette (recipe follows)
2) tuna steaks (about 16 ounces), broiled or grilled or 1 can (12-
1/4 ounces) white tuna in water, drained, flaked into 1-inch pieces
Lettuce leaves
Basil or parsley sprigs

Combine beans, tomatoes, cucumber, pepper and onion in large bowl; add Basil Vinaigrette and toss. Refrigerate mixture at least 4 hours for flavors to blend, stir mixture occasionally. Add tuna to mixture 1 to 2 hours before serving time. Spoon salad onto lettuce-lined plate; garnish with basil.

Basil Vinaigrette
(Makes about 2/3 cup)
3) tables spoons olive oil
1/4 cup tarragon wine vinegar
3) to 4) tables spoons finely chopped fresh, or 1 to 1 1/2 teaspoons dried, basil leaves
3) tables spoons fat-free plain yogurt
1 to 1 1/2 tablespoons lemon juice
1) to 2 cloves garlic
Mix all ingredients; refrigerate until serving time. Mix before serving.

NOTE: Bean salad can be made and refrigerated one day in advance; add tuna as directed above.

Food & Fitness
Food safety education impact—Lancaster County NEP

Home canning concerns
It's canning time again! If you're thinking about making your own canned tomatoes, here are some "Major Canning Sins" that are potentially deadly from Charlotte P. Brennand, PhD, Utah State University Extension Food Safety specialist:
1) Letting food cool in the Botulism center... 
2) Adding extra starch, flour or other thickener to a raw tomato sauce. WHY UNSAFE: This will change the rate of heat penetration into the product and can result in undercooking.
3) Adding extra onions, celery, bell peppers or other vegetables to salsas. WHY UNSAFE: the extra vegetables dilute the acid level and can result in botulism poisoning.

NUTFACTS
NUTFACTS offers information 24 hours a day, 7 days a week. In the Lincoln area call 441-7188; for the rest of Nebraska call 1-800-832-5441. When directed, enter the 3-digit number of the message you wish to hear.

300 New Canning Recommendations
301 Canning Vegetables
305 Tean Hangar's for Pickling

NUTRITION AND FOOD SAFETY WEB SITE
Visit our Internet web site at: www.lanco.unl.edu/food

FOOD SECURITY RECREATIONS E-MAIL NEWSLETTER
To be added to the mailing list, e-mail Alice Henneman at AHENNEMAN1@UNL.EDU

DIABETES STUDY COURSE
Call Alice Henneman (441-7800) for more information.

“Don’t Get Bugged” interactive activity. Glitter Big bug washing interactive activity. Fight Bac, USDA educational resources. Eating Right is a Basic Food Safety Lesson, University of Massachusetts at Learn about Food, Nebraska NEGuides and Sheets, food preparation demonstrations, Nebraska Poultry and Egg Division resources, USDA Meat and Poultry Hotline, Nebraska Beef Board resources and Safe Food for the Hungry Right when you confer. Group and individual lessons are tailored to meet the needs of the specific audiences. Efforts are targeted to respond quickly during times of increased community food safety risk such as the power outage during October 1997. (MB)
Jean's Journal

Jean Wheelock

FCE Council Chair

Here is it August already—where has the summer gone? With all our rain, my big yard and pulling weeds has consumed a lot of time especially, when the yard is so big. Time to be thinking about election of officers, so club members when you are asked, please consider. None of the positions are difficult and without your help, we can’t manage our organization.

A good time was had at our annual Sizzling Summer Sampler. The individual members were responsible for organizing and they did a super job. The food was wonderful and the variety of workshops was just great.

A very big thank you to Clarice Orr on her presentation about the disembursement of our cherished keepsakes, heirlooms and personal belongings to family members. It’s so important to talk about these things with our families.

Gaga Greenerly presented a lovely workshop on flower arranging and then presented each one attending a lovely bouquet.

The third workshop was the arts competition presented by The Loft Stamp Art and Accessories. I’m ready to sign up for a class. They gave some demonstration and had lots of samples of cards. It would be another fun hobby.

Corrine Jarecke was the recipient of our scholarship award. We presented her with a check at our June council meeting. A very lovely young woman who is working hard to get her degree in nursing.

Joy Kruse, Clarice Steffans, Jan Ruliffson and myself were elected as delegates to State Convention. We’ll have the reports at our September council meeting.

And, remember our September council meeting will be at the Governor’s Mansion so hope all our club members will be able to as a time to begin our new year of FCE. Call in your reservations to Pam, 441-7180.

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Establish a daily family routine

Studies show that successful students have parents who create and maintain family routines. Routines generally include time for doing homework, doing chores, eating meals together and going to bed at an established time. Routines are important to make life predictable and satisfying for all family members. Discussion of daily events at mealtimes, for example, is an important part of that care.

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**Ak-Sar-Ben**

Ak-Sar-Ben horse show will be held September 21 and 22 in Omaha. The schedule is as follows:

**Monday, September 20**  
5-6 p.m.  Check in horses for Tuesday morning and afternoon classes

**Tuesday, September 21**  
8 a.m.  Western Horsemanship  
Junior and Senior Pony Pleasure  
Western Pleasure  
Advanced Western Horsemanship  
Advanced Western Pleasure

3-4 p.m.  Check-in for all English and Reining Classes  
Check-in for 2-Year Old Snaffle Bit Western Pleasure

4:30 p.m.  2-Year Old Snaffle Bit Western Pleasure

6 p.m.  English Equitation  
English Pleasure  
Advanced English Equitation  
Advanced English Pleasure  
Hunter Hack

**Wednesday, September 22**  
8-9:30 a.m.  Check in for Polos and Barrels

8 a.m.  Reining  
Pole Bending  
Barrel Racing (EK)

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**County fair was a success!**

Thanks to all the fair volunteers, parents, 4-H leaders, 4-H members, 4-H Ambassadors and Teen Council members for a job well done. We couldn’t have a fair without you. A special thanks goes to the Fair Board and 4-H Council members for their support of the 4-H program. Also thanks to Gerri Ault and crew for keeping the Rock Café and Snack Shack running.

Thanks again! (LB)

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**Award nominations**

Nominations are needed for the following awards by October 15.

- **I Dare You Youth Leadership Award**—presented to junior or senior 4-H members who have demonstrated personal integrity, lead well-rounded lives and possess a willingness to assume responsibility. They do not need to hold leadership positions currently, but should be recognized by their peers and adults who work with them as emerging leaders. Two 4-H members will be selected from Lancaster County. (LB)

- **Outstanding 4-H Member**—presented to an individual who has excelled in their involvement with the 4-H program and are 14 years of age or older. The basis for selection appraises the variety and depth of 4-H activities. (LB)

**2002 CWF registration begins**

Reservations are now being accepted for the 2002 Citizen Washington Focus program. To be eligible you must be 14 years of age by the time of the trip. To reserve a seat, send a $100 deposit to the Lancaster County 4-H Council, attention: Deanna, 444 Cherrycreek Road, Lincoln, NE 68528-1507. Applications will be accepted on a first come, first served basis. We are limited to 42 youth. What better way to learn about government, meet new friends and travel the east coast? Join today! (DK)

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**Fair’s over, now what? Parent and leader meeting**

Leaders, parents and interested volunteers are invited to attend this 4-H training. Discover how to finish the current 4-H year and how to prepare for the next 4-H year. Awards, project completion/selection and club reorganization will be covered. See you there September 21 at 9:30 a.m. or 7 p.m. (TK/LB)

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**Award**

4-H awards are due in the extension office October 15. The awards competition will remain as it has in the past for county and district competition. All 4-H members 12 years old and older are eligible to submit books for county awards. If you have questions, call 441-7180. (TK & DK)
**HORSE BITS**

The State 4-H Horse Exposition was held July 11-15 at Fonner Park in Grand Island. Lancaster County had 36 exhibitors at the show. They came home with 34 purple ribbons, 49 blue, 27 red and 3 white. They also brought back 3 trophies.

Congratulations to all exhibitors! They not only rode and placed well, but put on a great show of sportsmanship and good will. (EK)

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**1999 Fonner Park State 4-H Horse Exposition**

**Hunter back—reserve champion**

Emily Plake, 17, and her 5-year-old Paint gelding won the hunter back reserve championship July 14 at the 1999 Fonner Park State 4-H Horse Exposition in Grand Island. Emily, daughter of Barbara Plake of Lincoln, showed Lucky Light for the win. Emily’s award was donated by Oufred National Bank of Grand Island.

(Photocourtesy of NU Institute of Agriculture and Natural Resources)

**1999 Fonner Park State 4-H Horse Exposition**

**Elementary Dressage—reserve champion**

Rachel Braunorth, 13, and her 7-year-old Quarter Horse mare won the Elementary Dressage reserve championship July 14 at the 1999 Fonner Park State 4-H Horse Exposition in Grand Island. Rachel, daughter of Brad and Cindy Braunorth of Lincoln, showed Swift Jockey Jo for the win. Dressage is an English riding class judged on how well horse and rider work together. Rachel’s award was donated by Budget Host Island Inn of Grand Island. Rachel also won this event last year.

(Photocourtesy of NU Institute of Agriculture and Natural Resources)

**State fair livestock schedule**

**Saturday, August 28**

7:30 a.m. Dog Judging Contest—Bob Devaney Sports Center

8 a.m. Dog Show—Bob Devaney Center

1 p.m. Dairy goat check-in until 2 p.m.

**Sunday, August 29**

8 a.m. Dairy Goat Show—Showmanship first, open class

11 a.m. Dairy goat market lambs and breeding sheep

11 a.m. Dairy cattle must be in place

1 p.m. Check-in of dairy cattle

7 p.m. Breeding sheep show, Youth Complex Area

**Monday, September 6**

8 a.m. Judging all 4-H market steers and market heifers

8 a.m. Judging market lambs and sheep showmanship, Youth Complex Area

8 a.m. Weigh and tattoo market hogs

**Tuesday, September 7**

6 a.m. Market beef for slaughter

7 a.m. Deadline for removal of sheep and beef not sent to slaughter

11 a.m. Exhibits released until 3 p.m. (DK)

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**Ak-Sar-Ben**

The 1999 Ak-Sar-Ben 4-H Youth Livestock Exposition will be September 21-27. For more information, call Deanna at 441-7180. (DK)

**Scholarships available**

Several scholarships are available to 4-H members graduating in 2000. Application forms can be obtained at the extension office. Application deadline is October 15, 1999. For more information, call Lorene at 441-7180. (LB)

**Upbeat science!**

As school begins, students will participate in the 4-H School Enrichment program, where science is upbeat and at its best!

Through hands-on activities, youth develop skills in problem solving and decision making. They apply scientific and technical principles to their daily lives...AND they have fun! Each year, 4-H School Enrichment educates over 12,000 students in Lancaster County.

Second grade youngsters will encounter smelly stuff—trash—things we don’t need anymore! These are ideas that come to mind when they hear the word “garbage.” Garbology introduces youth to solid waste management and the three R’s: Reduce, Reuse, Recycle. Students develop an increased awareness of garbage—where it comes from and where it goes, the problems it presents and possible solutions.
Pollution prevention: it’s everyone’s issue

Horse show planned to benefit new event center

August 22 is the date for a benefit horse show that will boost support for the Lancaster Event Center building project. It is sponsored by the Eastern Nebraska Driving Society and the Capital City Horse and Pony Club.

The show will be held at the Capital City Horse and Pony Club grounds located at 12900 North 14 Street. Individuals interested should contact Suzanne Border for more information at 402-782-2008.

Construction for the new facility is scheduled to begin soon with site preparation (weather permitting) to begin in the middle of August. (GB)

Recycling is important to the University of Nebraska-Lincoln.

With two campuses covering 607 acres and a student and staff population of 25,000, waste management is an enormous challenge. Emphasis is placed on an overall goal to reduce the amount of waste taken to the landfill. Much of this is accomplished by reducing the amount of waste generated, reusing materials through inventory redistribution and recycling.

Here are UNL’s recycling numbers for 1998—187 tons of cardboard, 106 tons of newspaper, 450 tons of office paper, 12 tons of steel cans, 3 tons of aluminum cans and over 35 tons of plastic bottles, wood pallets, fluorescent light bulbs and other materials. In the last 5 years, the university has increased the amount recycled from 370 tons to 790 tons and has noted an 11.5% decline in waste taken to the landfill. (GB)

Pioneers Park Nature Center
Herbal Festival
Saturday, August 21
9 a.m. to 1 p.m.

Join us for a new look at an old favorite. Attend workshops, take a tour of our herb garden, taste wild teas and browse through our herb-related gift shop items.

Workshop schedule: 9:15-10:15 a.m.
• Herb Hors D’oeuvres - Becky Seth
• Nature’s Beauty Secrets - Jean Wheelock

10:30-11:30 a.m.
• Not Enough Thyme: General Uses of Herbs - Jody Hoover
• Landscaping with Herbs - Kim Todd

11:45 a.m.-12:45 p.m.
• Herb Hors D’oeuvres - Becky Seth
• Nature’s Beauty Secrets - Jean Wheelock

Each workshop is $2.50. If you attend three, the total is $6.00. Herb garden tours with Irene Alexander at 9:30, 10:15, 11:15 a.m. and noon. Reservations are appreciated, but not necessary. Call 441-7895 for more information. (GB)

Partners in pollution prevention interns

Josh Barber and Sarah Buechner have been completing pollution prevention internships in the Lancaster County Extension Office. Josh is a UNL senior working on his bachelor’s degree in Biosystems Engineering with emphasis in environmental engineering. Sarah is pursuing her bachelor’s degree in Civil Engineering with emphasis in environmental engineering. She plans to graduate in May of 2000.

During their internship, Josh and Sarah have been working with local businesses and industries. In partnership they are conducting waste generation assessments, communicating results and working to find innovative solutions to reduce waste and pollution amounts.

The internships provide practical and relevant experience for students like Josh and Sarah while continuing to improve the environment and quality of our lives in the United States. (GB)

Results from 1997 & 1998 Pollution Prevention Internship Program

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<thead>
<tr>
<th></th>
<th>Summer of 1997</th>
<th>Summer of 1998</th>
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<tr>
<td>Students</td>
<td>17 undergraduate 3 graduate</td>
<td>15 undergraduate 2 graduate</td>
</tr>
<tr>
<td>Potential Savings for Business</td>
<td>$108,000 for 67 small businesses $150,000 for 7 industries</td>
<td>$175,000 for 70 small businesses $100,000 for 3 industries</td>
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<tr>
<td>Solid Waste Diverted from Landfill</td>
<td>700,000 pound</td>
<td>2,300,000 pounds</td>
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<tr>
<td>Reduced Hazardous Waste</td>
<td>3,500 gallons</td>
<td>3,500 gallons</td>
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Dealing with unwanted guests  

continued from page 3  

(moth balls) are hardly any better. Their primary usefulness is in generating repeat business for pest control industry. To be at all effective, they must evaporate quickly and undergo frequent replacement. Aerosol dog and cat repellents may discourage but use of a particular roosting spot for periods of up to several months. They have been used effectively to prevent bats from roosting above porches. The spray is applied by day when bats are not present. Aerosol is not recommended as it is not an adequate substitute for exclusion. In the case of day roosts and nests, one method is to destroy the nest and then attach a few bat deterrents in a roost. In many cases, suspending 2” wide by 7”-10” long pieces of tin or helium-filled mylar balloons at a roost will deter bats. Poison dusted against bats poses serious health hazards to humans and are not effective in eliminating bat colonies. For this reason, there are currently no poisons or chemicals licenced for use against bats. Furthermore, it is a direct violation of federal law to use a chemical in any way other than that which it is strictly intended for. In most cases, the only safe, permanent solution is exclusion. 

Do bats present a rabies danger? 

According to the Center for Communicable Disease guidelines, a bat exposure requires contact with an open wound or mucous membranes (eyes, nose, or mouth) with a rabid animal’s saliva or nervous tissue. Transmission from an animal to a human is rare, and has never been recorded outdoors or in buildings, though there are two reports of transmission inside caves. There is no evidence of transmission through contact with urine or feces. 

* Netting available from: Internet, Tel:1-800-328-8456 (request 1/6” mesh size, order #OV-7100) For illustrated methods of excluding bats from your home and a detailed discussion of public health concerns, Merlin Tuttle’s book America’s Neighborhood Bats is an excellent resource and delightful reading. With generous use of color photographs, the book covers all of the most common bats of North America. This book can be found in our online catalog. 

NOTE: For those residing in the United Kingdom, please note that bat exclusion requires prior notification to the proper authorities is a punishable and probably enforceable. It’s imperative that you do what we can to create a safer, more stable and efficient society. 

Pollution prevention: it’s everyone’s issue  

continued from page 10 

As students at the University of Nebraska, we took part in the 1999 P5 program and helped many Lincoln businesses reduce waste and work toward pollution prevention. One business is considering the use of a solvent still for process chemicals to replace their current disposal method. This method could save them over $5,000 annually on operating costs and reduce the amount of waste produced by the company. An area hotel is looking into an ozone laundry system. If the hotel implements this system, they’ll reduce laundry water use by 50% and chemical use by 60%. One supplier claims that switching to ozone laundry produces a gas savings of up to 90%. This new system results in large savings on chemical, energy and water expenses and conserves Lincoln’s water supply. 

It is everyone’s issue. It’s imperative that we all do what we can to create a safer, more stable and efficient society. Pollution prevention is one way. For everyone’s sake, take advantage of National Pollution Prevention Week to discuss new efforts and praise the old ones.

Monarch butterflies and Bt corn  

continued from page 3 

So, using fewer pesticides should be a good thing for non-target insects. 

What can farmers do? If farmers are concerned about killing monarch butterfly larvae, they can choose to plant a nonBt corn hybrid on their border and end rows and effectively move the Bt pollen away from milkweed plants. More studies need to be done to look at the effect of Bt corn and non-target insects, including monarch butterfly, on milkweed plants. 

The largest threat to monarch butterfly populations is due to habitat destruction and deforestation in their wintering habitat in Mexico. During the summer in North America, there are many other factors which reduce monarch butterfly populations, including mowing of weeds along highways, ditches and pastures. According to Marlin Rice, Extension Specialist, Iowa State University. (BPO) 

Prepare for school  

continued from page 7 

Encourage Elementary and middle school children experience a different world as they move from one grade to another. There are new schedules, class changes, teachers, friends and school facilities. Each school year is accompanied by a period of adjustment. Students need and want adult patience and encouragement. 

Plan Conflicts surrounding back-to-school demands will be avoided if planning is done ahead of time. When school begins, spend a few hours on weekends cleaning and organizing wardrobes. During the week, make time the night before to lay out clothes, set the breakfast table, prepare lunch, if necessary, and put books and lunch money in a designated place. It’s important to go back to school prepared to learn. (LJ) 

Miscellaneous  

Upbeat science  

continued from page 9 

Embryology, where baby chicks are hatched right in the classroom, teaches responsibility, patience and expectation. Youth develop a healthy sense of awe, respect and tenderness toward living things. The miracle of life unfolds as third graders study life cycles and take responsibility for the care of fertile eggs throughout the 21-day incubation period, then the chicks after they’ve hatched. 

Blue Sky Below My Feet relates science and space technology to everyday living for fourth graders. By using features from the space shuttle program as working models, students learn how forces, fibers and food affect their daily lives on earth and astronauts while in space. Youth learn about gravity and free fall, taste space food and communicate with NASA via the internet. 

With an emphasis on water quality and conservation, 4-H Water Riches provides new and exciting experiences for fifth graders and solicits each student’s commitment to preserve and conserve this important natural resource. Through demonstrations with the groundwater flow model, youngsters learn about the water cycle and how pollutants affect the water they use. 

So—watch for your student’s participation in 4-H School Enrichment. It’s an educational experience for the whole family! (ALH) 

Nobuko Nyman is awarded a ‘Certificate of Appreciation’ from the YWCA’s Parent Center Coordinator, Donna Delahoussaye. Nobuko, Nutrition Advisor with NEP has provided educational programs for teen parents at the Y for three years. 

Calling All Artists!  

2000 White House Easter Egg Artistry Contest  

The 2000 White House Easter Egg Artistry Contest in underway! The American Egg board (AEB), in conjunction with the Poultry & Egg Division of the Nebraska Department of Agriculture, is again sponsoring this statewide contest. Nebraska artists are asked to decorate an egg to represent some special feature(s) of the state of Nebraska. 

The winning egg chosen from the state of Nebraska, will be sent to the American Egg Board for inclusion in the 2000 Easter Egg Display at the White House in Washington, D.C. Entries for this year’s contest are due September 9, 1999. For contest criteria or further information, contact Mary Torell by E-mail at mtorell2@unl.edu or call 402-472-0752. 

Make It Yourself with Wool Contest  

Entries for the Make It Yourself with Wool Competition are due October 3. The district contest for Lancaster County participants will be held at Nebraska City, Calvary Commu- 

nicity Church on Sunday, October 17. Call the extension office for a registration form. (LB)
The Nebl ine
The Nebl ine is published monthly by the University of Nebraska Cooperative Extension in Lancaster County, 444 Cherry Creek Rd., Lincoln, Nebraska, 68528-1507. Contact the extension office, (402) 441-7180 for more information.

Notice: All programs and events listed in this newsletter will be held at the Lancaster Extension Education Center unless otherwise noted.

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Extension Calendar
All programs and events will be held at the Lancaster Extension Education Center unless otherwise noted.

August 17
4-H Livestock VIPS Meeting ................................................... 7 p.m.

August 19
Teachers Character Counts Training
Fair Board Meeting ................................................................. 7:30 p.m.

August 25
State Fair Entry Day—State Fair Park, Lincoln

August 24
Pesticide Container Recycling—Southeast Nebraska Coop., Junction of Hwy 4 & 136, east of Beatrice ........................................ 9 a.m.–3 p.m.

August 27
Pesticide Container Recycling—Otte Oil and Propane, Wahoo .................. 9 a.m.–3 p.m.

August 27-September 6
Nebraska State Fair—State Fair Park, Lincoln

September 8
4-H Horse VIPS Meeting ..................................................... 7 p.m.

September 9
4-H Rabbit VIPS Meeting ........................................................ 7 p.m.

September 12
4-H Ambassador Meeting ....................................................... 1:45 p.m.
4-H Teen Council Meeting ...................................................... 3:5 p.m.

September 13
Extension Board Meeting ....................................................... 6 p.m.
4-H Open House ................................................................. 6:30-8:30 p.m.

September 16
Fair’s Over-Now What? 4-H Leader Training ......................... 9:30 a.m. or 7 p.m.

September 21-22
Ak-Sar-Ben 4-H Horse Show—Omaha

September 22-27
Ak-Sar-Ben Livestock Exposition—Omaha

Water treatment equipment considerations
continued from page 3

1. Use appropriate tests to correctly identify the problem or problems which need to be addressed.
2. Identify options for correcting the problem.
3. Select reputable dealers; ask for references.
4. Check to see if the proposed equipment has been tested or validated by an independent organization such as NSF (formerly known as the National Sanitation Foundation) or Water Quality Association.
5. Identify all costs including purchase price, installation, operating and required routine maintenance costs.

Bug zappers spew germs

Bug zappers are installed by many homeowners to reduce the number of insects in and around the yard. These devices use light to attract bugs to an electrified metal grid and electrocute them. When insects hit the grid, their bodies explode. Many people don’t realize that bug zappers are actually killers in which are attracted to carbon dioxide, but they do kill many moths and other insects that are attracted to light.

Researchers at Kansas State University have shown that electrocuted insect parts are showered as far as 6 feet away from the bug zapper. And, unfortunately the bacteria and viruses are not destroyed in the electrocution process. If you have one of these bug zappers, you don’t need to abandon the device altogether, but make sure that it is located more than 8 feet away from food preparation, the barbecue and picnic areas.

According to John Urban, KSU associate professor of microbiology, “Most people probably think that using electrocuting traps to control insect in one’s backyard or around food-handling areas would improve sanitation, but the results of this study suggests their use actually spreads microorganisms.” (BPO)

6. Determine if the system has adequate capacity for your needs.
7. Understand what maintenance will be required.
8. Understand how to determine if the equipment is operating satisfactorily.
9. Understand any warranty provided with the equipment.

SOURCES: Sharon Skipton, UNL extension educator and DeLynn Hay, UNL water resource specialist. (BPO)