3-1-2001

The NEBLINE, March 2001

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Globs of paper pulp...what will that make? Eat mud for lunch...or is that a chocolate coveredunt? Birds flying through the air—so close they might touch your shoulders! Water that looks clean but may be polluted...that’s what you’ll look for! And why is that lake so dirty? Is the soil blowing away and is it making the air harder for us to breathe?

These are the kinds of questions and answers that nearly 3,000 fifth grade youth in Lancaster County will find out at earth wellness festival, Thursday, March 22, 2001 at Southeast Community College, 8800 O Street, Lincoln.  Around 300 community volunteers, education resource agencies, organization presenters, and earth wellness festival Steering Committee members will assist students and teachers in a day of creative learning, innovative study, and valuable experiences in environment education. Youth recognize that water, land, air, and living resources are interdependent, that their actions have an impact on the environment, and how they can enrich the world around them! Students have FUN but come away from the festival with a renewed interest in global environment and what they can do to make a difference!

So watch for your youngster to come home with new information and new ideas on how you can help. This is a family affair! See you at the festival, fifth-graders! (ALH)

In this issue...

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Curbside Recycling Offered Through NDEQ Grant!

Blue tubs galore! That’s what you’ll see! And it’s because earth wellness festival Steering Committee received a grant from Nebraska Department of Environmental Quality (NDEQ) that provides funding for one year of free curbside recycling for 130 Lincoln families. With the assistance of Chris Zegar, Recycling Enterprises as coordinator and hauler, participants around Lincoln will recycle at curbside. Tin, glass, paper, aluminum, cardboard, and plastics will be picked up once a week for one year.

A manual prepared by Mark Danley and students at Cavett Elementary also will be delivered to each family. This manual has activities that will encourage youngsters and adults as families to recycle. At the end of one year, participants are asked to complete a questionnaire to assess the success of the project. earth wellness festival is proud to be a part of this exciting program. Thank you, NDEQ, Recycling Enterprises and Mark Danley and Cavett students, for helping us “make a difference.” (ALH)

Youth Are Making A Difference!

Students
✓ have made recycled envelopes from magazine pages, sold them and purchased a tree for their school yard and now they are selling envelopes to make money for a field trip.
✓ are using both sides of the paper they use and then making recycled paper.
✓ have planted butterfly gardens.
✓ have started school and/or neighborhood recycling programs.
✓ have contacted the mayor and the city council about energy and conservation issues.
✓ are turning the water off when they brush their teeth and/or wash their hands.
✓ are checking for water leaks in the faucets and the toilets at school and at home.
✓ are taking shorter showers and using bath water to water their plants.
✓ are composting their kitchen scraps.
✓ are designing recycling centers in their homes.
✓ are buying products made from recycled materials.
✓ are finding ways to reuse items in their classrooms.

With the assistance of Coordinator Marti Franti, Lincoln Public Schools has begun a very successful recycling program. (ALH)
The Perennial Plant Association has awarded the title of Perennial Plant of the Year 2001 to Calamagrostis xacutlflora ‘Karl Foerster’. This highly acclaimed cultivar is one of the most versatile, attractive, and low maintenance ornamental grass. The deep green, shiny foliage of this cool-season grass appears in early spring and lasts until early winter. Loose, feathery flower inflorescences appear in June and are initially light pink in color. As the seed heads mature, they become very narrow with a golden tan color and last through the fall season. The growth habit is vertical with a tuft of foliage two to three feet tall and flower stems to five feet in height. The narrow, tight habit of this cultivar creates a 18 inch wide clump. In mild winters the foliage rosettes remain evergreen or may show some growth. Calamagrostis xacutlflora ‘Karl Foerster’ is a long- blooming, low maintenance, long-lived perennial grass for full sun to partial shade. This grass grows best in well- drained fertile soils with sufficient moisture, but will tolerate heavier clay soils and drier sites. Fertilizer may be required to produce maximum height. Low fertility will result in shorter plants. It is usually free of serious disease or insect problems although a foliar rust disease can occur in wet summers in situations with poor air circulation. Little maintenance is required except to cut back the stems to about six inches in late winter or early spring. This ornamental grass is a cool-season grass, which allows planting or transplanting in spring or fall. Sterility eliminates any chance of this cultivar becoming an invasive plant or create unwanted seedlings in the garden. Calamagrostis xacutlflora ‘Karl Foerster’ is excellent as a specimen plant or providing a vertical accent in the landscape. Some landscape designers use it for creating a fast developing screen. Floral designers appreciate this cultivar for its use in fresh or dried arrangement. Stems cut before the flowers mature will last for months in an arrangement while maintaining the golden tan color. A combination of ‘Karl Foerster’ feather reed grass with various other perennials makes a dramatic effect in the landscape. Consider combinations with late summer and fall-blooming perennials such as coreopsis, coneflower, liatris, and rudbeckia. It is understand- able why Calamagrostis xacutlflora ‘Karl Foerster’ is one of the best selling ornamen- tal grasses year after year. (MIM)

Shade and ornamental trees may be purchased from retail or mail order nurseries and garden centers. A broad selection is available including many improved cultivars. Nursery grown trees have adequate root systems for rapid development and have been properly trained for future growth. Trees from the wild or woods generally have inadequate root systems for transplanting and usually possess inferior branching frameworks. Specimen trees selected from a nursery should be healthy and show evidence of good growth. Properly pruned trees have one main leader and adequate numbers of side or lateral branches. Examine existing twigs and leaves for symptoms of insect damage or disease infection. All specimens should be free of mechanical damage. Root systems should be in proportion with the tops. Beware of plants with exceedingly small root systems and large tops. These plants will establish slowly or fail totally. Trees can be purchased bare root, balled and burlapped or container grown. Bare root trees are relatively inexpensive, but require special care to ensure establishment. Root systems must be protected from drying before and during planting. Bare root trees must be held in a cool, humid location and the roots covered with moist packing material until planted. Only small evergreens, under two feet, are normally transplanted bare root. Deciduous seedlings up to four or six feet can be successfully transplanted bare root. Balled and burlapped trees are more expensive, but are more easily transplanted. Transplanting success with larger balled and burlapped trees is quite high with proper care and an adequate root system. The root system is contained within the ball of soil. The soil ball should remain firm to keep the root system intact and minimize transplant shock. The soil ball must also be kept moist until the roots are established in the soil. Container grown trees can be planted over an extending season. The entire root system is contained inside the container or pot. Disruption of the root system is minimal and rapid growth should continue. However, examine the root system and its ability to produce healthy seedlings to determine if the plant is root bound. Plants with large, circling roots on the bottom or sides of the container have been grown in the con- tainer too long. Special root pruning is necessary for these plants to become established in the landscape. (MIM)

Easter Lily Care
If you have an Easter lily, you can save the bulb and plant it outdoors. Spring flowering bulbs that are forced, such as paper white narcissus, are often discarded after flowering. Easter lilies can be replanted after the blooms are gone. The most successful place to plant an Easter lily and get it to bloom again is outdoors. You can plant the Easter lily outdoors, after the danger of frost is past. Select a sunny site with well drained soil. Set the top of the bulb six inches below the soil surface. Do not remove the flower stalk until it dies and then cut it off at the soil surface. The lily will likely rebloom the first year in the summer. After the soil surface freezes in the fall, mulch the soil and do not remove the mulch until new growth begins in the spring. (MIM)
Increased Landfill Rates Are Still A Bargain

Barb Ogg
Extension Educator

If you have taken a pick-up load of trash to the Bluff Road Landfill recently, you may have been surprised to find that rates have increased. If you have a trash hauling service, your rates may also have increased slightly.

Did you know that no tax dollars are used to support the landfill operations, transfer station operation, composting or recycling programs? The landfill operates like a business and must maintain a positive cash balance just like any other privately owned business.

Monies used to operate the landfill come from refuse haulers and citizens through gate fees collected at each facility. Monies are also generated from the sale of recyclables. It only makes sense for the people who use the waste disposal facilities to pay for it through user fees.

Why have rates increased?

Rates have increased primarily because state regulations have required the construction of environmental protection features at the Bluff Road landfill and closure and monitoring of the old landfill site. The fee increases are significant, but the new rates are still less than the average landfill fees in Nebraska.

Disposal fees are listed below. Additional fees also apply when disposing of asbestos, contaminated soils, and other special wastes. For more information call 441-7738 or visit the website at www.ci.lincoln.ne.us.

Bluff Road

<table>
<thead>
<tr>
<th>Year</th>
<th>Solid Waste at Bluff Road Landfill ($/ton)</th>
<th>Yard Waste at Bluff Road Landfill ($/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>$12.00</td>
<td>$10.75</td>
</tr>
<tr>
<td>1996</td>
<td>$16.00</td>
<td>$15.75</td>
</tr>
<tr>
<td>1999</td>
<td>$17.00</td>
<td>$15.75</td>
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</table>

Small Vehicle Transfer Station Fees

<table>
<thead>
<tr>
<th>Item</th>
<th>1999</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pickup trucks</td>
<td>$4.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>Small trailers</td>
<td>$7.00</td>
<td>$7.00</td>
</tr>
<tr>
<td>Cars (each)</td>
<td>$1.50</td>
<td>$2.50</td>
</tr>
<tr>
<td>Pickups with trailers</td>
<td>$7.50</td>
<td>$12.00</td>
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<tr>
<td>Cars with trailers (each)</td>
<td>$5.50</td>
<td>$9.50</td>
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Additional Fees

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<tr>
<th>Item</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Uncovered loads at North 48th Street (each)</td>
<td>$2.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Passenger tires (each)</td>
<td>$2.00</td>
<td>$3.00</td>
</tr>
<tr>
<td>Truck tires (each)</td>
<td>$6.50</td>
<td>$6.50</td>
</tr>
<tr>
<td>Implement tires</td>
<td>$11.25</td>
<td>$11.50</td>
</tr>
<tr>
<td>Appliances</td>
<td>$5.00</td>
<td>$5.00</td>
</tr>
</tbody>
</table>

Where do you go with wastes in Lancaster County? How do you find recycling drop off sites? Check the blue pages in the Lincoln Telephone Book for additional information about waste disposal in Lincoln.

Environmental Focus

Are you Ready for Some Spring Invaders?

Bokerle bugs

Borerle bugs often overwinter in walls of homes, and warming by the sun during the day causes them to crawl about. They are scentless and leave no stains on walls or furniture. Simply vacuum them up when observed. Do not attempt to spray them, as their dead bodies will later be attractive to demineral or carpet beetles. Allow them to completely disperse in the spring. Next is the time for employing preventive measures tocurtail invasion.

Clover mites

These tiny, dark mites are often observed around walls last autumn when they migrated from the lawn into the home to overwinter inside walls. They often become active on warm winter days and can be observed crawling on walls and counter tops. When smashed they leave a stain. It is best to vacuum them up when they are on curtains or wallpaper. Gently wipe them off painted surfaces and counters with a soft, soapy rag. Preventive measures to reduce invasion must occur in the early fall. For more information, contact the extension office and ask for Clover Mites and Their Management, NebGuide G-131. Rabbits and other “plant munchers”

Exclusion! Exclusion! Exclusion! Plan now to protect your plants from hungry bunnies and other furry friends. For a free guide, contact your local extension office. Time spent now will save money and heartache. For more information, visit the extension office and pick up any of the following publications: Prevention and Control of Rabbit Damage, NebGuide G-1401; Thirteen-lined Ground Squirrels, NebGuide G-1110; Rabbit Resistant Perennials, NUFact 278.

For your convenience, the University of Nebraska Coop-erative Extension offers County Web site offers instant access to information on many topics including Insect and Pest Management. For more information, contact your local University of Nebraska Coop-erative Extension office and pick up any of the publications listed at your local Extension office.

Termite Workshop on May 22

A workshop for homeowners “Everything Homeowners Should Know About Termites and Termite Control” will be held at the Lancaster County Extension Office on May 22, 2001 from 6:30 to 8:30 p.m. These workshops are designed to help homeowners understand termites, termite control options, and become more informed consumers. This workshop will also be held in Columbus (May 10), Aubur (May 17), and Hastings (May 24). Cost of these workshops is $20 and includes reference materials. Call the Lancaster County Extension Office for more information (441-7738). (BPO)

Stunned by Fuel Bills? Reduce Energy Consumption

Are you still in shock by your last couple heating bills? The increase in fuel prices is due to increased demand for fuel worldwide. In some areas of the United States, natural gas prices are as much as 65 percent higher than they were one year ago. LPG gas and fuel oil are up to 40 percent higher than they were in October 1999. Since Nebraska is experiencing a colder winter this year, we are using more fuel and natural gas to heat our houses which naturally also increases our bills.

The simplest way to save energy in the winter is to lower the thermostat setting. Energy is reduced about 2.5 percent for each degree you turn down the thermostat. Compensate for a colder environment by dressing warmer or by adjusting to the new temperature. Another option is to turn down the thermostat at night or when nobody is home or install an automatic setback thermometer. Some models can be programmed to have different temperature regimes on weekend days vs. week days. A cooler environment will be more comfortable if drafts are eliminated. If windows rattle in the wind or curtains flutter, the weather stripping around the...windows probably needs to be replaced. If weather stripping can’t be done during cold weather, stuff rope caulk in the cracks, which can be removed in the spring without damaging the woodwork. Install plastic on the interior or exterior of windows to reduce drafts.

Closing blinds or drapes during the evening also increases comfort because it keeps heat from radiating to the outside, reduces convention currents and heat loss through convection.

Hire a qualified heating professional to service the heating system to separates as efficiently as possible. Between maintenance, be sure to check the filters—the filters slow down the flow of heat as well as affect the efficiency of the heating system. For more information, see FUEL on page 11.

March 2001
What do we Really Know about BSE “Mad Cow Disease”

“Mad Cow” hysteria has again struck the United States. CBS news just finished a three-part series on Bovine spongiform encephalopathy (BSE) and Purina published 1,200 head of cattle in Texas because of the feed they were given. Is this hysteria war- ranted?

The Center for Disease Control (CDC) recently re- leased a question and answer worksheet on BSE and variant Creutzfeldt-Jakob disease (vCJD), the human form of BSE. The following is an excerpt from that sheet.

What is spongiform encephalopathy (BSE)?

Spongiform encephalopathy (BSE) is a progressive neurological disorder that results from infection by an unconventional transmissible agent. As of November 2001, more than 177,500 cases of BSE were confirmed in the United Kingdom alone and more than 35,000 herds. The BSE epidemic in the United Kingdom peaked in January 1993 at almost 1,000 new cases per week. The outbreak may have been initiated from the feeding of scrapie- containing sheep meat-and-bone meal to young calves. There is no evidence that BSE is spread from animal to animal through nonfood contact.

Is BSE occurring in the United States?

According to the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture, BSE has not been detected in the United States despite active surveillance efforts since May 1990. As of October 11, 2000, 11,700 bovine spongiform encephalopathy cases had been examined by an ongoing BSE surveillance system in the United States, and no evidence of BSE was seen. Further, to prevent BSE from entering the United States, severe restric- tions were placed on the importation of animals and certain ruminant products from countries where BSE was known to exist. These restric- tions were later extended to include importation of rumi- nant meat and bone meal products from all European countries.

A food borne hazard in the United States?

As indicated above, BSE has not been observed outside the United States. Thus, it is extremely unlikely that BSE would be a food borne hazard in this country. Because the use of ruminant tissue in ruminant feed is a significant factor responsible for the BSE outbreak in the United King- dom, there is no evidence to suggest for possible transmis- sion of BSE to humans, the U.S. Food and Drug Adminis- tration instituted a ruminant feed ban in June 1997 that continues to this date.

How evident is the evidence linking the newly recognized variant of Creutzfeldt-Jakob disease (CJD) to BSE exposure?

There is strong epidemi- ologic and laboratory evidence for a causal association between new variant CJD and BSE. The absence of confirmed cases of new variant CJD in other geographic areas free of BSE supports a causal association. In addition, the interval between the exposure period for the initial extended exposure of the population to potentially infected feed (1984-1986) and onset of initial new variant CJD cases (1994-1996) is consistent with known incubation periods for CJD.

What is the current BSE Disease Control initiated increased surveillance efforts at the time the newly recognized variant of CJD occurs in the United States?

Yes. In addition to the ongoing review of national CJD mortality data, the CDC is reviewing active CJD surveillance in its four established Emerging Prion Disease Surveillance Centers (Minnesota, Oregon, Connecti- cut, and the San Francisco Bay area). CDC is also reviewing the metropolitan Atlanta site during April and May 1996.

For more information on BSE, please feel free to contact Lance L. Cummins-Brown, extension educator at the Lancaster County Extension, Office at 441-7180 or e-mail at brown44@ufl.edu (LCB). For more information on variant CJD, see the news and publications available on the world wide web on http://www.cdc.gov/ ncidod/diseases/cjad/cjd_cjd_ca.htm.

Poor Germination and Shortages Plague Soybean Seed Supply This Season

Lots of heat and little water last summer means this year’s soybean seeds are small in size, lower in quality, and short in supply. Farmers switching acreage from corn to soybeans, which require significantly less nitrogen, to avoid skyrocketing fertilizer prices, could exacerbate the situation.

Steve Knox, field services supervisor for the Nebraska Crop Improvement Associa- tion, based at the University of Nebraska, said “Last year’s hot, dry weather was devastating to dryland soybeans, which is the majority of soybean products in Nebraska.”

The quality of soybean seed is measured by the germination percentage, or the number of seeds per 100 that are viable. Most year’s samples sent for testing by NCIA members have germina- tion rates above 90 percent, with 80 percent being the standard. This year the average germination has been detected in the United States since 1984.

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Advertising a Pick-Your-Own Farm or Farm Stand

Just as farmers need to condition the soil to grow crops, they also need advertising to condition customers to buy their crops. Advertising is a tool, one which you can use to attract customers to your farm and your brand. Like many farm tools, advertising can be expensive! It is important to carefully research the best types and amounts of advertising for your situation. Then you’ll get the best return on your investment. Here are some tips to help you make the most of your advertising dollar.

Surveys show that most of your customers are within 20 miles of your farm. Advertising outside this area may not pay off. Focus your advertising in the densest population centers, such as urban areas. Families with children tend to spend the most money at retail farms, so place your ads where these people will see or hear them. For example, use postcards with pictures of your farm or product ads and a short promotional message. Send these out just before harvest time to bring in customers. This makes customers feel you have a special interest in them, which makes them more likely to respond than if they just see an ad.

You can also develop a mailing list by asking people to sign up for mailings when they visit your farm. Better yet, ask customers to fill out a survey, asking what they like and how they found out about your stand. The survey data will help you plan future advertising.

Newspapers are a good way to reach your customers. Choose the newspapers most likely to be read by your clientele. Have the ad placed where your intended audience is most likely to see it. The weekly food or marketplace place in your area might be a good spot for your ad.

Space for newspaper ads is sold by the column inch. A quarter-page ad may cost over $800, but, depending on how many people see it, it may be an effective, worthwhile investment. Use your farm logo and photos in the ad to grab the readers’ attention. Offer coupons in the ad to draw people to your farm. The number of coupons redeemed is a good way to measure how well the ad worked.

Radio: To get the most effective radio advertisement, pick a station your customers listen to. A customer survey can provide you with this information. The prices of radio ads vary based on the station’s audience, length of ad, and time of the broadcast.

Television: The high cost of television advertising makes it less attractive to small farm businesses. However, prices during some time slots and on local channels may work if a lot of clients are likely to be watching. Daytime ads can reach a family audience through homemakers, and they are cheaper than prime time. Production costs of a TV ad can be very high, too, depending on the type of ad you want.

Advertise your crop when it is ready. Give the customer what they want, when they want it. Begin advertising lightly just before the season. Advertise heavily at the beginning of the season, and taper off as the season progresses. Don’t wait for slack sales to advertise; keep things moving!

As a rule, budget advertising at five to ten percent of your sales income. With experience, you’ll know how much to spend. Keep track of your spending versus income from sales. If an ad campaign does not bring a quick and noticeable increase in income, re-evaluate it. Perhaps it didn’t reach the target audience, or its content didn’t attract attention.

Increase your advertising budget if local competition is great or your location is distant from the target audience. Too much advertising will bring diminishing returns and too many customers. Remember that crowds and low prices are sure ways to lose patrons.

Remember, a good advertisement will bring customers to your farm, but it is also a promise to customers that they’ll find what they want once they get there. To get repeat customers (“regulars”), you must give them a reason to come back—excellent quality and service, a friendly atmosphere, neat, clean and attractive surroundings, good parking, and fair prices.

Always let your customers know how important they are to you. If treated well, they’ll provide the best kind of advertising: word of mouth. This is one of the best types of promotion, but it is not free. You must earn it. (DJ)

New Models Save Water

Older toilets typically use three to seven gallons per flush and account for about 30 to 50 percent of the water used indoors. New water-saving toilet standards are set at 1.6 gallons per flush, which can save 8,000 or more gallons of water per year per household or about 50 percent of older toilets. (DJ)

When Push is Better Than Pull

New water-saving toilets may use pressure-assisted, vacuum-assisted, and wash-down or gravity flush. Pressure-assisted or compressed air toilets may perform better than gravity flush, but may make more noise. Gravity flush toilets are easier for do-it-yourselfers to fix. In any case, the toilet must have enough force and water to carry the finished waste through the wastewater system. (DJ)

Nebraska’s Newest Noxious Weed

On January 1, 2001, purple loosestrife (Lythrum salicaria and Lythrum virgatum) officially became the state’s seventh noxious weed. Purple loosestrife is an aggressive wetland invader which displaces native plants important to wildlife. This plant also infects irrigated pastures and hay meadows.

Purple loosestrife is found in wetlands, wet meadows, and along streams and rivers near North Platte toward eastern Nebraska. In the past, it has also been sold as an ornamental and can be found in flower gardens throughout the state. Most nurseries agreed to stop selling it after our announcement on May 1.

Purple loosestrife can be easily identified by its long spikes of six-petal, rose-purple-colored flowers. The plant has narrow leaves which grow from opposite sides of squarish stems. Homeowners should dig or pull the plant, making sure to remove as much of the root mass as possible. Place the plant and root material in a plastic bag and seal the bag tightly and dispose of it in an approved sanitary landfill.

Large infestations can be controlled with herbicides. Several products are available for control of purple loosestrife. Contact your local county water control authority or the University of Nebraska Cooperative Extension Service for more information on approved herbicides and other control options. County water control superintendents will begin contacting landowners and homeowners to assist in developing plans to attack this aggressive invader.

Other weeds deemed noxious in Nebraska are musk thistle, plumeless thistle, Canada thistle, leafy spurge, diffused knapweed, and spotted knapweed. (DJ)

Waste Pesticide Disposal Program

Homeowners, producers, and pesticide dealers will again have the opportunity in 2001 to dispose of unusable or unwanted pesticide-free containers for free. Beginning in mid-March, a waste pesticide management company will go through the state collecting these materials.

The collection sites and dates will be made available by March 1. The anticipated number of collection sites will be approximately 20. Every attempt will be made to locate the sites throughout the state so everyone has the opportunity to participate.

Previous collections held during the past five years have resulted in excess of 1.4 million pounds being collected. Everyone with products which need to be disposed of are encouraged to participate in this program, because the future availability of funds for the project is uncertain. (DJ)
Nutrition Education Program

For Long Island Multifamily Families
Dr. Wanda Kozlowski
RD, LMT

On the Plate...What is Normal Eating?

A discussion on what is normal eating was held at a retreat I was at recently. It seems that Americans have lost their balance in a number of ways when it comes to eating. We have more adults and children that are classified as obese and yet we also have an increase in the incidence of eating disorders and disordered eating behaviors. What has happened? Some say it is due to the increase in technology, the move from a rural to urban society, advertising, peer pressure and changes in the family unit. To say the least it probably was not one cause and unfortunately there is no easy solution to our eating imbalance.

Here are some statistics of what is going on in America. Eighty percent of all American women are on diets. American standards for ideal weight have become thinner and thinner over the past 20 years. During the same period of time, the weight of the average adult has increased. Ellen Satter defines normal eating with the following characteristics:

- Being able to eat when you are hungry and continue eating until you are satisfied.
- Being able to choose food you like and eat it and truly get enough of it, not just eating because you think you should.
- Being able to use some moderate constraint on your food selection to get the right food, but not being so restrictive that you miss out on pleasurable foods.
- Giving yourself permission to eat sometimes because you are happy, sad or bored, or just because you feel good.
- Choosing three meals a day or just to munch along.
- Leaving something on the plate because you know that you can have some again tomorrow or just eating more now because they taste so wonderful.

FREE “Tips & Recipes for Fixing Healthy Food in a Hurry”

If you’d like to prepare healthy meals but feel short on time, you may enjoy attending a FREE workshop on “Tips & Recipes for Fixing Healthy Food in a Hurry.” You’ll learn how to plan “mix & match” meals; safely cook once and eat twice; select time-saving kitchen tools, use ingredient substitutions that save time and money; and much, much more. Each participant will receive an extensive handout giving tips and recipes for use after the class. The class is taught by Alice Henneman, a registered dietitian and Lancaster County extension educator.

This program is part of BryanGHL’s “To Your Health Series” and will be held on Monday, April 2, 7 to 8:30 p.m. The program will be held at the Plaza Conference Center, BryanGHL Medical Center East, 1600 South 48 Street. To register, call BryanGHL at 481-8886. (AH)

INGREDIENT SUBSTITUTIONS

Here are some of the suggestions cited most frequently. The substitution tips for which there was the most general consensus and which used the most common ingredients are listed. Your final product made with the substituted ingredient may differ slightly from the original food, but still be acceptable in flavor, texture and appearance.

Allspice
Amount: 1 teaspoon
Substitute: 1/2 teaspoon cinnamon plus 1/2 teaspoon ground cloves

Apple Pie Spice
Amount: 1 teaspoon
Substitute: 1/2 teaspoon cinnamon plus 1/4 teaspoon nutmeg plus 1/8 teaspoon cardamom

Baking Powder, Double-Acting
Amount: 1 teaspoon
Substitute: 1/2 teaspoon baking soda plus 1/2 teaspoon cream of tartar

Baking Soda
There is NO substitute for baking soda

Butter
Amount: 1 cup
Substitute:
- 1 cup regular margarine
- 1 cup vegetable shortenings (for baking)

An equal amount of oil can be substituted for a similar portion of MELTED butter if the recipe specifies using MELTED butter.

TIP 1: According to the National Association of Margarine Manufacturers, you can tell “if the product is regular margarine” by checking the Nutrition Facts: a one tablespoon serving will have 100 calories.” Products that contain less than 80 percent fat often give the fat percentage on the front of the package.

If the margarine is labeled “light,” “lower fat,” “reduced fat,” “reduced calorie/diet” or “fat-free” or is called a “vegetable oil spread,” you may be less successful substituting it for butter OR for regular margarine in baking and in some cooking procedures. These products are higher in water and lower in fat content and won’t perform in the same way as regular butter or margarine.

For additional information about using the various forms of margarine in recipes, check the Web site of the National Association of Margarine Manufacturers: http://www.margarine.org/howtousemargarine.html

TIP 2: There is no standard procedure to substitute liquid oil for solid shortening in cooking. Oil is 100 percent fat, while butter, margarine and other solid shortenings are lower in fat on a volume-for-volume basis.

Also, for some recipes, solid oil helps incorporate air into the batter when it is whipped with other ingredients such as sugar and eggs. If you are trying to whip these ingredients with oil, your baked product is likely to be more compact and oily in texture. Your most successful substitution occurs if you can replicate the recipe calls for MELTED butter, in which case you can usually substitute an equal amount of oil.

Buttermilk
Amount: 1 cup
Substitute: 1 tablespoon lemon juice or vinegar plus an equal amount of regular milk to make 1 cup (allow to stand 5 minutes)

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Grasscycling is the natural practice of leaving clippings on the lawn when mowing. It is obvious how this practice can save resources like landfill space, but there are additional benefits as well. The clippings quickly decompose, returning nutrients to the soil. Grasscycling, in conjunction with the practice of reducing water and fertilizer inputs, can reduce mowing time in addition to disposal costs.

Grasscycling can be practiced on any healthy lawn as long as responsible turf management guidelines are followed. Proper mowing, watering, and fertilizing practices result in more moderate turf growth yet still produce a healthy, green lawn. The nitrogen contained in grass clippings removed from a lawn almost equals the recommended application rate for healthy turf (about 5 pounds of nitrogen per year per 1000 square feet). While some of this nitrogen is lost through decomposition of the clippings, leaving the clippings on the lawn by grasscycling can have the overall impact of reducing fertilization requirements by 15 to 25 percent or more. Similar savings on water use are possible.

Returning clippings to the lawn usually means mowing more than once a week during the few weeks of rapid growth in spring and early summer. Grass clippings should be less than 1 inch, or no more than one-third of the total plant height, to ensure rapid decomposition. Mowing more frequently is not as much extra work as you might think, because lawns moved at the proper height cut more easily and quickly. Mowing infrequently damages the lawn by removing too much of the plant at one time. When mowed regularly, clippings filter down through the grass, decompose rapidly and recycle nutrients back into the soil.

Fertilize your lawn to provide uniform, moderate growth throughout the growing season. A properly fertilized lawn will have a healthy, dense stand of turf that reduces weeds and pests quickly from insect or disease injury. The number of fertilizer applications you make will depend on how you want your lawn to look, the type of grass, and soil type.

Good lawn care practices can save water and prepare turf for dry summer months. Taller mowing and proper fertilization result in a deep and efficient root system that reduces the need for additional water. The best time to water is early morning. Less water is lost by evaporation, and disease incidence is reduced. (DJ)

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What is “Grasscycling”?

Sometimes it is easier to prevent or eliminate conducive conditions than to control pests that are invading your house. There are a number of conditions around the yard that may be contributing to increased populations of some pests invaders. Mulching has many benefits for the ornamental plants and trees in your yard by decreasing weed growth and preventing moisture loss, but it may also serve as habitat for several types of insects/pests that may move inside your home later. The more mulch/wood chips you have and the longer it sits, the more likely there will be pillbugs, sowbugs, millipedes, and crickets living in it. Predators, like spiders and centipedes, will also increase in these areas. Most of the time, these critters find their way into the house in the fall of the year.

One way to use mulch and still reduce the critters is to use it farther away from the house. Another is to seal cracks and crevices in your house exterior to prevent entry. Another strategy might be to anticipate these pests and use an insecticide barrier around the house in the fall to help prevent entry. Compost is great stuff. But it has its own complement of insects that like to live in it, including many of the insects/pests that are also found in mulch. A poorly managed compost pile may produce stable flies. These flies look a lot like house flies, but can give a painful bite to people and pets. Another source of stable flies is animal excrement. Removing this waste promptly will prevent the development of stable flies and later discomfort to people and outdoor pets.

Other conditions in the yard environment can be attractive to pests. Dense vegetation is attractive to many pests because of increased humidity; most insects survive better in higher humidity. You have probably noticed mosquitos seem to be especially attracted to dense vegetation. Rabbits are also fond of dense vegetation or piles of brush that they can hide in. Snakes like to live under concrete porches or under sidewalks. If foundations have cracks, snakes may enter base- ments. Mice can easily enter through small openings in basement foundations. Some plants serve as a food source to insect species. A couple good examples are elm leaf beetles and boxelder bugs. Both of these pests enter homes in the fall to overwinter. Elm leaf beetles feed primarily on elm trees so if these beetles really drive you crazy, consider planting another type of tree, if you have the opportunity to plant one. Box elder bugs feed on members of the Acer genus, including box elder trees and maple trees. Nearly every tree species has something not-so-good about it. Hackberry trees, in addition to dropping branches, produces lace bugs that have a nasty bite in the late summer and early fall. Oaks are messy and attractive to squirrels. It can be a real challenge to find the “perfect” tree. Fruit-bearing trees are highly attractive to bees in the springtime, a fact that someone highly allergic to bee stings might want to consider before planting fruit trees. Yellow jackets are attracted to dropped, fermenting fruit in the fall of the year. Picking up dropped fruit is one way to reduce wasps in the yard. Or, plant crab apples that don’t produce much of a fruit.

Lighting around the home can attract nocturnal insects, like moths, midges, wood roaches, and spiders that prey on these insects. Using yellow light bulbs that are not as attractive to nocturnal insects may reduce these pests.

Aquatic environments, like wetlands, lakes, streams and ponds near your home can breed aquatic insects like mosquitoes, midges, horseflies, deer flies, and black flies. Homes made from wood shingles or cedar siding attract a number of insects that prefer living in wood. These include carpenter ants, carpenter bees, paper wasps, yellow jackets, and honey bees. Log homes are very attractive to beetles that naturally invade filled trees.

It is impossible to completely prevent pests in your yard, unless you decide to completely pave your yard with concrete and we don’t recommend that. But, by recognizing conducive conditions and remedying problems in your yard, you might be able to decrease the numbers of pests.

For more information about most of the pests mentioned in this article, contact the Lancaster County Extension Office. (BPO)
Recycling - Page 2a

Facts About Grass Clippings

• Yard waste can account for 20% of the solid waste in landfills, and up to 50% of all yard waste is grass clippings. Grass clippings are recyclable and do not need to take up valuable landfill space.

• Using grass clippings as a source of fertilizer for your lawn can save time, money, and help protect the environment.

• Leaving grass clippings on your lawn can generate up to 25% of the lawn’s yearly fertilizer needs and reduce the amount of time and money you spend fertilizing and bagging. Lawns stay greener and healthier when clippings are left on them.

• Grass clippings don’t cause thatch.

Thatch (pronounced “thack”) is caused by excessive growth from over-fertilizing, by allowing grass to get too high before mowing, or by incorrect watering. Too much thatch leads to uneven mowing, scalping, and drought stress.

Grass Recycling Saves Lawn Care Costs

• Fertilizer – Grass clippings can supply up to one-third of a lawn’s nitrogen fertilizer needs.

• Time – Recent trials confirmed leaving grass clippings on the lawn saves one-third of the mowing time.

• Water use – Clippings shade grass roots, cool the soil, return moisture, and add moisture holding organic matter, and thereby reduce lawn watering needs.

• Soil health – Clippings decompose rapidly, feeding soil organisms that keep soil healthy and disease-free.

• Thatch – Studies prove grass clippings do not cause thatch build-up. (DJ)

Grass Recycling

Thatch consists of a tightly intermingled layer of dead and decaying turfgrass tissues derived from stems, roots, and leaves. Thatch has a high lignin content and resists microbial breakdown. Located between the green vegetation and soil surface, thatch accumulates when production of turfgrass organic matter exceeds decomposition.

Infrequent mowing of tall grass can contribute to thatch accumulation. The rule for mowing is to mow at a height and frequency so no more than one-third of the grass height is removed at any single mowing. For example, a lawn that grows to a 3-inch height can be cut back to a 2-inch height, leaving the 1-inch clippings to easily filter into the grass canopy. Grass clippings are not a primary cause of thatch, and they should not be collected in an attempt to prevent thatch buildup. Leaf tissue readily breaks down in a lawn compared to the more stable crown and shoot tissue. Mulching-type mowers chop clippings into smaller pieces that easily filter into the grass canopy and decompose faster.

A small thatch layer (less than 1/2 inch) can be beneficial because it increases turf’s resiliency, improves its wear tolerance, and insulates it against soil temperature changes. When thatch layers exceed 1/2 inch, however, the disadvantages generally outweigh the advantages. The turf’s susceptibility to heat, cold, and drought increase with excess thatch accumulation, and localized dry spots, scalping, disease, and insects may become problems. As thatch accumulates, there is a tendency for root and rhizome growth to occur primarily in the thatch layer rather than in the soil. This results in a weakened, poorly rooted turf that is prone to stress injury and requires increased management.

Thatch can be removed by hand raking or by using a power rake. Hand raking is laborious and is practical only for small areas. Power rakes can be rented, or the service can be hired from a professional lawn care company. Power rakes use rigid wire trays or steel blades to lift thatch debris and a small amount of soil to the lawn surface. The soil should have some moisture for best results. (DJ)

The Truth About Thatch

Mulching Tree Leaves into Lawns

The state regulation that prohibits sending yard wastes to landfills has created a problem for grounds managers and homeowners who need to dispose of tree leaves each fall. One alternative is to compost the leaves, either on the premises or at a local composting center. The latter requires the expense of collection, bagging, and a means of transport to a composting center. The former requires part of the landscape to be devoted to the composting. When there are many trees on the grounds, leaf clean-up and composting can be a time-consuming chore. Another means of disposal is simply moving the turf/tree leaves with a rotary mower often enough to pulverize the leaves so they fall into the turf.

It appears returning the leaves to the turf is not harmful to the grass if the mulching/mowing is done at appropriate times. When oak leaves are predominant, it will be necessary to mulch them into the turf later in the fall because they are held on the trees longer than most other trees. For best results, leave the mower set at the same height as you have been mowing the turf. It is important to use a rotary mower that pulverizes the leaves well and that the leaves are dry when mowed. Sharpening the mower blades and a slow movement with the mower will help to grind the leaves finer. It may be necessary to make as many as three or four passes over the area to grind the leaves fine enough. The finer the leaf particles, the more easily they fall into the turf, leaving grass leaves exposed to the sunlight.

The pulverized leaves will settle into the turf within a day or two, particularly if followed by rain. Take care that the pulverized leaves do not cover the grass blades entirely. It is best if the tree leaves are “mowed” regularly, not allowing them to lie on the turf more than three or four days. Fall is a very important time for the turf to photosynthesize and store carbohydrates, particularly under trees where the turf receives limited sunlight during the summer. It is suggested to add 1/2 pound nitrogen per 1,000 square feet in addition to the normal fall nitrogen fertilization to enhance decomposition of the tree leaves.

Mulching leaves into the turf is a reasonable means of disposing of the leaves. (DJ)

Turfgrass Cultivars for Nebraska

Kentucky Bluegrasses

Medium-High Input Cultivars (4 lb. N/1000 sq. ft., mowed at 0.5-2.5”, irrigated, prevent drought stress)

• Absolute, America, Arcadia, Award, Bartria, Blacksburg, Blackstone, Brilliant, Conn I, Explorer, Impact, Liberator, Limousine, Midnight, Nuglide, Odyssey, Platinum, Quantum Leap, Rambo, Rugby II, Serene, Shurwood, Total Eclipse, Unique

Low Input Cultivars (2 lb. N/1000 sq. ft., mowed at 3.0-3.5”, minimal to no irrigation)

• Baronne, Bartria, Barwest, Caliber, Cynthia, Canterbury, Haga, Midnight, Monopoly, Rustler, Ram I, Sophia, Unique

Turf-Type Tall Fescues

• Indicates cultivars moderate to high resistance to brown patch disease

• Adobe, Advanti, Antheum®, Arid®, Austin®, Aztec®, Bullet, Crossfire, Coyote, Debutante, Empress, Guardian®, Gazelle, Houndog V, Lancer, Lexus, Markman, Monarch®, Petite, Phoenix, Privy, Raider I, Raider II, Rebel 3D, Shortstop II, Silverado, Sunpro, Southern Choice, Tufem

Perennial Ryegrasses


Other Turfgrasses

Cool-Season Turfgrass Species: Perennial Ryegrasses

• Brittany, Brigade, Discovery, Ecoturf, Jasper, Nordic, Reliant II, Seabreeze, Tiffany

Creeping Bentgrasses (Putting Greens)

• Creeping Bentgrasses (Putting Greens)

• Backspin, Caro, Century, Crenshaw, Imperial, L-93, Penn A-1, Penn A-4, Penn G-6, Penncross, Penntx, Providence, Southshore, SR 1020

Buffalograsses

• Creeping Bentgrasses (Putting Greens)

• Pennagle, Southshore, Procup, Penncross

Rough Bluegrasses

• Colt, Sabre

Warm-Season Turfgrass Species: Bufalograsses

• Buffalograsses

• 315, 378, Bison, Cody, Sharp’s Improved, Tatonka, Texoka, Topgun

Zyergusgrasses

• Meyen

Cultivar lists are not inclusive. Consumers should use them as guides. Use all available information before making a final selection of grasses best adapted for use in your situation.

Consult the “yellow pages” directory in your telephone book for local suppliers of seed and sod for best results. Packaged seed mixtures and blends list the names of species and cultivars they contain. Read the label to be sure the package contains desired cultivars.

Consultation on turfgrass species, cultivars and their adaptation is available from your local Cooperative Extension Office. (DJ)
Grass clippings and leaves account for about one-third of the residential waste stream during the growing season. When the State of Nebraska was developing strategies to promote recycling, the waste stream was targeted. It is a waste stream that can be separated from other wastes relatively easily and the approach to make beneficial uses from it are relatively inexpensive when compared to other recycling options.

When the Nebraska State Legislature passed the Integrated Solid Waste Management Act in 1992, one of the key components was to prohibit the disposal of grass clippings and leaves at the sanitary landfill during the growing season, from April 1 to November 30 of each year. During this time, the state can fine any city or county up to $5,000 per day for dumping grass clippings and leaves in landfills. Based on this legislation the city developed the 16 acre yard waste compost facility next to the Blair Road Sanitary Landfill. This site receives over 20,000 tons of yard waste, bricks, and leaves, each year. This is equivalent to about 50,000 garage trucks during an eight month period.

Grass is mixed with leaves and wood chips to form windrows roughly 6-feet high and 12-feet wide. It takes 9 to 12 months to complete the composting process. If compost material is screened to remove any debris and wood chips and placed in a curing pile for another three months.

Since the program began in October, 1992, the cities has composted close to 111,800 tons of grass and leaves, and wood chipped 171,738 tons of tree debris. The amount of tree debris includes tree debris that was wood chipped from the 1993 and 1997 storms as well as wood materials from the sanitary landfill by the Parks and Recreation Department. For an average year the compost facility grinds about 60,000 tons of brush and tree debris.

The diversion of grass leaves and brush to the composting program for seven-years, has added nearly two-years to the life of the sanitary landfill. If the amount of material diverted over the remaining life of the landfill, another 4-25 years will be added to the life of the landfill’s life. Gene Hanlon, recycling coordinator, believes the compost program is successful because it saves valuable landfill space and produces a beneficial product that improves soils in the county. He states one of the primary goals is to become self-funded. Currently, the capital and operating costs of the program exceeds the revenue received from disposal fees and sale of finished compost. As a result, the city has raised the cost of compost and wood chips. This year, compost is $6.00 per cubic yard and wood chips for $5.50 per cubic yard, only a dollar increase from last year. A limited amount of compost is made available at no charge each spring at the North 48 Street Transfer Station. Please call 441-8215 for more information on the composting program. (GH)

Lincoln Composting Operation Saves Landfill Space

The city of Lincoln Recycling Office has announced the availability of LinGro compost. LinGro is a new term developed by Public Works and Utilities for the organic compost produced from grass clippings, leaves and yard waste. The public can obtain LinGro compost in bulk quantities from eight transfer stations in Lincoln. The eight retailers that will make the compost available to the public are: All Care Grounds Maintenance, South Coddington Ave.; Campbell’s Nurseries and Garden Centers, 7000 South 56th Street; El Paso Landscape Eng., 6701 Cornhusker Highway; Landscapes by Leuders; Nebraska Nursery and Color Gardens, 7801 Pioneers Blvd; Nemaha Nursery, 430 West Pioneers Blvd; Naturascapes, and Seeds of Life. The LinGro compost is only available in bulk quantities at these locations. A nominal fee is charged for the material by these retailers.

The main advantage of using LinGro compost is its ability to improve soil structure by increasing the water-holding capacity of the soil; adding beneficial micro-organisms to the soil; increasing soil porosity; and decreasing the bulk density of the soil. LinGro compost is an excellent top dressing for lawns. It improves soil fertility and water infiltration. The city of Lincoln also distributes wood chips to the public. Free wood chips are available from Oak Lake Park, 1st and Cornhusker Highway on a first-come, first-served basis and must be self-loaded. The 48th Street Transfer Station also has wood chips available for a fee and will load up pick-up trucks.

The city of Lincoln receives about 4,500 tons of grass and leaves each year and 6,500 tons of brush during the growing season. Residents must separate grass clippings and leaves from their household trash. Grass clippings and leaves are collected from April 1 through November 30 of each year. Individuals that subscribe to the special yard waste collection during an eight month period.

Checklist for Subscribing to Special Yard Waste Collection

If you subscribed to the separated yard and leaf collection through your garbage hauler last year, you will automatically be subscribed when this year’s program begins April 1. Here’s a check-list to make sure you are prepared for the separate yard waste collection.

• Secure proper container for grass clippings and leaves. Remember, any waste container you use should not be larger than 32 gallons and have a tight fitting lid. Your refuse hauler may provide a yard waste, 90-gallon cart for a small additional charge. Plastic bags can be used for grass and leaves.

• Make sure your yard waste container is clean. Any household waste contaminates the compost and causes problems at the compost facility. Haulers can be fined up to $50

What kinds of materials can be composted?

Yard waste, fruits and residues and other organic materials are suitable for composting. This includes leaves, grass clippings, straw and hay, sawdust, and finely chopped or shredded tree and shrub prunings.

Can kitchen scraps be added to a compost pile?

Kitchen scraps can be added to the compost pile, such as fruit and vegetable trimmings, coffee grounds and eggshells. Bury them in the pile to prevent odors and flies. Do not add meat scraps, bones, grease, whole eggs, or dairy products to the compost pile because they are slow to decompose, will cause odors, and can attract rodents.

What is the optimum size for a compost pile?

The best size of an enclosed compost pile is between a 3’ x 3’ x 3’. If any smaller, it will dry out too fast; any larger and there will be too much moisture and it will be difficult to turn the pile.

How can I avoid problems with unpleasant odors from the compost pile?

Odors may arise either from the addition of excessive amounts of wet plant materials like grass clippings and leaves. The solution is to spread the material over the compost pile. If not dried down, they will be aerobic and will attract animals. If not dried down, they will be aerobic and will attract animals.

Can I compost outside of the seven-month composting period?

Inexpensive when compared to the seven-month composting period, the Nebraska State Legislature passed the Integrated Solid Waste Management Act in 1992. The Act prevents the disposal of grass clippings and leaves at the sanitary landfill during the growing season, from April 1 to November 30 of each year. During this time, the state can fine any city or county up to $5,000 per day for dumping grass clippings and leaves in landfills.

LinGro compost is available to quantities from eight retailers and the Cooperative Extension Service. Partial funding for the eight-month composting program was provided by the Nebraska Legislature. The Legislative Comprehensive Solid Waste Reduction and Recycling Program (GH)

For an answer to this question, please refer to the index page 8a.
When water falls on the land it either infiltrate into the soil or runoff. Most of the activities associated with development and urbanization decrease infiltration and increase runoff. At the same time, the number of potential sources and types of pollutants increases. Storm water runoff can carry sediment, oil, grease, antifreeze, fertilizers, pesticides, animal wastes, and many other potential contaminants directly into streams, rivers, lakes, and wetlands and can significantly impair water quality. Because most of this pollution comes from many dispersed sources throughout a watershed as opposed to a single, identifiable source, it is referred to as nonpoint source (NPS) pollution. Unlike point source pollution, which has been significantly reduced through legislation and regulation, there are very few laws dealing with NPS pollution. In fact, it would be difficult to entirely address the problem of NPS pollution with laws and regulations. What is needed is a conscious, cooperative effort by everyone to take the steps necessary to reduce the impact of NPS pollution.

The most common nonpoint source pollutants in urban areas are plant nutrients, especially phosphorus, and the primary sources are leaves and grass clippings. When leaves and grass clippings are washed into the street, they eventually make their way into the storm drains and are carried directly into our streams and lakes. As they decompose, they release plant nutrients into the aquatic environment and deplete oxygen supplies making it difficult for many aquatic organisms to survive. Proper handling and disposal of yard waste is essential to protecting water quality in urban areas. When possible, use a mulching mower to chop up grass clippings and return them to the lawn. Not only does this keep them out of the surface water it also reduces the need for fertilizer. If you must bag your clippings dispose of them properly or, better yet, put them in a compost pile. In the fall, leaves should be collected and composted or placed in paper bags for disposal. While leaves and grass clippings are the primary source of plant nutrients in surface water, lawn and garden fertilizers also contribute to this problem. To minimize their impacts, apply lawn and garden chemicals sparingly and according to label directions. Make sure your spreader is properly calibrated and sweep any excess off of driveways and sidewalks so it cannot be washed into the street. Time your applications to avoid periods of heavy rainfall and, if possible, lightly water the material into the soil following application.

Although soil erosion is not normally a problem in urban areas after they are developed, controlling soil erosion and minimizing runoff from your lot will also help protect water quality. Control erosion by planting ground covers or using mulch to stabilize erosion prone areas and minimize runoff by creating areas in your landscape that will slow water down and allow it to infiltrate. Other things you can do to help reduce the impact of NPS pollution are:

- Dispose of used oil, antifreeze, paints, and other household chemicals properly.
- Clean-up spilled brake fluid, oil, grease, and antifreeze by using an absorbent material, such as kitty litter, and disposing it of in a safe manner rather than washing it into the street.
- Clean up after your pets and place all pet waste in the garbage.
- Wash your car on the lawn where the detergent, road grime and excess water can infiltrate into the soil rather than running down the gutter and into the storm drain. Better yet, use a car wash. These facilities have traps for collecting the dirt, oil, and grease washed off of the car and the rinse water drains to the sanitary sewer system where it can be treated. (SCB)

**Water Use in the Landscape**

Every time you turn on a faucet, an important natural resource, water, goes down the drain. Unfortunately, more water than necessary. This check list will help you conserve water for your lawn and garden use. Try to add these water conservation tips into your landscape and vegetable gardens. A few simple changes in your daily routine can conserve some of this important resource and help to avert waste.

- Mulch shrubs, perennials, annual flowers, and vegetable plants to retain moisture in the soil longer. Use shredded leaves, grass clippings, or chopped bark around the plants. Mulching also controls weeds that compete with garden plants for water.
- Vegetables that require more water should be grouped together in the garden to make maximum use of water applications.
- Collect rain water in a barrel or large bucket from down spouts. Use it to water container plants.
- Use a drip irrigation system in your gardens. This method uses 25 to 50 percent less water than a hose or sprinkler methods.
- Water the lawn during the morning hours. Avoid watering when it is windy or during the hottest part of the day. To avoid over watering, keep track of the time by setting a timer or alarm clock.
- When purchasing plants or developing a new landscape, select low water use plants. By making these simple changes, you can pull the plug on unwise water use and help to conserve this precious resource. (MIM)

**Conservation Checklist**

**Things you can do to help save natural resources.**

In your home...

- Recycle newspapers, cans, glass bottles, aluminum foil, and motor oil.
- Investigate local recycling centers that take items your garbage hauler does not.
- Use cold water in the washer; whenever possible.
- Do not use electrical appliances for things you can easily do by hand, such as opening cans.
- Store food in reusable containers instead of plastic wrap or aluminum foil.
- Do not leave lights running needlessly.
- Turn off the lights, television, or other electrical appliances when you are out of the room.
- Install a water saving shower head.
- Take unwatered and reusable items to a charitable organization or thrift shop.
- During the winter months, turn your heat down and wear a sweater.
- Get an energy audit from your utility company.

In your yard...

- Start a compost pile.
- Put up birdfeeders, birdhouses, and birdaths.
- Pull weeds instead of using herbicides.
- Use organic fertilizers.
- Compost your leaves and grass clippings.
- Use mulch to conserve water in your garden.
- Reuse plastic pots and containers.

On vacation...

- Carry reusable cups, dishes, and flatware.
- Do not pick flowers or keep wild creatures for pets, leave plants and animals where you find them.
- Watch out for wildlife, give consideration to all living things you see crossing the road.
- When hiking, stay on the trail, do not trample fragile undergrowth.

In your car...

- Keep your car tuned up.
- Carpool, if possible.
- Use public transportation, whenever possible.
- Recycle your engine oil.
- Keep your tires properly inflated to save gas; check your wheels properly aligned to save your tire.
- Buy a more fuel efficient model, when you are ready for a new car.
- Do not litter our roads and highways, save trash and dispose of it at a rest stop.

At your business...

- Recycle computer paper and cardboard.
- Use the computer’s automatic notes to yourself and others.
- Print or copy on both sides of the paper.
- Reuse manila envelopes and file folders.
- Use washable coffee mugs instead of throw away cups.
- Use the stairs instead of the elevator.

Spread the word...

- Convert by example, encourage your family, friends, and neighbors to save resources, too.
- Learn about conservation issues in your community or state.
- Volunteer your time to conservation projects.
- Learn about conservation issues in your community or state.
- Join groups, organizations, and help to avert waste.
- Carry reusable cups, dishes, and flatware.
- Do not pick flowers or keep wild creatures for pets, leave plants and animals where you find them.
- Watch out for wildlife, give consideration to all living things you see crossing the road.
- When hiking, stay on the trail, do not trample fragile undergrowth.

**Every time you turn on a faucet, an important natural resource, water, goes down the drain. Unfortunately, more water than necessary. This check list will help you conserve water for your lawn and garden use. Try to add these water conservation tips into your landscape and vegetable gardens. A few simple changes in your daily routine can conserve some of this important resource and help to avert waste.**

- Mulch shrubs, perennials, annual flowers, and vegetable plants to retain moisture in the soil longer. Use shredded leaves, grass clippings, or chopped bark around the plants. Mulching also controls weeds that compete with garden plants for water.
- Vegetables that require more water should be grouped together in the garden to make maximum use of water applications.
- Collect rain water in a barrel or large bucket from down spouts. Use it to water container plants.
- Use a drip irrigation system in your gardens. This method uses 25 to 50 percent less water than a hose or sprinkler methods.
- Water the lawn during the morning hours. Avoid watering when it is windy or during the hottest part of the day. To avoid over watering, keep track of the time by setting a timer or alarm clock.
- When purchasing plants or developing a new landscape, select low water use plants. By making these simple changes, you can pull the plug on unwise water use and help to conserve this precious resource. (MIM)

**What Do You Know About H2O?**

- How much water does it take to process one quarter-pound hamburger? About one gallon
- How much water does it take to process four new tires? 2,072 gallons
- How long can a person live without water? About one week, depending on the conditions.
- How much water is used to flush a toilet? 2-7 gallons
- How much of the earth’s water is suitable for drinking? 1 percent
- How much water is used to process a quarter-pound of beef? 1,500 gallons
- How much water does it take to process one can of fruit or vegetables? 9.3 gallons (MIM)

**Proper Landscape Maintenance Helps Protect Water Quality in Urban Areas**

Things you can do to help save natural resources.
Low Maintenance Trees & Shrubs for Your Landscape

After a major snow or wind storm, many of us are forced to remove damaged trees. The next task is to select trees to replace the one’s you lost. When replacing those unscorable trees, you may want to consider a low maintenance tree. These are trees that need minimal pruning, have minor insect or disease problems, have slower growth rate, and add value to your landscape. Consider selecting one of the trees on this list. After these trees become established, they will beautify your landscape for years to come. (MJM)

Trees

<table>
<thead>
<tr>
<th>Name</th>
<th>Mature Height (Ft)</th>
<th>Crown Spread (Ft)</th>
<th>Growth Rate</th>
<th>Mature Form</th>
<th>Fall Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Hornbeam</td>
<td>25-40</td>
<td>25-30</td>
<td>slow</td>
<td>oval</td>
<td>yellow</td>
</tr>
<tr>
<td>Amur Mazzardii</td>
<td>20-30</td>
<td>20-30</td>
<td>slow</td>
<td>round</td>
<td>green</td>
</tr>
<tr>
<td>Amur Cork Tree</td>
<td>20-40</td>
<td>20-40</td>
<td>medium</td>
<td>round</td>
<td>yellow-brown</td>
</tr>
<tr>
<td>Dogwood, Fragrant</td>
<td>15-25</td>
<td>15-25</td>
<td>medium</td>
<td>round</td>
<td>red-brown</td>
</tr>
<tr>
<td>Douglas fir</td>
<td>40-80</td>
<td>12-20</td>
<td>medium</td>
<td>pyramid</td>
<td>purple</td>
</tr>
<tr>
<td>Gingko</td>
<td>40-60</td>
<td>30-40</td>
<td>slow</td>
<td>oval</td>
<td>yellow</td>
</tr>
<tr>
<td>Golden rain Tree</td>
<td>20-25</td>
<td>25-30</td>
<td>slow</td>
<td>round</td>
<td>brown</td>
</tr>
<tr>
<td>Hackberry</td>
<td>50-70</td>
<td>30-40</td>
<td>slow</td>
<td>vase</td>
<td>yellow</td>
</tr>
<tr>
<td>Hardy Rubber Tree</td>
<td>40-60</td>
<td>40-60</td>
<td>medium</td>
<td>round</td>
<td>yellow-green</td>
</tr>
<tr>
<td>Hembebaum, European</td>
<td>40-60</td>
<td>10-40</td>
<td>medium-slow</td>
<td>oval</td>
<td>yellow</td>
</tr>
<tr>
<td>Japanese Tree Lilac</td>
<td>20-25</td>
<td>15-25</td>
<td>medium</td>
<td>vase</td>
<td>green</td>
</tr>
<tr>
<td>Linden, Little-Leaf</td>
<td>40-60</td>
<td>25-75</td>
<td>medium-slow</td>
<td>pyramid</td>
<td>yellow-brown</td>
</tr>
<tr>
<td>Magnolia, Saucer</td>
<td>20-30</td>
<td>20-30</td>
<td>medium</td>
<td>round</td>
<td>yellow-brown</td>
</tr>
<tr>
<td>Magnolia, Star</td>
<td>15-20</td>
<td>10-15</td>
<td>slow</td>
<td>oval</td>
<td>yellow to bronze</td>
</tr>
<tr>
<td>Maple, Norway</td>
<td>40-50</td>
<td>30-40</td>
<td>medium</td>
<td>oval to round</td>
<td>Yellow to orange</td>
</tr>
<tr>
<td>Maple, Sugar</td>
<td>50-70</td>
<td>40-60</td>
<td>slow</td>
<td>oval to round</td>
<td>yellow to red</td>
</tr>
<tr>
<td>Maple, Amur</td>
<td>15-20</td>
<td>10-15</td>
<td>medium</td>
<td>round</td>
<td>scarlet</td>
</tr>
<tr>
<td>Maple, Satinian</td>
<td>15-20</td>
<td>15-20</td>
<td>medium-slow</td>
<td>round</td>
<td>yellow-red</td>
</tr>
<tr>
<td>Maple, Black</td>
<td>40-70</td>
<td>40-70</td>
<td>slow</td>
<td>round</td>
<td>yellow</td>
</tr>
<tr>
<td>Mountain Ash, Korean</td>
<td>40-50</td>
<td>20-40</td>
<td>medium</td>
<td>round</td>
<td>yellow-orange</td>
</tr>
<tr>
<td>Oak, Swamp White</td>
<td>40-60</td>
<td>20-40</td>
<td>medium</td>
<td>oval</td>
<td>yellow-brown</td>
</tr>
<tr>
<td>Oak, Shingle</td>
<td>50-60</td>
<td>50-60</td>
<td>slow</td>
<td>medium-slow</td>
<td>yellow to red</td>
</tr>
<tr>
<td>Oak, Chinkapun</td>
<td>40-50</td>
<td>40-60</td>
<td>slow</td>
<td>medium-slow</td>
<td>yellow to brown</td>
</tr>
<tr>
<td>Oak, Burr</td>
<td>50-70</td>
<td>50-70</td>
<td>slow</td>
<td>oval</td>
<td>yellow-brown</td>
</tr>
<tr>
<td>Oak, White</td>
<td>50-70</td>
<td>30-50</td>
<td>slow</td>
<td>round</td>
<td>purple</td>
</tr>
<tr>
<td>Redbud, Eastern</td>
<td>20-30</td>
<td>25-75</td>
<td>medium</td>
<td>vase</td>
<td>yellow (purple flowers)</td>
</tr>
<tr>
<td>Smoketree, Common</td>
<td>10-15</td>
<td>10-15</td>
<td>medium</td>
<td>round</td>
<td>red-purple</td>
</tr>
<tr>
<td>Spruce, Colorado</td>
<td>30-60</td>
<td>10-20</td>
<td>medium-slow</td>
<td>pyramid</td>
<td>red-purple</td>
</tr>
<tr>
<td>Spruce, White</td>
<td>40-60</td>
<td>10-20</td>
<td>medium</td>
<td>pyramid</td>
<td>red-purple</td>
</tr>
<tr>
<td>White Fringe Tree</td>
<td>15-25</td>
<td>15-25</td>
<td>slow</td>
<td>round</td>
<td>Yellow</td>
</tr>
<tr>
<td>Witch Hazel, Common</td>
<td>15-30</td>
<td>20-25</td>
<td>medium</td>
<td>oval</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

Shrubs

<table>
<thead>
<tr>
<th>Name</th>
<th>Mature Height (Ft)</th>
<th>Spread (Ft)</th>
<th>Growth Rate</th>
<th>Mature Form</th>
<th>Fall Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barberry, Japanese</td>
<td>4-6</td>
<td>3-5</td>
<td>medium</td>
<td>round</td>
<td>scarlet</td>
</tr>
<tr>
<td>Cinquefoil, bush</td>
<td>2-4</td>
<td>2-4</td>
<td>slow</td>
<td>round</td>
<td>yellow</td>
</tr>
<tr>
<td>Cotoneaster, spreading</td>
<td>5-6</td>
<td>6-8</td>
<td>medium</td>
<td>round</td>
<td>yellow, red</td>
</tr>
<tr>
<td>Eumyrsus, winged</td>
<td>15-20</td>
<td>15-20</td>
<td>slow</td>
<td>round</td>
<td>red</td>
</tr>
<tr>
<td>Ninebark, dwarf</td>
<td>3-4</td>
<td>3-4</td>
<td>medium</td>
<td>round</td>
<td>yellow</td>
</tr>
<tr>
<td>Siberian Pea Shrub</td>
<td>15-20</td>
<td>12-15</td>
<td>medium</td>
<td>oval</td>
<td>red</td>
</tr>
<tr>
<td>Viburnum, Arrowwood</td>
<td>8-10</td>
<td>10-12</td>
<td>medium</td>
<td>round</td>
<td>red</td>
</tr>
<tr>
<td>Viburnum, Wayfaring</td>
<td>10-12</td>
<td>10-12</td>
<td>medium</td>
<td>round</td>
<td>red</td>
</tr>
</tbody>
</table>

Basic Tree Pruning for the Home Owner

Trees are the most valuable of all landscape plants. Care for them properly, and your trees will live a long and healthy life. Start tree maintenance the day you plant the tree and continue throughout its life. Proper pruning is essential and helps your trees live longer. Good pruning preserves your trees, attracts, and less susceptible to injury from natural forces, such as strong winds. On the other hand, poor pruning practices, topping in particular, make trees less attractive, more prone to pest and weather problems and, ultimately, shortens their life span. You may want to hire an arborist, a trained tree service, professional, to prune medium and large scale trees. These trees deserve professional maintenance because of their landscape value. Professional tree work will cost more, but you should view it as an investment. If you don’t have the knowledge or equipment to properly prune larger trees, you need to hire a professional tree service. Pruning tools are available at gardening stores, and through garden supply catalogs. Although, you should do most pruning from late winter through spring, other times of the year are also acceptable times to prune. Some trees will bleed when you prune them in early spring. Examples include maples and birch. This heavy sap flow does not hurt the tree, but you can prevent it by pruning during the growing season. Pruning wounds are best left unpainted. Pruning paint does not stop bleeding or prevent decay, and in some cases may even increase decay. Tree wound dressings are not recommended for most pruning cuts, including those made on maples, birch, and other bleeders to stop sap flow. When pruning trees, there are several types of branches to remove. Prune out dead branches, whenever you see them. Remove broken or diseased branches. And, remove branches that are rubbing together or growing back toward the tree’s crown. These last branches will eventually rub against other branches. Finally, prune out water sprouts and suckers. You will see water sprouts and suckers on flowering crabs, maples, and certain other trees. Suckers are long straight shoots that grow out of the ground from the tree’s roots, and water sprouts are long straight shoots that grow off of the trunk and main branches. Certain trees have multiple leaders, including maples, ashes, and lindens. Trees grow best and develop a better branch structure when you train them to a single leader. It’s important to remove all but the strongest leader early in the life of the trees prone to developing multiple leaders. Occasionally, you may need to remove lower branches on mature trees. You can usually do this anytime of the year. Because these branches are usually large, it’s best to use the three-cut pruning method for removal. To do this, make an undercut halfway through the branch, a foot out from the trunk. Make a second cut a few inches below the undercut. You will remove the branch with this second cut. Remove the stub with your third and final cut. The three-cut method prevents the falling branch from tearing a large section of bark from the trunk. No matter what kind of branch you’re pruning, the rule is to never leave a stub. Stubs are unsightly, and result in larger decay columns than flush cuts. Make pruning cuts flush to the branch collar when the collar is evident. Branch collars are the natural swellings that occur where a branch joins a larger branch of the branch. (MJM)
Low Water Use Flowers for Your Landscape

In Nebraska landscapes, conserving and maintaining water quality is essential. Planting water wise flowers will help accomplish this, while providing season long color. During establishment, water wise perennials require regular irrigation. After establishment, however, supplementary water will be needed only during periods of extended drought. The depth, width, and overall health of a plant’s root system determines how efficiently it uses water. To encourage maximum root growth, wet the soil to the depth and width of the eventual root span. Here is a list of low water use plants for you to try in your landscape. (MJM)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Annual/Perennial</th>
<th>Flower Color</th>
<th>Bloom Time</th>
<th>Height</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aster fendler’s</td>
<td>Aster fendleri</td>
<td>Perennial</td>
<td>Light Purple</td>
<td>July-September</td>
<td>12-18”</td>
<td>Sun</td>
</tr>
<tr>
<td>Beebalm</td>
<td>Monarda fistulosa</td>
<td>Perennial</td>
<td>Lavender</td>
<td>June-August</td>
<td>up to 5”</td>
<td>Sun to part shade</td>
</tr>
<tr>
<td>Black-eyed Susan</td>
<td>Rudbeckia fulgida</td>
<td>Biennial or short lived perennial</td>
<td>Yellow, Brown Center</td>
<td>July-August</td>
<td>24”</td>
<td>Sun</td>
</tr>
<tr>
<td>Blanket Flower</td>
<td>Gaillardia aristata</td>
<td>Perennial</td>
<td>Red with Yellow</td>
<td>June-August</td>
<td>18”</td>
<td>Sun</td>
</tr>
<tr>
<td>Boltonia</td>
<td>Boltonia asteroides</td>
<td>Perennial</td>
<td>White</td>
<td>August-October</td>
<td>48”</td>
<td>Sun to part shade</td>
</tr>
<tr>
<td>Butterfly Milkweed</td>
<td>Asclepias tuberosa</td>
<td>Perennial</td>
<td>Orange</td>
<td>July</td>
<td>24”</td>
<td>Sun</td>
</tr>
<tr>
<td>Coneflower Purple</td>
<td>Echinacea Purpurea</td>
<td>Perennial</td>
<td>Purple</td>
<td>July-August</td>
<td>36”</td>
<td>Sun</td>
</tr>
<tr>
<td>Coreopsis</td>
<td>Coreopsis lanceolata</td>
<td>Perennial</td>
<td>Yellow</td>
<td>June-August</td>
<td>24”</td>
<td>Sun</td>
</tr>
<tr>
<td>Gayfeather Rough</td>
<td>Liatris aspera</td>
<td>Perennial</td>
<td>Deep Purple</td>
<td>August-September</td>
<td>36”</td>
<td>Sun</td>
</tr>
<tr>
<td>Gayfeather Spicata</td>
<td>Liatris spicata</td>
<td>Perennial</td>
<td>Purple</td>
<td>August-September</td>
<td>18-24”</td>
<td>Sun</td>
</tr>
<tr>
<td>Missouri Primrose</td>
<td>Oenothera macrocarpa</td>
<td>Perennial</td>
<td>Yellow</td>
<td>May-July</td>
<td>12”</td>
<td>Sun</td>
</tr>
<tr>
<td>Pasque Flower</td>
<td>Anemone patens</td>
<td>Perennial</td>
<td>Lavendar</td>
<td>April-May</td>
<td>12-18”</td>
<td>Sun</td>
</tr>
<tr>
<td>Penstemon species</td>
<td>Penstemon species</td>
<td>Perennial</td>
<td>Reds, Pink, White</td>
<td>May-September</td>
<td>8-36”</td>
<td>Sun</td>
</tr>
<tr>
<td>Phlox, Prairie</td>
<td>Phlox pilosa</td>
<td>Perennial</td>
<td>Pink</td>
<td>June</td>
<td>12-18”</td>
<td>Sun</td>
</tr>
<tr>
<td>Sedum, Tall</td>
<td>Sedum telephium</td>
<td>Perennial</td>
<td>Rose to Salmon</td>
<td>August-October</td>
<td>18”</td>
<td>Sun</td>
</tr>
</tbody>
</table>

Proper Landscape Plant Maintenance

After plants are established in the landscape, maintenance needs can be minimized by following correct maintenance procedures on a timely basis. Following are some suggestions to reduce the time and amount of maintenance necessary in established landscapes.

1. Practice preventive maintenance.

   Be observant of your plants. Watch for disease and insect outbreaks regularly. Pests are much easier to control if they are affecting only a few leaves or one branch. By the time they spread to several plants or an entire shrub border they will be more difficult to control.

2. Use the right tool.

   Power tools can make short work of many maintenance operations. However, make certain they are the right tool for the job. For example, weed whips or string trimmers quickly mow down weeds and grass around buildings and fences, but should be used with caution around trees. The force of the trimmer line can cause injury to the bark, leading to girdling, unless the tree is protected from direct contact with the trimmer.

3. Irrigate various plant zones separately.

   Some plants are better adapted to hot, dry conditions than others. If plants of similar growth requirements are grouped together in the landscape, they can be watered as a group. Use the appropriate type of irrigation system for the planting. Overhead sprinklers or pop-up heads on an underground irrigation system may be most appropriate for turf. For shrubs and flower beds, drip irrigation may be the most efficient system.

4. Fertilize in moderation.

   Base your fertilization programs on soil test results. Recycle as many nutrients as possible onsite by leaving clippings on the lawn and applying leaf mulch compost to planting beds. Over-fertilization leads to excessive growth that needs frequent pruning. Excessive fertilization may also force growth that will be more susceptible to insect and disease attack.

5. Prune when appropriate.

   Take care of pruning needs when the problem first develops. Cut out weak, narrow crotches on branches, crossing branches or competing branches while they are still small in diameter. These problems will not correct themselves and the pruning job becomes more major with each season the task is delayed. Avoid planting trees and shrubs where they will outgrow their designated space without frequent pruning.

   Several hours of planning and thought before planting can prevent maintenance headaches for years to come. (MJM)

Using Mulch in the Landscape

Mulch in the home landscape not only conserve moisture, modify soil temperatures and control weeds but also may be used to make landscapes more attractive and usable. Many types of material, organic or inorganic, may be used as mulch. Organic mulch may break down in one season or less, or persist for several seasons. Those that persist for more than one growing season are more useful around permanent plants.

Inorganic mulch, such as gravel, crushed stone or some manufactured products, are not as beneficial to plants as the organic mulch, such as wood chips, sawdust, bark, compost, grass clippings, or shredded leaves. Though not generally considered mulch, some low growing ground cover plants produce many of the same beneficial effects as mulch. Mulches should not be considered as fertilizer. Most of them release some nutrients as they decompose, but the fertilizer value is very small compared to the physical effects. Where mulch is needed, use for the mulch value and add fertilizer, as needed. (MJM)
Kids Page

Learn About Ground Water – The Fun Way!

Ground water, the water we pump from the earth through wells or which flows naturally from springs, is one of Nebraska’s most valuable resources. It is not new water, but “recycled” water that is related to all the other water on earth by a process called the hydrologic cycle. The source of ground water is precipitation. When rain, snow, sleet, fog, or any moisture falls on the surface of the ground, some of it travels on the land into lakes and streams (runoff), and some soaks into the ground (infiltration) and reaches the saturated zone or aquifer, a holding place for ground water. The top of the saturated zone is the water table.

Ground water moves slowly down gradient between grains of soil or in cracks in rocks until it reaches a point where it can discharge at the surface, such as a lake, stream, or wetland, or until it is withdrawn from a well. It then becomes surface water again. It then evaporates to become precipitation, and thus the cycle begins again. Ground water we use today may have traveled through the hydrologic cycle hundreds or thousands of times since the earth was formed.

The ground water flow model is used to demonstrate ground water movement principles. It demonstrates two types of aquifers: unconfined and confined. To complete this demonstration,iggler worms (not earthworms) must be purchased or否则 most system, red wiggler worms (not earthworms) must be purchased or taken from another worm bin to stock the new bin. When most of the contents of the bin have become dark “worm castings,” the contents may be harvested and used. The finished compost will be greatly reduced from the original volume, and should only fill one half or less of the bin. The compost may be harvested by moving it all to one side and adding fresh bedding to the empty side. Once you begin burying food waste in the newly bedded side, the

Worms Eat your Garbage!

When “red wigglers” worms eat your garbage, it’s called vermicomposting and this process takes place in a bin. These bins can be wood boxes or any containers with lids that provide worms with a dark and moist environment in which to live and eat vegetative food wastes. Worms are bedded with these boxes in shredded and moistened newspaper, corrugated cardboard or other high-cellulose materials. Selected kitchen garbage is buried in this bedding and burial spots are rotated in an organized progression. Worms turn the food wastes and bedding into a high quality soil amendment suitable for use on houseplants, vegetable seedlings, and flowers.

With some understanding of what red wigglers’ need, vermicomposting systems are simple to use indoors with two or three times each year, a few hours are spent preparing bedding, and harvesting compost, and worms. Vermicomposting is an interesting way to compost non-fat kitchen wastes. In addition, it composts the newspapers, cardboard or other wastes used as bedding. Worm bins are most efficient if sized and stocked according to the amount of waste to be handled. Surface area is more important than depth in sizing a worm system; generally, one square foot of surface is required for every pound of food waste to be composted per week.

To start a vermicompost system, red wigglers (not earthworms) must be purchased or taken from another worm bin to stock the new bin. When most

Evaluating Future Stewards of the Earth

Each year, approximately 3,000 fifth-graders attend earthwellness festival and in six years, over 19,000 youth have participated. In October, pre-festival learning kits are delivered to each school attending the event. Each kit contains 20+ hands-on activities, all the materials, supplies, and equipment to complete these lessons, plus a computer game and more. Kits provide year-round learning opportunities for the teachers and students attending earthwellness festival.

earthwellness festival is truly a committee effort.

• To date, nearly $604,850 cash and in-kind services support the festival.

• More than $58,000 in grants have been awarded to the festival.

• Community volunteers have donated over 8,400 hours of service to the event. This support is valued at more than $109,200.

• Presenters and their respective agencies donated nearly $175,000 in staff support, office supplies and services, site facilities, and educational programs.

An award winning event, earthwellness festival has received the 1995 Ventures in Partnership School Award for outstanding and innovative programs for Lincoln Public Schools students, the City of Lincoln’s 1995 Environmental Award, the 1997 University of Nebraska Cooperative Extension Team Programming Award and the 1999 Institute of Agriculture and Natural Resources Team Effort Award.

If you wish to volunteer or be a part of this important education program, call Arlene or Dave. (ALH)
Pruning Mature Deciduous Shrubs

Correct pruning is one of the most essential of all management practices for shrubs in the home landscape. Proper pruning will help keep shrubs vigorous, maintain them in proper shape and form for a desirable landscape effect, and add years to their usefulness. Prune deciduous shrubs to maintain natural habit of growth; remove dead, damaged or broken branches; promote flower and fruit development; encourage vigorous growth of plants with colored twigs; and improve chances of survival at transplanting time.

With most shrubs, the ideal time to prune is during the dormant season before new growth begins. Spring flowering shrubs, such as forsythia and lilac, should be pruned shortly after flowering to avoid removing flower buds. Prune vines that bloom after the end of June in the winter or spring before new growth starts. These plants develop their flower buds during the spring growth period. Prune shrubs that bloom on current season’s growth include rose-of-Sharon. In general, most deciduous shrubs should be thinned out rather than sheared or cut back. Thinning out excessive or unsightly branch formation at the top of the plant and main-stems maintains the natural habit of growth. Thinning is done by cutting off a branch where it is attached to the main stem. This method, the least conspicuous of all type of pruning, is best used on plants that are too dense. To develop branches that grow toward the outside of the dense growth, remove the inward growth. Prune to plant, remove the inward growth toward the outside of the dense. To develop branches that grow toward the outside of the dense growth, remove the inward growth toward the outside of the dense growth. Prune the plant by cutting off the oldest branches at the ground, leaving only the young stems. If there are not many younger stems, remove the older wood over a three-year period to maintain the overall shape of the plant. New shoots that develop can be cut back to various lengths by the thinning-out method, which encourages the development of strong branches. Prune the plant by cutting off the oldest branches at the ground, leaving only the young stems. If there are not many younger stems, remove the older wood over a three-year period to maintain the overall shape of the plant. New shoots that develop can be cut back to various lengths by the thinning-out method, which encourages the development of strong branches. Plants that often become overgrown and benefit from rejuvenation include forsythia, honeysuckle, spirea, viburnum, weigela and other fast growing types. These plants, if extensively overgrown, severely weakened or otherwise unhealthy, can be cut back to the ground but may not bloom for one or several years, depending on the rate of regrowth. (MM)

Answers

adequately turned compost heap will generate little if any objectionable odor. Good aeration, provided by regularly turning over the materials in the pile, is essential for good, rapid decomposition. Also, keeping the compost damp but not waterlogged will go a long way toward preventing unpleasant odors. How long does it take to reach a finished product? Generally, a compost pile that contains a good mixture of finely chopped materials, is turned regularly and kept moist, will be ready in two to four months. A pile or bin left unattended and material not shredded may take a year or longer to decompose. Piles prepared in the late fall will not be very well decomposed by the spring. When the compost is finished, the pile will be about half its original size and have a pleasant, earthy smell. Of what value or use is the finished compost product? Compost is used as an organic amendment to improve the physical, chemical, and biological properties of the soils. For example, adding compost to garden soil will increase the moisture holding ability of sandy soils, and improve the drainage and aeration of heavy clay soils. Over time, yearly additions of compost will create desirable soil structure making the soil easier to work. (MM)

Trouble-shooting Your Compost Pile

Composting is a science based on guess work. Ideally a compost pile’s outside will be warm, moist and earthy-smelling. When it’s not, it means that one or more of the six components listed at the beginning of this article are out of balance. The chart will help you correct the problem. If there is a problem with your compost pile, don’t worry; compost will still result, but you’ll have to wait longer.

There are many books about composting; look for them at book stores, garden centers and the public library. Your county extension agent can also answer your composting questions.

Who to contact to be yard smart.

Backyard Composting Cooperative Extension 441-7180
Compost Availability Recycling Office 441-8215
Disposal Lawn Chemicals Lincoln-Lancaster County Health Department 411-8040
Lawn Chemical Use Cooperative Extension 441-7180
Mulching Grass Clippings Cooperative Extension 441-7180
Water Conservation The Water Center 472-3305
Wood Chip Availability Recycling Office 441-8215
Yard Waste Collection Lincoln Solid Waste Management Association 441-8284
Complaints on Backyard Lincoln-Lancaster County Health Department 441-8040
NeibGuide Lists/ Publications/Websites Cooperative Extension 441-7180
Nebraska Department of Agriculture (8:00 a.m.-5:00 p.m., M-F)...........471-2394
Information on certification for private and commercial pesticide applicators
Poison Control Center (24 hours).............................................(800) 955-9119
National Pesticide Telecommunications Network (8:00 a.m.-6:00 p.m., M-F).............................................(800) 888-7378

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<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Problems</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pile is wet and smells like rotten eggs.</td>
<td>Not enough air; pile too wet.</td>
<td>Turn it; add coarse, dry wastes such as straw or corn stalks.</td>
</tr>
<tr>
<td>The center is dry and contains tough, woody wastes.</td>
<td>Not enough water in pile. Too much woody material.</td>
<td>Turn and moisten; add fresh green waste; chop or shred the pile.</td>
</tr>
<tr>
<td>The pile is damp and warm right in the middle, but nowhere else.</td>
<td>Pile is too small, or too dry.</td>
<td>Collect more material and mix into a new pile; moisten.</td>
</tr>
<tr>
<td>The pile is damp and sweet-smelling, but will not heat up.</td>
<td>Lack of nitrogen. The compost may be done, check and see!</td>
<td>Mix in fresh grass clippings or nitrogen fertilizer.</td>
</tr>
<tr>
<td>The pile has an aminoa odor.</td>
<td>Too much green material. Lack of nitrogen.</td>
<td>Add high carbon material, such as straw, wood chips or sawdust.</td>
</tr>
<tr>
<td>Pets, racoons, rats and insects are attracted to the pile.</td>
<td>Meat scraps and fatty foods are present.</td>
<td>Remove meat and fatty foods from pile. Cover pile with a layer of soil. Turn the pile to increase temperature.</td>
</tr>
</tbody>
</table>

We assure reasonable accommodation under the Americans with Disabilities Act; for assistance contact Lancaster County Extension, 444 Cherrycreek Road, Lincoln, Nebraska 68528-1507, 402-441-7180. TDD capability available.
Once again it is time for another NBNL column—this time for March. March—time to think about digging out of the winter’s last snowstorm, breathing in the fresh air of spring, wearing lighter coats, opening windows more than just a crack, and watching the trees begin to bud. All this is a little hard to think about because I’m writing this on February 9. Snowed in with inches and inches of snow—can’t get out of the driveway, horrible wind chill, and more snow forecast for next week. But I am truly thankful our power has been on throughout it all.

By the time you receive the Newsline, our weather should be much improved. Even now, there are some positive signs of things to come. If you attended the January Council meeting, you have already sighted the Easter Bunny! Once again our clever crafters came up with a variety of bunnies to top their new candy jars. I have also noticed packages from nurseries arriving at our house with all those vegetable and flower seeds.

At the January Council meeting we enjoyed lunch, our craft project and had time to visit with other FCE members. Yearbooks for 2001 were distributed, workshops for the Sizzlin’ Seniors were discussed, as well as our scholarship program and possible county service projects. Final decisions on the latter two projects will be determined at the March meeting.

The next council meeting is set for March 26 at 1 p.m. The program, Planting Tips, will be presented by Don Jansen, extension educator. Host clubs will be Live and Learn and 49’s.

Applications for the FCE scholarship are due at the extension office by April 1. This is a $200 scholarship and information on illegibility was distributed at the January Council meeting. For additional information, call your club resident, county officers, or the extension office.

Entrees for Heritage Skills should be brought to the March Council meeting.

The earth wellness festival is scheduled for March 22 at Southeast Community College.

It’s not too early to mark your calendar for the state FCE meeting in Kearney beginning at 5 p.m. on August 16 and closing August 17 at 5 p.m. at the Holiday Inn. Happy St. Patrick’s Day!

Grandparenting has the acceptance of children that can be found in no other role. Grandparenting can be profound. Whether the grandparent is looking to fill a physical or emotional void in the grandchild’s life, creating the grandparent-grandchild relationship is often developed for life. In a recent conference. Plan now to attend. (LB)

The April FCE leader training, “Family Storytelling” will be presented March 27 at 1 p.m. Lancaster County, extension educator, will be presenting this lesson. The Family Storytelling lesson will help participants understand the importance and value of stories and explore ways to pass the stories on to future generations. (LB)

- FCE Scholarship -

A $200 scholarship provided by 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 2001 or who have completed two years of study in a vocational school. Application due April 1 in the extension office.

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- FCE Leader Training -

Today grandparents come in all ages and from all types of families and research tells us that her husband sends flowers to each of his grand-children every Valentine’s Day.

One national survey of grandpar-ents reported a variety of activities were engaged in with grandchildren.

Here are just a few:

- Teaching a skill or game
- Giving money
- Talking about growing up
- Giving advice
- Paying your bills. When debts are incurred it is important to remember you are paying for those debts and be responsible for your actions. Return items you borrow. When something is lent to you, it is usually assumed you will return it to its owner at a later date.

Broken promises can frustrate others or hurt their feelings. Make an honest effort to fulfill all your commitments and promises. (LB)

The second of four characteristics of being a trustworthy person is promise-keeping. This is an important trait because people who don’t keep promises are often viewed as unreliable and not trustworthy. Promise-keeping is simply doing what you say you will do. Keeping your word and only making promises you know you can keep shows you are trustworthy. When you make commitments, don’t use excuses to get out of them. Remember people may be relying on you. Don’t make any promises that may require you to do something unethical. Another area of promise keeping is paying your bills. When debts are incurred it is important to remember you are paying for those debts and be responsible for your actions. Return items you borrow. When something is lent to you, it is usually assumed you will return it to its owner at a later date.

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So Now You’re a Grandparent

LaDeane Jha
Extension Educator

As many of you know, Deanna Karmaniz of our Lancaster County staff made two sets of very excited parents out of me and her—me, her husband, Steve, did double duty by producing two grandchildren at once—one for each. I met Deanna Karmazin of our Lancaster County staff made two sets of very excited parents out of me and her—me, her husband, Steve, did double duty by producing two grandchildren at once—one for each. I met

Great-great grandmother, Lilly Osteburu of Holdrege, NE, holding Chris, Deanna holding Lilly. By the time you receive the Newsline, our weather should be much improved. Even now, there are some positive signs of things to come. If you attended the January Council meeting, you have already sighted the Easter Bunny! Once again our clever crafters came up with a variety of bunnies to top their new candy jars. I have also noticed packages from nurseries arriving at our house with all those vegetable and flower seeds.

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Achievement Night Highlights

The 4-H Achievement Night and 4-H: What’s It All About? program was held February 6. 4-H members began the night by giving demonstrations, speeches, modeling clothing items, performing musical selections, and sharing information about other 4-H events and opportunities. 4-H youth and volunteers were also recognized for their achievements in 2000 and the time they have given to the program. Receiving the Meritorious Service award was Nancy Birkett. This award recognizes the many years of dedicated service they gave to the 4-H program. Community service awards were presented to the following 4-H’ers: Rachel Rentschler, Caleb Pearson, Sam Beck-Johnson, Megan Bergman, Ashley Dryer, Karen Clinic, Laura Cassel, Becky Fiala, Willi Fox, Shannon Drake, Alyssa Fiala, Erica Daugherty, Emily Veburg, Michael Veburg, and Sean White. This award is given to those 4-H’ers with the largest number of volunteer hours.

Each year 4-H members turn in record books to show their accomplishments in the 4-H program. This year’s county award winner was Karen Clinic. Those selected to represent Lancaster County at the district competition were Megan Bergman and Becky Fiala.

Receiving the Outstanding 4-H member award was Megan Bergman. I Dare You awards were presented to Marta Madsen and Megan Bergman. The 4-H Council gave eight scholarships. Receiving these awards were Tyson Ritz, Kaleena Dey, Teresa Perrin, Joshua Blum, Megan Bergman, and Marta Madsen. Michael Backes was presented the Jonathan Backes scholarship and Teresa Perrin was presented the Amy Countryman scholarship. Lincoln Center Kiwanis awarded their scholarship to Marta Madsen and the Lane scholarship was awarded to Catherine Potter. The 2000 Outstanding 4-H Club awards, sponsored by the Lincoln Center Kiwanis, were presented to the following clubs: Low Riders, led by Sherry Mellan, Clover & Company, led by Kay Clinch; and, Happy Go Lucky, led by Ron Dowding.

4-H Leader Training

Want to learn new and innovative ideas for your 4-H club? Plan to attend the 4-H leader training Tuesday, March 13 at 9:30 a.m. or 7 p.m. All 4-H leaders and parents are invited to attend. (TK)

2001 Clover College

June 19-22 (date correction)

Do you want to learn some new and exciting things? Do you like making projects and meeting new people? Then plan on attending the 2001 Clover College Tuesday, June 19 to Friday, June 22, 8 a.m. - 4:30 p.m. Some possible workshop topics include sewing, table setting, outdoor education, nutrition, and many others. Most workshops will consist of one to four sessions with each session lasting two hours. A fee will be required for most of the workshops. You may sign up for as many or as few of the workshops as you like.

Look in next month’s NEBLINE for more information and registration forms. Call Tracy if you have any questions, or may be interested in presenting a workshop. (TK)

Music Contest

Join the fun and enter the 4-H Music Contest! Your club can sing and dance at this exciting 4-H event. The 2001 Music Contest will be held Sunday, April 29, 2 p.m. at Dawes Middle School Auditorium. Stop by the office or call Tracy for a registration form and for more information. Rules can also be found in last year’s fair book. All registration forms are due to the office by Friday, April 20. (TK)

Creating A Winner

What: Cattle Grooming and Showmanship Workshop
Where: Saturday, March 31, 9 a.m to 2 p.m.
Where: Lancaster County Event Center

Youth will have the opportunity to work with professional groomers to learn how to properly clip and groom their beef projects. After grooming, youth will attend a showmanship workshop. Everyone is encouraged to bring a clean, tame calf, clipping chute, and grooming supplies. For additional information contact Deanna or Lance at 441-7180. (DK)

Creating A Winner Registration Form

(One person per form)
A $5.00 fee per person must be paid in full upon registration.

Name: __________________________ Age: _____ Sex: ________
Address: _________________________________________________________________

Daytime phone number: ________________________________ special needs: ______________________

1. Check/money order should be made payable to Lancaster County Extension.
2. Mail this registration form along with check or money order to Lancaster County Extension, 444 Cherry Creek Road, Suite A, Lincoln, NE 68526-1507.
3. Registration must be received by March 26.

Kiwanis Karnival

Karnival time is here! The Kiwanis Karnival is a free family event sponsored by Lincoln Center Kiwanis and the 4-H Council. It is scheduled for Saturday, April 21, 7-9 p.m. at State Fair Park in the Lancaster Building. All 4-H families are invited to attend this fun and free activity.

4-H clubs or families are needed to provide carnival-type games booths for the evening. Each booth will have an area 4’ x 6’ to use. Prizes are provided. If your club or family would like to provide a booth, call the extension office to register by April 6.

There will be bingo for the adults and treats for all. Plan now to attend this fun, family activity. For more information, call Lorene at 441-7180. (LB)
A horse incentive program has been started in Lancaster County for 4-Hers who are interested in setting goals for the 4-H year, finding sponsors for educational programs and logging hours of actual 4-H activities. For information and a form, please call Ellen at 441-7180. (EK)

4-H Camp Dates
4-H camps at the Eastern Nebraska 4-H Center, near Gretna, are summer adventures that allow your child to have an experience of a lifetime. 4-H camp allows your child to become more independent, build self-confidence and self-worth, discover new recreational skills, and develop a sense of love and respect for others as well as the out-of-doors.

If you’d like to see your son or daughter enjoying the fun and excitement of summer camp, help put them in position to do so. Enroll them with a friend in a 4-H camp. Brochures are available at the Lancaster Cooperative Extension Office. (TK)

Fish Camp June 4-6
Outdoor Skills I June 8-10
Discovery I June 11-13
First Timers June 14-15
Clove Kids Camp I June 16
Discovery II June 18-20
Wet-n-Wild I June 21-23
Boldly Bound June 25-28

Outdoor Skills II June 29-July 1
Spotlight on Talents July 2-4
Nebraska Trip July 8-11
Summer Sports July 14-16
Wet-n-Wild II July 17-19
Clove Kids Camp II July 31
High Adventure August 1-4
Road Trip Nebraska August 6-9

4-H & Youth

3. Tips for using filters: How to filter your lens to make your photos look more interesting. 4-H Camp Counselors Needed If you are 14 years of age or older and enjoy working with youth and sharing your skills, this is a great opportunity for you. Camps are held at the Eastern Nebraska 4-H Center during June and July. Camp counselor applications are available at the extension office and due by March 29. A training will be held at the 4-H Center for all selected counselors. (LB)

Working With An Adjustable Camera - The Focus of Photography Workshop II
Adjust your schedules and plan now to attend our second photography workshop. Joseph Torrey from Harman’s Camera will present information for 4-H’ers interested in learning more about taking sharp photos. Many of the topics covered are ideal for those taking Photography Level 2. Specific topics include:
1. Getting to know the different parts of your camera.
2. Different speeds and types of film. Learn what is best for your camera and the kind of pictures you are taking.
3. Adjusting lens opening and shutter speed settings to get the right light for the best pictures.
4. How to frame pictures to make them more interesting to viewers.
5. How a variety of patterns and textures can add interest to your photo.
7. How to capture people in motion.
8. How to compose your shots.
9. How to properly expose your shots.
10. How to develop your photos.
11. How to print your photos.
12. How to store and protect your photos.
13. How to present your photos.

Come To The Record Book Workshop Saturday, April 28, 9:30 a.m.
Do 4-H record books confuse you? Would you like to learn some record books on the computer? Attend this workshop and discover answers to your record book questions, tips to make your record books shine, and how to successfully complete them. (Tk/DK)

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Pets at the Museum!
Sheri Ramirez, Leader
Pet Pals 4-H Club will be holding its third annual pet show at the new Lincoln Children’s Museum. This event will take place on Friday, March 30, 12-3 p.m. Pet Pals members will display their household pets and habitats for kids of all ages. So plan to spend a “school off” day with us and enjoy our show!

Spring Rabbit Clinic and Show
The Lancaster County Spring Rabbit Clinic will be March 29, 7 p.m. at the Lancaster Extension Education Center. There will be sessions on stationary exhibits, grooming and rabbit care, showmanship, judging, and quiz bowl. The clinic is free to everyone and you need not bring a rabbit.

The Spring Rabbit Show will be Saturday, March 31, 9 a.m. at the Lancaster Building at the State Fair Park. Registration will begin at 7:30 a.m. The cost is $2.50 per rabbit at the day of the show. Early registration is available. To request a registration form, call Ellen at 441-7180, or email her at ekraft@unl.edu. Early registrations are due by March 17. (EK)

Chesse Club
The 4-H Chess Club will meet Monday, March 26, 7 p.m. Any youth interested in joining the club are invited to attend. The club will meet the 2nd and 4th Monday of each month. For more information, contact Lorene at 441-7180.

Does your 4-H club want $1000?
If so, apply for a grant sponsored by the Nebraska Investment Finance Authority (NIFA). These dollars can be utilized for educational experiences (programs, service projects, trips, etc.) that will encourage youth to consider agricultural careers. There are more careers than farming in agriculture. Why not explore careers in food science, chemistry, veterinary medicine, animal science, zoology, law, or sociology? To obtain a grant application, please contact Deanna at 441-7180. Applications are due March 23.

Bake & Take Days
Bake & Take Days, sponsored by the Nebraska Wheat Board, are scheduled for Friday and Saturday, March 23-24. Bake & Take Days are a time to bake an item and take it to someone to let them know you’re thinking about them. This “someone” could be a friend, neighbor, elderly person, or shut-in who is frequently alone. If you want to deliver baked goods to a nursing home resident, be sure to check for dietary restrictions.

Stickers and pamphlets are available at the extension office. This is a great community service activity for 4-H or FCE clubs or families. (LB)
Ak-Sar-Ben Pioneer Farm Awards

For the 46th year, the Knights of Ak-Sar-Ben and the Nebraska Association of Fair Managers will recognize Nebraska Pioneer Farm Families whose land has been owned by the same family for 100 years or more. Titled "the Nebraska Pioneer Farm Family Award," local recognition requires that the land of a family in Lancaster County must have been owned by some member of that family for a century or more. To date, over 6,000 families have been honored throughout Nebraska. Each honoree receives an engraved plaque and gatepost marker as permanent recognition of this milestone.

"A great deal of who we are as a state is tied to our agricultural and natural resources. We want to synergize our natural resources, our land, our crops, our livestock and our people in order to continue this wonderful quality of life. And we must be the ones to do it."

-Merilyn Carlson, Director, Nebraska Department of Agriculture

Ag Awareness Festival Scheduled April 24-25

Come spend an educational day on the farm!!! All fourth grade students in Lancaster County, along with their teachers and parents are invited to attend the Ag Awareness Festival April 24 and 25 at the Lancaster Event Center. The festival will provide hands-on learning opportunities for students to learn about the importance of Nebraska agriculture in their lives. During the day, students will focus on beef, dairy, swine, and crop production in the State of Nebraska. Students will receive hands-on learning opportunities about the production and packaging, transportation, and advertising of these products produced by beef, dairy, swine, and grains. These learning opportunities include interacting with cows, baby calves, and pigs, climbing on real farm machinery, and tasting the food produced from all of these products. The Ag Awareness Festival is sponsored by the Ag Awareness Coalition, a body of representatives from several Nebraska agricultural organizations, including the University of Nebraska Cooperative Extension in Lancaster County. Thanks to this sponsorship, there is no charge for the event and transportation costs to the Ag Awareness Festival may also be covered.

How does your class participate in the Ag Awareness Festival?

Registration is open to all fourth graders. To obtain more information or to register a class for either the April 24 or the April 25 session, please contact Lance Cummins-Brown, Extension Educator at the Lancaster or Saunders County Extension Office at 402-441-7180 in Lincoln or 402-624-8030 at the ARDC near Mead, or e-mail brown4@unl.edu (additional information can be found at the Ag Awareness Coalition website www.AgAware.org). Each day will be limited to 300 students, so register early to secure your spot. (LCB)
Ingredients continued from page 6

**Crumbling Cream**
Amount: 1 cup unwhipped Substitute: If you wish to use a commercially prepared whipped cream or whipped cream substitute rather than whip your own cream, use the guideline that 1 cup UNWHIPPED whipped cream expands to 2 cups when WHIPPED. For example, if your recipe called for 1 cup of cream that had been whipped, you could substitute 2 cups of an already whipped product.

*egg* Amount: 1 whole egg Substitute: (examples include: Egg Beaters, Second Nature, Scramblers); check label for specific directions.

**Reconstituted powdered eggs**
Follow package directions.

**Eggs**
Amount: 1/4 cup egg substitute Substitute: The National Egg Association recommends that you replace no more than half the eggs specified in any recipe. You may be able to use more than half the eggs specified in a recipe without affecting the quality of the final product by:
- Adding another egg to the mixture.
- Decreasing the liquid ingredients in the recipe by 1/3.
- Decreasing the dry ingredients in the recipe by 1/2 cup for every egg replaced.

**Egg substitute**
Amount: 1 cup Substitute: 1 cup granulated sugar plus 1 tablespoon cornstarch; or 1/2 cup liquid (for baking plus 1 tablespoon powdered eggs on hand.

**TIP:** It's generally recommended that you replace no more than half the whole white flour with whole wheat flour. Too much whole wheat flour in a recipe calling for all-purpose flour might result in a reduced volume and a heavier product.

**Flour, Cake**
Amount: 1 cup Substitute: 1/2 cup whole wheat flour plus 1/2 cup all-purpose flour

**Flour, All-Purpose Whole White**
Amount: 1 cup Substitute: 1/2 cup whole wheat flour plus 1/2 cup all-purpose flour

**Flour, Self-Rising**
Amount: 1 cup Substitute: 1 cup all-purpose flour minus 2 teaspoons baking powder plus 1 teaspoon salt

**Garlic**
Amount: 1 small clove Substitute: 1 1/2 teaspoons minced garlic or 1 teaspoon garlic salt (for use in recipes calling for garlic)

**Herbs, Fresh**
Amount: 1 tablespoon, finely cut Substitute: 1 teaspoon dried herbs

**Substitute: Most rice products will substitute for each other on a fairly equal basis in recipes, however, their cooking times and the amount of liquid needed may vary. If possible, choose a rice with a comparable grain length for the closest match. Visit the USA Rice Federation’s Rice Cafe to learn more about cooking with the different forms of rice: http://www.ricecafe.com

**Rum**
Amount: Any amount Substitute: Any amount plus 1 tablespoon extract plus 3 parts water. For example: for 1/4 cup rum, substitute 1 tablespoon rum extract plus 3 tablespoons water.

**Sugar, Confectioners’ or Powdered**
Amount: 1 cup Substitute: 1 cup granulated sugar plus 1/4 cup water

**TIP:** Dried onion powder can be added directly to moist foods such as soups, gravies, sauces and salad dressings. You may need to rehydrate it with a little water before adding it to dried foods. For some package directions—one brand advises adding an equal amount of water to the onion and letting it stand over night. 10 minutes. 

**Pasta (substituting one for another)***
Amount: 4 cups COOKED Substitute: The National Pasta Association suggests these substitution ratios. Check http://www.longofoodpastas.com/facts.html#Q10 for more information.

- 8 ounces of UNCOOKED elbow macaroni, medium shells, rotini, twists, spirals, wagon wheels, bow ties, broken penne, radiatore, rigatoni, spaghetti, angel hair, linguine, vermicelli and fettuccine all produce about 4 cups COOKED pasta.
- Use about twice as much UNCOOKED egg noodles to provide 4 cups COOKED pasta.
- Approximately 8 ounces UNCOOKED egg noodles equal 2 cups COOKED noodles

**Pumpkin Pie Spice**
Amount: 1 teaspoon Substitute: 1/2 teaspoon cinnamon plus 1/4 teaspoon ginger plus 1/8 teaspoon ground all spice plus 1/8 teaspoon ground nutmeg

**Rum**
Amount: Any amount Substitute: Most rice products will substitute for each other on a fairly equal basis in recipes, however, their cooking times and the amount of liquid needed may vary. If possible, choose a rice with a comparable grain length for the closest match. Visit the USA Rice Federation’s Rice Cafe to learn more about cooking with the different forms of rice: http://www.ricecafe.com

**SOYBEAN continued from page 4**

- some of their acres from corn to soybeans. With soybean seed supplies already short, more demand for soybeans will make the situation even worse,” said the Len Nelson, an NU crop variety and seed production specialist. “Farmers will need to plant more soybeans may find that they don’t have as many options in terms of variety or even quality. There will be some limitations to switching.”

Farmers considering planting more soybeans now should also consider the impact of over supply on markets in the future. “If this situation also results in an oversupply of soybeans at harvest, it will certainly bring the price down,” Nelson said. “Nearby states as low as Georgia, and Illinois that normally might have soybean supplies suitable for Nebraska are in the same situation,” Cross said. He also warned about looking to southern states for soybean supplies, because those soybeans variety masses are not as good and may not well work in Nebraska’s longer cold season in spring.

Farmers need to talk with their seed suppliers as soon as possible and find out what is available. “While the popular Roundup Ready beans may be sold, conventional and GSP varieties still may be available and are good options for Nebraska farmers,” Knoss said.

“You will also need to adjust your planting rate to account for smaller seeds and smaller germination percent- age,” he said. “There are print materials available as resources for calculating planting rates, and you can talk to local cooperative extension educators about adjusting these rates.”

“A planting rate of 150,000 live seeds per acre works well in Nebraska,” said Jim Specht, an NU crop scientist. “This leaves a margin of error for plants damaged by pests, bad weather, and other problems.”

“At harvest, you want to have 100,000 mature plants per acre, so the margin of error is very important since not all of the plants will be effective,” he said. “It is also important to note that the germination percentage values given on the seed is from a warm germination test, not a cold stress test, so it may be a high germination rate of the number of seeds that will germinate in cooler field conditions.”

To find the correct planting rate, Specht said, divide the desired number of live seeds per acre by the decimal equivalent of the germination percentage. For example, for seed with 75 percent germination, divide 150,000 by 75. For 150,000 seeds per acre, that 200,000 seeds per acre, that means you would need to plant 200,000 seeds per acre to achieve a minimum 90 percent soybean quality soybeans is that the shorter is less likely to drive up seed prices this year,” Knoss said. “You shouldn’t charge a high price for a lower quality product,” he said. “But sometimes supply and demand does things funny things to the market, so it’s difficult to tell what will happen at this point.”

Farmers considering soybean seed, corn, soybean, and horticulture, Gary Cross, NU foundation seed manager, Steve Longacre, Crop Improvement Movement, Ken Ander- son, marketing manager, NC+ Seeds; Lenis Nelson, NU, professor, agronomy and horticulture; and, Heather Schroeder, IANR News and Publishing.

**Debt**
Debt is a part of every farmer’s life. In fact, most agricultural producers now find that debt is necessary to the success of their operations. Credit should be seen as a resource to aid in the profitability of the operation, because when managed carefully, it can do wonders to enhance the profitability of the operation, even in the end, debt is working. But too much of it is accrued; tough strikes. Farmers are facing financial ratios that can help to assess exactly how much is too much. The total asset ratio is the ratio of total farm liabilities to total farm assets. Guidelines based on farm record studies indicate that debt less than 40 percent of assets is acceptable. Debt between 40-70 percent is questionable and debt over 70 percent of assets is in the danger zone.

The return of on assets reflects the productivity of farm assets. So, the amount of ROI is greater than the interest rate, the borrowed funds are aiding in the productivity of the operation. For example, an operation with an ROI of 12 percent and borrowing money at 8 percent is using credit profit- ably and can benefit from a high level of debt. Interest expense ratios measure the percent of gross revenue being used for debt. In most cases, 10 percent or less is optimal. Up to 20 percent is considered for certain operations. interest expense ratio ranges from 2 to 5 percent can be profitably earned and can benefit from a high level of debt. Interest expense ratios measure the percent of gross revenue being used for debt. In most cases, 10 percent or less is optimal. Up to 20 percent is considered for certain operations. interest expense ratios measure the percent of gross revenue being used for debt. In most cases, 10 percent or less is optimal. Up to 20 percent is considered for certain operations.
March 20

Computerized Financial Recordkeeping Part 2—Call about space availability

March 21

CFCE Council
4-H Fair Superintendent Meeting-Lancaster Extension Center
1 p.m.
7 p.m.

March 27

CFCE and 4-H Community Leader Training
Chemigation Certification Training
2 p.m.
6:30 p.m.

March 31

Infants-Toddler Child Care Provider Conference
Cattle Grooming Workshop-Lancaster Extension Center
8 a.m.-4 p.m.
9 a.m.

April 3

4-H Council Meeting
April 10

CWF
7 p.m.

April 21

4-H/101 Seminars-Karnival-Lancaster Building, State Fair Park
7:30 p.m.

April 29

4-H Music Contest-Dawes School
2 p.m.

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DEBT

business to cover all term debt and capital lease payments. It is the ratio of funds available to service-term debt to the amount of existing term debt payments. Any ratio greater than one to one indicates the business has reserve capacity to service-term debt and capital lease payments. Remember that these are only guidelines based on the fact that every ranch or farm is unique. (TD)

SOURCE: Larry Binney, NU Extension Farm Management Specialist with the Department of Agricultural Economics, NE/IANR.

A Quick Tour of http://lancaster.unl.edu

Start your visit to the University of Nebraska Cooperative Extension in Lancaster County website with the home page. On this site, you'll find a convenient search feature that helps you access publications, view, and print resources available on-line. If you want to visit the office, a map and contact information are now at your fingertips. By bookmarking this page, you’ll also have quick access to reliable resources in a variety of subject areas summarized below.

4-H and Youth—shortcut address http://lancaster.unl.edu/4h

Current features include information on 4-H projects, 4-H camps, school enrichment, Citizen-ship Washington Focus, 4-H Clover Kids, character education, and more. Keep track of 4-H, youth events, and upcoming livestock events and shows with the Lancaster County 4-H calendar. This site is rated as a SafeSurf™ site for families.

Nutrition and Food Safety—shortcut address http://lancaster.unl.edu/food

This site is a National Award Winning Website. The Ag and Acreage website with Nebraska Production Agriculture was awarded first place, Communications Award Competition Web-Page. This award was presented at NACAA Annual Meeting, August 7, 2000 in Jackson, Mississippi. The award was sponsored by AT&K.

Horticulture—shortcut address http://lancaster.unl.edu/hort

Looking for a way to beat the winter blues? Start thinking about warm weather by exploring the horticulture site. You’ll find monthly garden tips, activities for teachers, parents, children, and more. Information on 4-H gardening projects. Learn how to become a master gardener. If you need help identifying a plant, pest, or weed, this site features links to reliable resources.

Nutting and Food Safety—shortcut address http://lancaster.unl.edu/food

"Indulging Without Bulging;" “Quick Recipes for Food Safety Update;” “Forgotten in the Fridge.” These are just a few of the articles you can find on this site. In addition to viewing family-friendly food preparation ideas, tips on food safety, and lists of resources on health and nutrition, you can sign up for the e-mail “Food Reflections” newsletter.

“Food Reflections” e-mail newsletter on-line edition continues to receive a “Better Than Most” rating from “Tufts University Nutrition Navigator—A Rating Guide to Nutrition websites.

Environment and Natural Resources—shortcut address http://lancaster.unl.edu/enviro

Find practical and reliable information on controlling pests and wildlife found in and around the home. Watch the Telly-Award winning video, Removing Rodent Life Safety. Download the English and/or Spanish version of the accompanying fact sheet. You can also listen to audio messages on a variety of topics. This site also features information on the biosolids project, composting, water quality, and youth programs like earth wellness festival.

The NEBLINE—shortcut address http://lancaster.unl.edu/nebline

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