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In This Issue

Bio-Fuels Can Help Bridge Energy Gap

Nebraska in Ideal Position to be Supplier of Biofuels

Tom Dorn
UNL Extension Educator

Photo by Ronald Seymour

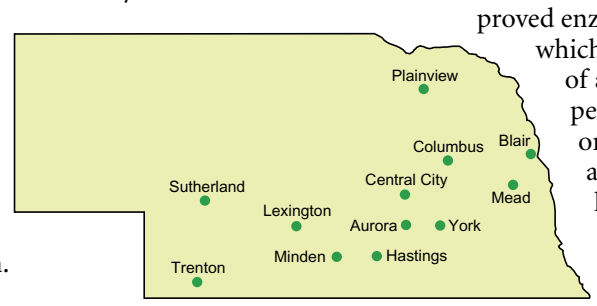
The ethanol plant at Hastings.

The United States is the worlds largest user of energy, both in terms of total consumption and per capita. Forty percent of our energy currently comes from oil and we import about 60 percent of the oil we consume. With unrest in the Middle East and the hurricane damage to gulf coast oil platforms last fall, crude oil prices are at all-time high prices. Nebraska is uniquely situated to help the United States answer the question, "What can be done to reduce our dependence on foreign (and domestic) oil?"

Ethanol

One answer is gasoline blended with ethanol. According to the April 12, 2006 Renewable Fuels Association - Ethanol Report, "Nationwide, 97 ethanol biorefineries are in operation with a combined annual capacity of nearly 4.5 billion gallons. Additionally, 33 new biorefineries and nine expansion projects are under construction that will add more than two billion gallons of annual capacity within the next 18 months. These numbers will continue to rise and new groundbreaking events are announced weekly."

At present, 12 plants are producing ethanol in Nebraska and a reported 19 more are in various stages of planning and construction. By 2007, experts predict Nebraska will have the plant capacity to produce a billion gallons of ethanol annually. Nebraska ethanol plants have the secondary advantage of a ready market for the by-products of ethanol production. Distillers grains are used as a protein supplement in our cattle feeding and dairy industry.



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Can the U.S. replace a significant amount of petroleum with biofuels? One country already has. Brazil recognized many years ago, importing petroleum had the potential to cause an imbalance in trade which would eventually be unsustainable. They decided to take advantage of their bountiful land and climate resources and develop bioenergy as a substitute for foreign oil. They led the world in modifying gasoline engines to run on E85 (85 percent ethanol gasoline) and now have vehicles able to run on 100 percent ethanol. Today, Brazil has become essentially energy independent thanks to the development of their ethanol industry.

Twelve percent of the gasoline sold in the U.S. contains some ethanol today. Nationwide about 2.5 percent of the volume of gasoline sold is ethanol.

Scientists continue to develop improved enzymes and yeasts which increase the yield of alcohol produced per bushel of corn or sorghum. These advancements have increased the yield of alcohol from around 2.3 gallons per bushel of corn in the late 1970s to about 2.7 gallons per bushel today — a 17 percent increase. The major improvement in alcohol yield, plus more energy efficient distilling plants and automation which has reduced labor costs has contributed to making ethanol cost competitive at the distributor level with unleaded gasoline.

On August 8, 2005, President Bush signed the Energy Policy Act of 2005 (H.R. 6) into law. This legislation directs the U.S. Environmental Protection Agency to promulgate regulations ensuring applicable volumes of renewable fuel are sold or introduced into commerce in the United States annually. It includes a nationwide renewable fuels standard. This standard will double the use of ethanol and biodiesel by 2012. The target set by the legislation is for 7.5 billion gallons of renewable fuels by 2012.

Cellulosic Ethanol Production

Research is now being conducted on the feasibility of using cellulose as the feedstock for ethanol production. Using cellulose instead of grain as the feedstock will require somewhat different processing and fermenting processes than grain-based alcohol production. Once the mechanical and microbiological processes are perfected, we could be making cellulosic ethanol from corn stalks, switchgrass, wheat straw and other low-value roughages—all found in abundance in Nebraska. The Energy Policy Act creates grant and loan guarantee programs to fund research and development of cellulosic ethanol production. The legislation set a target of 250 million gallons a year of cellulosic derived ethanol be included in the renewable fuels standard by 2013.

Biodiesel

Another biofuel making inroads into the American market is biodiesel. From a modest beginning of 500,000 gallons in 1999, biodiesel production had grown to an estimated 75 million gallons in 2005. There are 30 biodiesel plants currently in production in the U.S. and another 25 plants are under construction.

Biodiesel can be readily made from vegetable oils. The basic chemistry is simple: For every 100 pounds of vegetable oil, 10 pounds of methyl alcohol is added in the presence of a catalyst. This yields 100 pounds of biodiesel (B100) plus 10 pounds of glycerin. Any vegetable oil could be used, but the early research has concentrated mainly on soybean oil for biodiesel production.

Biodiesel blended in any proportion with petroleum diesel can be used in ordinary diesel engines with no modifications. A negative aspect is biodiesel blends have reduced cold flow properties compared to straight petroleum diesel. Cold flow has not been a problem for B2 and B5 blends in the Midwest, but higher percentage blends might result in gelling problems if used during the cold months of the year.

Sulfur in diesel fuel results in sulfate emissions, a major component of smog and a component in acid rain. Prior to 1993, the maximum limit for sulfur in diesel fuel was 5,000 parts per million (ppm). Legislation in 1993 dropped the maximum level to 500 ppm. In 2004, the Environmental Protection Agency wrote new regulations which go into effect in June 2006 that lowers the sulfur content to 15 ppm. This legislation is fully supported by engine manufacturers because sulfur content above this level renders diesel catalysts ineffective and also harms particulate traps and other filtering

see BIO-FUELS on page 11

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When to Harvest Bromegrass Hay

You may have heard the story about the lady who always cut the end off a ham before placing it in the roaster pan to cook. When her daughter asked why she did this, the mother admitted she didn't know the reason, but her mother always did so, therefore, it must serve some purpose. When the girl questioned her grandmother about it, grandma said, "I had to cut the end off, my roaster pan was too small to hold a whole ham."

I wonder if people decide when to cut bromegrass hay using the same sort of logic. Many people cut bromegrass hay in mid- to late-summer—July, August, even September. The question to ask yourself is: Do people cut their brome hay at this time because it makes the best hay or because it is when they have seen other people cutting their hay?

University of Nebraska Institute of Agriculture and Natural Resources

Cutting brome in mid- to late-summer can have its advantages. Weather damage is less likely because mature hay has lower moisture content when cut and we usually get less rain in July and August than in June. But what does waiting do to the quality of the hay?

Brome cut in early June, soon after heads appear, will have a crude protein content of around 10 or 11 percent and TDN (a measure of energy) of 55 to 60 percent (on a dry-matter basis). According to NU Extension Forage Specialist, Bruce Anderson, that's plenty adequate for wintering most beef cows or for most pleasure horses without adding additional energy or protein. However when cut in late summer, crude protein might be only six percent with TDN below 50. Anderson says all species of livestock need some supplements if fed that kind of hay.

Another advantage to cutting brome hay earlier is the possibility of grazing the re-growth in September, provided we get some fall moisture. Most pastures can use a little help that time of year. So, for the best quality hay and to possibly extend the grazing season, why not break with tradition and cut bromegrass when it has better nutritional quality instead of when the neighbors cut theirs.

—Tom Dorn, UNL Extension Educator

Moving Round Hay Bales Can be Dangerous

Moving hay bales is essential to get feed to livestock, but farmers should be cautious. When taking bales out of storage or moving them with a front-end loader, farmers should always use a bale clamp to prevent bales from rolling down the arms of the loader and pinning or crushing the operator. Bales can weigh up to 2,000 pounds.

Proper ballast is important when gathering and moving bales whether using front-end loaders or three-point hitch carriers. Farmers should make sure there's sufficient weight added to the front end of the tractor to ensure adequate traction for steering when using three-point hitch carriers. Added weight to the rear of the tractor, (fluid in the tires, wheel weights, and/or duals) may be necessary to maintain braking ability when using front-end loaders to handle large bales. When moving bales with a tractor, they should be carried as low as possible to keep the center of gravity as low as possible. Top-heavy loads can cause machinery to overturn easily.

—Tom Dorn, UNL Extension Educator

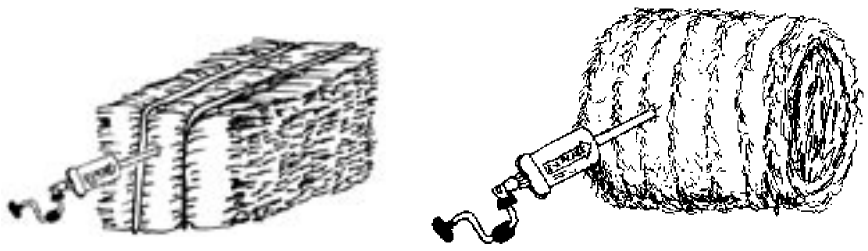
Sample Your Hay to Get Accurate Nutrient Analyses

Tom Dorn
UNL Extension Educator

Nutrient concentration varies considerably among forages. Values vary from one forage species to another, one cutting to another throughout the year, the stage of growth when harvested, whether the hay was rained on while in the windrow, etc. That is why the university recommends forage testing as a regular part of your livestock operation. For forage tests to provide an accurate reading of forage quality, the sample must accurately represent the hay. Reaching into a bale and pulling out a hunk of hay will not give you a good sample. Nor will gathering a single flake of hay.

The only effective method to sample long hay is by using a core sampler. If you don't have one, you can buy one from many ag supply catalogues or forage testing labs. UNL Extension in Lancaster County has a probe you can check out by leaving a deposit which is returned when you bring the probe back.

Once you have a hay probe, collect one core from 15 to 20 bales that came from the same field and same cutting and mix together to create a sample for analysis. Keep samples from different cuttings separate. The proper sampling procedure is to probe the bales, cutting across the grain. On square bales, probe the center of the bale from the end (between the twine or wires). On round bales, probe toward the center of the bale from the rounded edge. Then combine all the samples from a cutting into one larger sample to send to the lab.



The proper sampling procedure is to probe the bales, cutting across the grain. On square bales, probe the center of the bale from the end (between the twine or wires). On round bales, probe toward the center of the bale from the rounded edge.

If there is decayed or moldy material you will discard or your animals will not eat, do not include it in your sample. That way you will have a sample that is similar to the actual diet of your livestock. By following these sampling techniques, you will get accurate nutrient analyses of your hay and be able to use it more effectively. However, if you plan to sell the hay, you must include this less desirable material in your sample to accurately represent all the hay to be sold.

Forage testing can be an effective marketing tool. If you were a hay buyer deciding between two hay sources, one where the nutrient analysis is known and the other where nothing definite is known about the quality, wouldn't you rather buy the known commodity? Hay tests report various nutrient values such as crude protein, energy values (expressed several ways) and minerals, (calcium, phosphorus, etc.). In addition to reporting specific nutrient values, most labs use the analysis to calculate a rating of overall quality. This is commonly referred to as the relative feed value (RFV).

Not everybody needs the highest quality hay to meet the nutrient requirements of their particular animals, but they need to know what they are getting so they match the hay quality to the species of animal and time of year (stage of pregnancy, lactating, breeding. etc.)

To understand relative feed values, let's look at three examples. RFV of 100 is mediocre hay, but it is usually adequate to meet the protein and energy requirements for older dry cows in the middle one-third of pregnancy. RFV of 120–140 is generally suitable for pregnant beef heifers that are still growing and for beef cows about to freshen. RFV of 150 and above is considered dairy quality.

Even when the quality of one batch of hay doesn't meet the nutrient requirements of the animals, the livestock producer may be able to feed two or more forage sources in specific proportions that together will provide the nutrient needs of the animals being fed. Alternately, one may feed non-forage supplements to balance the protein, energy, and/or mineral needs of the animals they are feeding. Without the hay quality test, it is not possible to accurately develop the rations needed to meet the animal's nutrient needs at least cost.

Pumping Water for Ponds

Half Acre Pond Requires 1.2 Million Gallons of Pumped Water Annually

Tom Dorn
UNL Extension Educator

Occasionally, I visit with an acreage owner who would like to build a small fishing/swimming pond on their property. Their land area or topography is such they cannot count on surface runoff or natural springs to contribute any significant portion of the water needed to fill the pond or keep it full. Eventually, the discussion turns to the feasibility of using a well to pump the water for the pond. Invariably, the acreage owner is surprised by the amount of water it takes.

Let's crunch some numbers for an example pond 150 feet by 150 feet. This pond would have a surface area of just over half an acre. If the depth in the middle of the pond is 10 feet and the sides have a 1:3 slope (one foot vertical drop for each three foot horizontal run), the volume of the pond would be 153,000 cubic feet or a little over 1.1 million gallons.

Domestic pumps usually deliver between eight and twelve gallons per minute (gpm) but let's assume the well driller can find an adequate aquifer and installs a 20 gpm pump. Assuming the full 20 gpm flow goes only to the pond (not split between domestic needs and the pond), it would take between 40-60 days of continuous operation to fill the pond initially, depending on initial seepage losses.

If we assume 30 inches of direct annual rainfall per year, but no appreciable runoff into the pond, the evaporation and seepage losses not made up by rainfall will average about 0.25 inch per day. A quarter inch of loss per day over a half acre is equal to 3400 gallons of water per day. This would require running the 20 gpm pump about 1,000 hours a year to keep the pond full.

Each half acre pond requires 1.2 million gallons of pumped water a year to keep full. By way of comparison, a family of four will use about 250 gallons of water per day (91,250 gallons per year) for domestic uses. If the family also irrigates a 10,000 square foot (0.23 acre) lawn an average of 0.75 inch per week from May 1 through September 30, the total water used for the acreage more than doubles (194,000 gallons).

A half-acre pond, therefore, "consumes" about as much water to fill initially as a family of four would have used for the household and lawn in six years. It will then require as much water each year to keep full as the family would have used in 6.5 years. I always ask an acreage owner considering a groundwater fed pond, "Is this a sustainable use of our limited groundwater resource in eastern Nebraska?"

Controlling Pests with Home Remedies

Barb Ogg
UNL Extension Educator

Home Remedy. def. *A treatment or cure for a disease or other ailment that employs certain foods or other common household items. Home remedies may or may not have actual medicinal properties that serve to treat or cure the disease or ailment in question; many are merely used as a result of tradition or habit or because they are quite effective in inducing the placebo effect. (Wikipedia).*

It seems universal for people to have heard about or used a home remedy to prevent or control insects. Some examples:

- The lady who used baking powder for ants coming into the house after hearing someone mention it on a radio show and then called the extension office because it wasn't working. **There is no evidence baking powder or baking soda has an adverse effect against insects.**
- The pest control guy who told me you could kill moles and gophers with Wrigley's Juicy Fruit gum, by putting it in their holes. The theory is the varmints eat the gum which gummed up their intestines (or constipated them) then they died. **There is no evidence that moles and/or gophers would even eat gum or have any adverse effects from it.**
- The mom who used mayonnaise on her child's hair for head lice and became frustrated her daughter continued to have recurrent lice infestations. **A research study at the University of Miami School debunked several home remedies for head lice. The researcher found live lice after infested children slept overnight with mayonnaise, petroleum jelly or olive oil in their hair.**
- The homemaker who puts bay leaves, orange peels or sprinkles herbs and spices in cupboards to keep cockroaches away. **These herbs and spices don't repel roaches.**
- Using mothballs to keep rabbits, snakes and other critters away. **There have been no studies showing mothballs (napthalene) have any effect on wildlife.**

Grain of Truth

While some old wives tales are completely off-base (i.e., baking powder, baking soda, Juicy Fruit gum), for others, there is often a tiny grain of truth.

Throughout history, people have noticed some plants seem to be immune to insect feeding. Scientists have isolated substances in these plants which repel or even kill insects. Some examples:

- Research at Iowa State University has shown German cockroaches don't like to walk on surfaces treated with nepetalactone which is the extract of catnip. But, researchers also found catnip plants themselves did not repel insects in houses or other buildings.
- Similar studies with osage orange (also known as hedge apples) extracts showed concentrated extracts were repellent, but not the fruits themselves.
- Pyrethrins are natural insecticides produced by some species of the chrysanthemum plant. Flowers of the plant are either dried and powdered or the oils within the flowers are extracted with solvents. Natural pyrethrins quickly penetrate the insect's nervous system and, shortly after exposure, the insect cannot move or fly away. But, a "knockdown dose" does not mean a killing dose because enzymes in the insect quickly detoxify the chemical and the insect will recover. To delay the enzyme action and increase the lethal effect of the pyrethrin, another insecticide or synergist is usually added to the pyrethrins. Because of the short term nature of pyrethrins, scientists have developed longer-lasting chemicals structurally similar to pyrethrins, called pyrethroids. These pyrethroids include permethrin and most of the common over-the-counter insecticides used today.

Other botanical insecticides include:

- Rotenone, dried derris root, used in gardens, food crops and to kill fish in lakes and ponds.
- Sabadilla, the powdered ripe seeds of a South American lily, used to kill ectoparasites on domestic animals and humans.
- Azadirachtin, an insect-growth regulator, derived from the neem tree. It interferes with the insect molting hormone ecdysone.
- Limonene is derived from citrus peels. It is used to repel or kill mosquitoes, cockroaches, silverfish and some external pests of pets. It is relatively nontoxic.

Using Botanical Insecticides Safely

Some people believe natural insecticides are safer than synthetic ones. This isn't necessarily true. Nicotine, from tobacco leaves, is a very old and dangerous "natural" insecticide. Black Leaf 40 was a popular garden product for many years, but its use was curtailed by the EPA, because it was so toxic.

The toxicity of each insecticide is based on the characteristics itself. Concentrated insecticides, whether natural or synthetic, can be hazardous to the applicator. Be sure to read and follow label directions for safe use.

More Home Remedies Debunked

It would be great if we could control insects around the house simply by mixing up a few ingredients from the cupboard and sprinkling the concoction around the kitchen. Unfortunately, it just isn't that easy.

Mint oil. One study conducted at the University of California found commercial products containing 8 percent and 4 percent mint oil did not repel ants. The researcher put pieces of hotdogs in cups treated with mint oil products and left them near ant colonies. Four hours after treatment, the number of ants on the treated and untreated cups was statistically the same.

Vinegar and lemon juice. Vinegar and lemon juice are recommended for all sorts of household cleaning chores, but they aren't good insecticides. Another study at the University of California showed vinegar and lemon juice were also ineffective at repelling insects.

Bleach (sodium hypochlorite) and ammonia. These household cleaning products may mask ant trails, but there's no long lasting residual insecticidal effect from their use.

Chalk Line. And finally, a chalk line will not deter ants from coming into a structure.

What Does Work: Boric Acid and Borates

Boric acid is a mineral-based inorganic pesticide derived from the element boron. It is relatively nontoxic to people and pets, although people should take care not to inhale it. As an insecticide, boric acid acts as a stomach poison interfering with the insect's metabolism. The dry powder also abrades the exoskeleton and helps to desiccate the insects.

Ant control. Boric acid has been formulated into slow-acting bait products for sweet-loving ants. These are cheap to buy and readily available for homeowners to purchase. The key to using an ant bait successfully is to have ants feed liberally on the liquid bait. Place the bait where you see ants. Don't use insecticides which prevent the ants from taking the bait back to the colony. Replace the bait if it dries up. Leave the bait out as long as you see ants feeding on it. If ants don't feed on the bait, it won't work.

Vicki Jedlicka, UNL Extension in Lancaster County

The key to using an ant bait successfully is to have ants feed liberally on the liquid bait.

For grease ants, a homemade bait using peanut butter, honey and boric acid may work. Try mixing 4 tablespoons peanut butter, 6 tablespoons honey and 3/4 teaspoon boric acid. Remember, if the ants won't feed on it, the bait won't work.

Cockroach Control. There are a lot of boric acid products on the market for cockroach control, including dusts, baits and pastes. After walking through boric acid dust, cockroaches ingest the powder when they groom themselves. This works both as a slow acting stomach poison and also may desiccate the cockroach. Baits are effective, but should be used in conjunction with other method of control.

A homemade concoction can be made using equal parts flour, sugar and boric acid, with a little bit of milk to make a paste. Boric acid should not be applied so it will fall into food or onto food preparation areas. Do not allow children to eat any homemade boric acid baits. Apply near areas where cockroaches hide.

Termites. There are several professional-use borate products used as a wood treatment for termites. Application of these products to untreated wood surfaces provide long-term preventative protection against many wood destroying organisms, including subterranean termites, wood boring beetles, carpenter ants and wood decaying fungi. The effectiveness of these products comes from their ability to diffuse deep into wood fibers, protecting the centers of large pieces of wood.

Borate products cannot be used as soil termiticides, sprayed on the soil surface or applied to wood mulch. These products will have a limited lifespan if the borate-treated wood comes in contact with soil because the boron will diffuse out of the wood when in contact with moisture.

Protect Stored Winter Clothing from Insect Damage

Barb Ogg
UNL Extension Educator

As spring and summer approaches, it's important to properly store wool clothing and blankets to protect them from insect damage. Carpet beetles and clothes moth larvae are the only insects that can digest keratin, a protein in hair and wool which makes these insects important fabric pests.

During the summer, woolen clothing is susceptible to damage because that's when these insects are most active. These insects like to be in hidden places and can hide in the folds of clothing hanging in a closet.

Most people think about clothes moths as being the insect that damages fabrics, but, in Nebraska, the most common fabric pests are carpet beetles. Adult carpet beetles are small and oval, have knobbed antennae and scales or hairs present on their body. Damage is not done by the adult beetle, but by the larvae, which are small, hairy and cigar shaped. Some of these beetle larvae are also found in flour, spices and grain-based food items.

Soiled clothing is more likely to be damaged by insects, so wash or dry-clean clothing before storage. Store clothing and blankets in a dark, cool, well-ventilated place such as a dark closet. Attics are too warm, basements are musty and garages are easily accessible to insects.

Store clothing in air-tight containers such as plastic tubs, plastic sweater boxes. A cedar chest is not air tight and may not repel these insects.

There are two types of repellents used to repel clothes moths and carpet beetles: paradichlorobenzene and napthalene. Paradichlorobenzene is more effective because it actually kills insects and isn't just a repellent. It may be necessary to replace moth crystals as they dissipate throughout the storage period.

Healthy Eating
Enjoy Nebraska Foods!

By Alice Henneman, RD, UNL Extension Educator

Here's a fun way to drink milk and eat some fruit at the same time during June Dairy Month. The following recipe is courtesy of 3-A-Day of Dairy (www.3aday.org) and provided by Jennifer Meyer, RD, LMNT, Director of Nutrition Education, American Dairy Association and Dairy Council of Nebraska.

Bone Appetit Banana Smoothie

(Makes 2 servings)
Prep time: 5 minutes

1 medium banana, peeled, broken into pieces
2 cups fat free milk
1 package fat free, sugar-free instant vanilla pudding mix

In a blender, combine banana, milk and pudding mix. Cover and puree until smooth. Pour into two tall glasses and serve.

Nutritional facts per serving for individual food: calories: 180; fat: 0 g; saturated fat: 0 g; cholesterol: 5 mg ; sodium: 330 mg; calcium: 30% daily value; protein: 9 g; carbohydrates: 37 g; dietary fiber: 2 g.

Getting Past the Nutrition Headlines

NEP Nutrition Education Program
Helping limited-resource families learn to prepare nutritious and safe foods while stretching their food dollars.

Wanda Koszewski
PhD, RD, LMNT
UNL Nutrition Specialist

Recently, a research study was released based on the Women Health Trials. The initial results of the study were reported in all the major media outlets. The basic headline stated eating a low-fat diet did not help prevent certain diseases. The problem was most people did not read the entire study and based their conclusions on the headline alone. Nutrition experts were put on the hot seat and the public began to wonder if they could believe any nutrition information.

The study presented in the article was accurate, but the headline misled readers to believe something that may not necessarily be true. The research presented in the article was only preliminary data and more research needs to be done before any strong conclusions should be made. Another limitation of this research is the participants involved were all postmenopausal women, therefore a low-fat diet may still be beneficial for younger woman to follow.

Why does the media jump on reports like this? Nutrition misinformation is unfortunately part of life. A trends study conducted by the American Dietetic Association found doctors and registered dietitians are consumers' most valued source of nutrition information. However, doctors only provide 11 percent and dietitians 1 percent of consumer nutrition information. Unfortunately the publics' number one source of nutrition information is the media.

Here are some things to watch out for as you hear or read nutrition reports:

- If the study promises a quick fix, especially quick weight loss.
- If it recommends changing the dietary guidelines based on one single study.
- If it contains urgent warnings of danger from one single product.
- If it makes claims that are too good to be true.
- If it promotes a dietary recommendation that eliminates an entire food group.
- If it lists good and bad foods. All foods can fit into a healthy diet as long as you use moderation, balance and variety.
- If it is based on a study, you need to ask yourself, "Does this study really apply to me (gender, age, health condition, etc.)?"
- Does the study use absolute statements, such as "proves" or "causes"? Remember just because two things are associated does not necessarily mean one causes the other.
- Who paid for the study? Could that affect the results?
- If you are unsure, talk to your doctor or a registered dietitian.

Walk Nebraska!

Linda Boeckner, *PhD, RD,*
and Alice Henneman
MS, RD UNL Extension

"A man's health can be judged by which he takes two at a time — pills or stairs."
—Joan Welsh

The new MyPyramid guidelines for nutrition and physical activity suggest most adults receive health benefits if they are moderately active for at least 30 minutes on most days of the week. Walking is a simple, pleasurable and inexpensive way to be physically active. Explore our beautiful Nebraska scenery on foot AND do something good for your health at the same time.

Moderate levels of physical activity can boost your energy levels, plus give you an overall sense of well-being. Regular physical activity has these direct physical benefits:

- improves strength and endurance
- builds stronger bones and muscles
- assists in weight management
- improves blood pressure

Beginning your Walking Program

To start off on the right foot (pardon the pun!), here are a few simple tips to help you start a walking program.

Check your readiness. If you have not been physically active on a regular and consistent basis for more than a year, check with a medical care provider. Also, if you have high blood pressure, diabetes, experience dizziness or chest pain upon exertion, talk with your medical provider before you begin a walking program.

Get the right equipment. Since walking is so easy, you don't need much to get started. During the summer, you will want to wear light, loose clothing that will allow you to cool down if you work up a sweat. During cooler weather, wear layers of clothing to keep yourself warm but not overheated.

The shoes you wear are the most important equipment for a walking program:

- Your shoes should be flexible and give you enough room for your foot to expand while walking.
- A flat sole with little difference in height from the toe to the heel of the shoe is best. Many folks find a good running shoe also works well for walking and gives needed flexibility and support.
- Replace shoes about every six months if you are a daily walker.
- Wear clean, comfortable socks inside your shoes to prevent blisters.

Hats and sunglasses are important for protecting your eyes and skin. Wear sun screen when it is appropriate.

Check your walking style and stride. Walk tall and straight without arching your back or leaning forward:

- Keep your eyes focused ahead of you and hold that smile!!
- You can swing your arms at about a 90° angle as you walk but keep your elbows close into your body. You don't need to pump your arms wildly into the air.
- Use a heel to toe walking step so you hit the ground first with your heel and push off with your toe.
- Watch the length of stride. Smaller steps are better than striding out too far. Your stride should be comfortable to you and not overtire your legs and muscles.

Tips for Planned Walks

Here are some tips to help you enjoy and stay with a walking program:

- Begin with a slow pace for about five minutes before you move into the walking pace that you will continue through the rest of the walk. This will allow your muscles to warm up. At the end of your walking time, use a five minute slow down to cool yourself down. Also, stretch your leg muscles as a part of a cool down period.
- Purchase a walking meter (pedometer) to count the number of steps or measure the distance you have gone. Walking meters have the advantage of giving you a tool that will measure all of your steps in a day. Clip it on for the entire day and you will record the steps you get in your normal daily activities as well as your planned walks.
- If you don't wish to use a walking meter, you can go on planned walks according to the clock. Gradually aim for an accumulation of at least 30 minutes of planned walking each day. If you are already close to 30 minutes each day, it's okay to increase your time beyond 30 minutes.
- Consider making walking arrangements with a friend or a walking group.
- Scout your community for walking paths and other safe places to walk.
- Walk at the time of the day most convenient for you. Walking time can be in the morning, mid-day or evening. For some, it will be easier to break up your walking time throughout the day and that is okay, too.
- Think through how you will handle walking when the weather is bad. Check if a nearby school, church, mall or other facility will allow you to walk there during bad weather.
- If walking doesn't work out for you on one day, pick it up again the next day. Keep it fun rather than a chore.

The South Platte here at North Platte joins the North Platte just east of North Platte to form the Platte River.

A "Virtual" Walk Through Nebraska

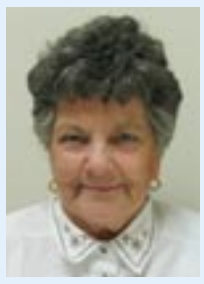
If you can't visit these Nebraska sites in person, visit http:/www.walknebraska.org. This Web site, developed by the University of Nebraska–Lincoln Extension, encourages walkers to complete a "virtual walk" on five different trails in the State of Nebraska. At key points along each trail 'walkers' receive helpful tips to learn more about how to take care of themselves nutritionally, how to protect themselves from the sun or how to use their physical activity to their best benefit. As they reach trail milestones, they see notable Nebraska landmarks and learn a little more about this beautiful state.

As you enter this Web site, you will receive instructions for recording your walking activities that will translate into miles that will help you travel along a Nebraska trail of your choosing. As you continue to walk each day, you will be able to check your progress on your trail.

Chimney Rock, near Scottsbluff, was one of the most famous landmarks on the Oregon Trail.

FAMILY & COMMUNITY EDUCATION (FCE) CLUBS

President's Notes — Alice's Analysis



Alice Doane
FCE Council Chair

This is the end of the school year and we have been going to Millard for two granddaughters choirs and band concerts. What fun it is to see how much the bands have improved over the last year.

We have been doing "show and tell" classes for the Hamlow first graders at Waverly. They go into the hayloft, Ted shears a couple of sheep and the dog works the sheep. We also have one or two different schools in Lincoln where we shear sheep.

Monday, June 26, 7 p.m. is the FCE Council meeting. Helpful Homemakers and Home Service will be the hosts. Bring your heritage skills entries to this meeting. The scholarships are in the process of being judged and the winner will be announced. The posters from the poster contest have been judged and the winner will also be announced. We did not have any entries for the Creative Writing Contest.

Tuesday, July 11, 6 p.m. is our Sizzling Summer Sampler. After our light supper, our program will be "Guru or Gourmet" by John, Rupnow, UNL professor of Food Science and Technology, and "Hats, Women and Song" by Dorothy Applebee. (Dorothy's fame was playing at Lee's Restaurant and is the mother of Kathy Blythe, KFOR fame.) I think you will enjoy the evening so mark your calendar. The cost is only $10 so come and enjoy the evening.

Remember to have your club baskets ready for the raffle. Tickets will be sold that evening for $1 each or 6 for $5. All the money goes to our FCE scholarship fund.

Looking forward to seeing you at the Council meeting, June 26 and the Sizzling Summer Sampler on July 11.

FCE News & Events

Council Meeting June 26

The next FCE Council meeting will be Monday, June 26, 7 p.m. Helpful Homemakers and Home Service are responsible for the program. Entries for the Heritage Skills Contest should be brought to this meeting. All FCE members are invited to attend.

Club Baskets

Has your FCE club got their basket or baskets put together for the scholarship fund raffle? The raffle will be held at the Sizzling Summer Sampler. Remember you can choose any theme. Use creativity as to size, shape or even container. Tickets will be sold the evening of July 11 for $1 each of 6 for $5. Help support the Lancaster County FCE Scholarship Fund.

Lancaster County Association for Family and Community Education presents

SIZZLING SUMMER SAMPLER

Tuesday, July 11 • 6 to 9 p.m.

Light Supper at 6 p.m.

Lancaster Extension Education Center, 444 Cherrycreek Rd, Lincoln

Cost $10. Make checks payable to FCE Council.
Send reservation and check by July 6 to: Attn Pam, UNL Extension in Lancaster County, 444 Cherrycreek Road, Suite A, Lincoln, NE 68528

Programs

"GURU OR GOURMET: THE SCIENCE OF FOOD"
John Rupnow, UNL Professor of Food Science and Technology
Learn about the science of developing new food items.

"HATS, WOMEN & SONG"
Dorothy Applebee
Wear your favorite hat — old or new.

How White are Your White Clothes?

White clothing, whether it be a shirt, blouse or a pair of cotton pants, always looks nice when the garment is new. The challenge is to keep the fresh white look.

Our grandmothers used to add chlorine bleach to the wash water. Adding chlorine bleach today, however, may actually turn those whites into yellow or gray.

Here are some steps to take to keep those whites looking their best.

- Avoid overexposing white clothing to light. Light can break down fluorescent brighteners. A garment laids out in the sun to dry may turn yellow, but the back will remain white. Once this happens, the damage usually cannot be corrected.
- Don't use chlorine bleach on whites, especially wool, silk, nylon, rayon and acetate. Chlorine bleach causes fluorescent brighteners to break down more rapidly.
- Always pre-soak heavily-stained garments to ensure adequate soil removal.
- Use enough detergent and adequate water temperatures.
- Don't overload the washing machine and sort clothes correctly.

Clothing dinghy gray from soil buildup may be restored with these methods:

- Use the hottest temperature of water acceptable for the fabric. Continuous washing in cold water isn't the best way to remove soil buildup.
- Add a water conditioner to hard water. Follow the directions on the box for the amount to add.
- Use sufficient amount of detergent.
- Run clothes through a complete wash and rinse cycle.

HOUSEHOLD HINTS

by Lorene Bartos, UNL Extension Educator

Storing Summer Swimsuits

Swimsuits take lots of abuse, especially from pools, hot tubs or spas containing chlorine.

Most swimsuits are made of a blend of nylon and spandex, which lets the suit stretch. Although spandex has good resistance to sunlight damage and deterioration, fabric yellowing may occur with repeated use and exposure. It is very important to rinse the chlorine out of swimwear after each wearing and at the end of the season.

Most swimwear is washable as noted by the manufacturer's care label. Check the drying method as stretch yarns can be damaged by high drying temperatures. Line drying or laying the swimsuit flat to dry typically are indicated on the care label. If tumble drying is recommended, use a low temperature to prevent fiber damage.

Summer Energy Saving Tips

This summer save electricity, save money and save the environment by following these energy saving tips.

- Clean or replace your air conditioner filter regularly.
- Turn the air conditioner off when you're not home.
- If you have central air, raise the thermostat setting on your air conditioner.
- Turn on ceiling fans, rather than air conditioners, to circulate air.
- Close blinds and curtains during the day to keep the heat out.
- Cook outdoors.
- Create natural cooling with shade trees on the west and south sides of your house.
- Shower and run your dishwasher, washer and dryer early in morning or late at night.
- Dry clothes outdoors. They smell wonderful!
- Don't use heat-producing small appliances (toasters, hair dryers) at peak times.
- Vacuum the coils of your refrigerator and keep other appliances in good working order. Or consider buying new EnergyGuide appliances.
- Don't heat your pool at night and let hot daytime temperatures warm it during the day.
- Keep those fridge and freezer doors closed as much as possible.

Are You Ready for Sun's Rays?

Are you looking forward to those lazy, hazy days of summer? You know those kind of days, where the sun radiates 90 degree temperatures all day in a cloudless sky. You can enjoy those days more if you remember to practice sun safety.

Here are some facts to give you cause to stop and think before running out the door in the summer sun. Skin cancer is increasing faster than any other form of cancer. The American Academy of Dermatology estimates children receive about 80 percent of their lifetime sun exposure before the age of 18. Evidence of long-term sun exposure may appear on the skin 20 or 30 years later. This may be premature skin aging, cataracts and other eye damage and skin cancer. Your skin remembers every sunburn you have ever had, which means the damage builds up over the years. There is no such thing as a "healthy tan." A tan means you have damaged your skin.

Follow these guidelines for a safe summer in the sun.

- Check the ultraviolet (UV) radiation index in your area. Since 1994 the National Weather Service has implemented the UV index, 0-2 minimal to 10+ high. This rating is the burning potential of daily UV exposure. Read your local newspaper for the rating if given, or access the Web at www.epa.gov/docs/ozone/index.html.
- Stay out of the direct sun from 10 a.m. to 3 p.m., the hottest part of the day. Seek shade to protect yourself.
- Wear a hat with at least a 3-inch brim for sun protection. A baseball cap only protects the eyes, and not the back of the neck or the ears.
- Wear sunglasses that provide 95 percent or better protection from ultraviolet radiation.
- Protect skin by applying sunscreen with and SPF rating of 15 or more. Apply it 20 to 30 minutes BEFORE heading outdoors so the lotion has time to bind with the skin. Use sunscreen even if the day is cloudy. As much as 80 percent of the UV rays pass through those clouds.
- Wear loose fitting clothing, preferably with long sleeves, long pant legs and a tighter weave, if out in the direct sun for long periods of time.
- Keep in mind three simple words: slip, slop, slap. Before going outdoors, slip on a shirt, slop on some sunscreen and slap on a hat.

Bagworms, Look for Them Now!

In June, bagworm larvae are susceptible to insecticides.


Lacy L. Hyche, Auburn University, www.forestryimages.org

Bagworm bags at completion of larval development (pictured) are difficult to control.

Bagworm eggs hatch in early June and young worms will begin to feed on junipers, cedars and arborvitae in eastern Nebraska. Bagworms also occur on various deciduous trees such as flowering crabs, plums, linden and cotoneaster. The bags attached to the trees now are those left over from last year and are empty, except for the remaining egg masses that will finish hatching. The worms are very tiny, probably 3/8 inch in length or less, and each contained inside a small protective sack or bag which they construct of silk and plant material. At this stage, the larvae are susceptible to insecticides but after six weeks they will be difficult to control. Suggested materials are Bacillus thuringiensis (Bt) (Dipel), Acephate (Orthene), Carbaryl (Sevin), Permethrin (Eight) and Malathion. Follow label directions and be sure to spray trees and shrubs thoroughly to penetrate foliage. Good coverage is essential if control is to be effective.

— Mary Jane Frogge, UNL Extension Associate

All American Roses for 2006

There are four All American Rose Selection Winners for 2006. As usual, one or more of the diverse offerings is sure to suit almost any landscape and gardener. This year's winners will convince you to plant more roses.


Julia Child

The first offering is Julia Child. The famous chef picked this one herself and we all know what great taste she had. This floribunda rose has a rounded growth habit and is topped with buttery-gold flowers. The flowers have a spicy scent, reminiscent of sweetened licorice. Plants are also highly prized for their excellent disease resistance.

Rainbow Sorbet is another floribunda rose. Plants produce masses of flowers in shades of yellow, orange and red. Eventually the flowers mature to light yellow and pink. This one lights up the landscape with its continuous display of blooms. Plants have an upright growth habit and grow nearly 5 feet tall. Rainbow Sorbet also possesses excellent resistance to black spot.

Another award winner is Tahitian Sunset. This hybrid tea type rose shines in the garden with its warm, sunny flowers that are orange-yellow in bud and open to a peachy-apricot-pink. The large, 5 inch diameter flowers are packed with petals, about 30, and have a delightful strong anise fragrance.

Last, but certainly not least, is Wild Blue Yonder, a grandiflora rose that is a sight to behold! This is the first lavender blend rose to win a coveted AARS award since 1984. This large bush rose is covered with velvety wine-purple, flowers in the summer. Another nice feature is the distinctive fragrance. The scent is a mixture of sweet citrus and rose.


Tahitian Sunset

Source: All American Rose Selections at http:/www.rose.org.


Rainbow Sorbet


Wild Blue Yonder

Garden Guide

THINGS TO DO THIS MONTH

By Mary Jane Frogge, UNL Extension Associate

Remove old flower heads from annual bedding plants to keep them blooming.

Disbud chrysanthemum flowers to secure large, beautiful blooms on straight, strong stems. To disbud, remove the small side buds along the stems which form in the angles of the leaves. This will allow all of the food reserves to be used for one large flower rather than many smaller ones.

Plant annual flowers in tubs or large containers for the porch or terrace. Make sure there are holes in the container's bottom to provide good drainage.

Remove foliage from spring bulbs after it turns yellow and begins to dry. Set out bedding plants to cover the bare spots using care not to damage the bulbs.

Watch for and control blackspot and powdery mildew on rose foliage.

Use bark mulch around young trees to protect them from lawn mower damage.

Spring flowering shrubs such as spirea, viburnum, lilac and forsythia should be pruned as soon as they are done blooming.

Mid to late June is an excellent time to take softwood cuttings of shrubs to start new plants. Some shrubs which can be propagated in this way are spirea, lilac and viburnum.

When you buy nursery stock that is container grown, check the root ball and make sure it is not bound too tightly. A mass of circling roots will stay that way even after it is planted in the ground.

If you do not have much room to landscape, consider using some of the many dwarf varieties available. These are plants that have slow growth and stay small, so there is little pruning maintenance. There are numerous dwarf evergreens, flowering trees and shrubs from which to choose.

Keep a close eye on the quality of your spring crops. Hot weather causes lettuce to bolt and become bitter. Plant a warm season crop as soon as the spring vegetables are harvested.

In most cases, blossom-end rot on tomatoes, peppers, squash and watermelons can be prevented. Do this by maintaining uniform soil moisture by mulching and watering correctly, planting in well drained soil and not cultivating deeper than one inch within one foot of the plant. Also avoid the use of high nitrogen fertilizers.

Continue planting warm season vegetable crops such as beans, squash and cucumbers.

The best time to harvest most herbs is just before flowering, when the leaves contain the maximum essential oils.

Before poring gasoline into the fuel tank of your lawn mower, garden tiller or other garden equipment, be sure to turn off the engine and allow it to cool for at least five minutes.

Identify garden pests before you attempt to control them. If you decide to use chemical control, read the label carefully.

Leftover vegetable and flower seeds may be stored in a cool dry location to be saved for planting next year.

During the hot summer months, mulch can be especially useful for conserving water. For vegetable gardens, shredded leaves or grass clippings are good mulch material. For ornamentals, pine needles or wood bark do the best job.

Weed removal is important for a number of reasons. It conserves moisture, conserves nutrients in the soil and helps prevent the spread of disease and insects.

Care of Coleus

Mary Jane Frogge
UNL Extension Associate


Coleus are good for use in containers or as a bedding plant.

Coleus are prized for their colorful foliage which may combine shades of green, yellow, pink, red and maroon. New introductions of this popular annual have been selected for increased sun and heat tolerance. Coleus vary from smaller types that will reach only 1 foot tall to tall bushy types of 3 feet. Sprawling types suitable for hanging baskets and window planters may spread up to 3 feet or more. Most coleus grow fairly rapidly to their full summer size. They are all tender annuals in Nebraska and will be killed by the first frost.

The brilliant and widely varied colors of coleus foliage make it a natural for use as a bedding plant and as a color accent. Coleus also grows beautifully in containers, which can be used to highlight patios, porches and garden terraces.

Coleus are highly resistant to serious disease or insect problems when grown outdoors in properly prepared beds or containers. Some pests to watch for include mealy bug, aphids and whiteflies. Some disease problems to watch for include stem rot and root rot.

Most coleus grow best in part shade. However, several new cultivars are available that will thrive in full, hot sun. Coleus must have good soil drainage. Poorly drained soils and excessive watering will damage coleus. Overwatered plants will be stunted and root rot could occur. Plants should not be allowed to dry out. Coleus grown in containers are more susceptible to drought and should be planted in a very well-drained soil mix that is watered more frequently.

Pinch growing shoots of young plants frequently to encourage and maintain dense foliage. For a mid-summer growth boost, fertilize in June, July and August with a liquid fertilizer at half the usual dilution. Flower spikes will appear in late summer. Many people dislike their appearance, and if allowed to go to seed the plant will decline. Shear back flowers to extend performance. Since coleus are annuals and will be killed by the first fall frost, you may want to take cuttings of especially prized cultivars. They root easily from stem cuttings that are placed in containers with moist potting soil.

Smart Watering Techniques Conserve Water in the Yard

Don Janssen
UNL Extension Educator

With continuing water shortages, applying simple water conservation tips when practicing lawn care is beneficial for both homeowners and the environment.

Instead of developing high water bills or allowing lawns to be drier and discolored, compromise by working with nature. The most efficient time to water lawns is in the early morning, from 4-10 a.m. At this time, the sun is barely out, the temperature is cooler and winds are milder than during the day, so there is less water loss due to evaporation. Also try leaving clippings on the lawn after mowing as a good nutrient source as well as a way to keep moisture in the ground.

Another way to work with nature is to put out large containers to catch rain water for more efficient watering use later. But don't let water containers sit uncovered long enough that mosquitoes use the standing water for a breeding ground.

Conserve moisture by mowing Kentucky bluegrass lawns to 2.5 or 3 inches and tall fescue lawns to about 3 or 4 inches. Think about reducing the number of fertilizer applications or the amount of fertilizer applied so the grasses don't grow as quickly and thus don't use as much water. Otherwise, consider allowing certain turfs, such as Kentucky bluegrass and buffalo grass, to go dormant. When doing this, limit foot traffic and mowing on dormant turf and irrigate it if no rain falls for three weeks.

Design home landscapes so plants with similar water needs grow side-by-side. According to Roch Gaussoin, Ph.D., turfgrass specialist you should group ornamental plants into low, moderate and high water users and water them accordingly, taking into consideration the time of year, actual precipitation and weather conditions. Also, try to put the plants in places where they'll grow and use water most efficiently, considering characteristics such as sun and shade, dryness and wetness. Planting native and adapted plants that are drought-resistant decreases the need for supplemental irrigation once the plants are established.

Photo Illustration by Vicki Jedlicka, UNL Extension in Lancaster County

Soil with water provides no resistance when inserting a screwdriver — where a screwdriver meets resistance is the depth of water infiltration.

Surround garden plants with a 2- to 3-inch layer of mulch to reduce evaporation and weed competition for available soil moisture. Soils can be amended with compost, manure or leaf mold to improve their water-holding capacity and infiltration of soils as well as plant vigor and health during dry conditions.

Water plants to the bottom of their roots. Determine root depth and water infiltration by sticking a screwdriver or soil probe into the ground. When pulled out of the ground, the probe should be moist—not dry or soggy wet. Then try to keep soil moist about 1/2-inch deeper than the deepest living roots or, if the root depth is unknown, 8 or 9 inches into the ground. Woody plants should be watered more deeply and infrequently to promote extensive rooting. New plants require supplemental irrigation at first—consider watering them by hand so they get enough water without all the surrounding plants having to be watered in the same way. When overseeding, irrigate lightly and frequently to accommodate the new turf plants' shallow root system.

Maintain irrigation systems by keeping track of the weather and the watering systems. Use empty coffee cans, tuna cans or other containers to measure the amount of water sprinklers put out and adjust the run time so it delivers the required amount, changing run time seasonally as plants' water needs change and subtracting any rainfall.

John Fech, extension educator says, "Once a month, inspect automatic sprinkler systems. Look for turf growth around the heads of the sprinklers, broken or damaged heads, clogged nozzles and other complications." Adjust sprinkler heads as plants grow or decorative items such as decks are built and start blocking the spray pattern. Make sure they don't spray sidewalks or other surfaces water will flow off of. When watering on a slope, run sprinklers until there is runoff, then stop. After three hours, water the slope again. Aerating soil in fall or spring increases infiltration.

Summer Blooming Perennials

Don Janssen
UNL Extension Educator

After the first flush of early summer blooming perennials, the garden often has a lull during the "dog days of summer." How about some new, rarely used perennials that provide color?

Many people are familiar with the perennial called Lamb's Ear, which is fuzzy gray and soft to the touch. Another member of this family is Stachys coccinea or Scarlet Hedgenettle. This plant

James L. Reveal @ USDA-NRCS PLANTS Database

Scarlet Hedgenettle

is a native to southern Arizona and will bloom non-stop from mid-summer on. The flowers are brilliant red spikes, speckled with white throats. Although hardy in Zones 5 to 9, with winter mulching, it is worth a try in a protected area of the Zone 4 garden. Remove or deadhead the flower spikes to encourage re-blooming.

There are several very good Agastaches on the market. Agastache is a member of the mint family and will do well in our climate and soils. Try Agastache rupestris, Sunset Hyssop. This

© Colorado State University Cooperative Extension, Denver Botanic Gardens, and Green Industries of Colorado, Inc.

Sunset Hyssop

plant puts on a show of orange and lavender spikes with a soft, wispy look. With a fragrance reminiscent of licorice, Sunset Hyssop gives a fresh, clean smell to the garden when its leaves are touched. It's also attractive to butterflies and other pollinators.

An often over-looked plant family in many gardens is the goldenrod. This plant is often accused of causing allergies, when in fact other blooming but less conspicuous plants are creating the problem for allergy sufferers. For a spectacular addition try Solidago rugosa 'Fireworks' which is an appropriate name. It puts out graceful, golden-arched flowers and can be easily mixed in with other plants in the perennial border.

Fireworks Goldenrod

All of these plants are considered xeric, or water-wise plants. After establishment (which does require some supplemental water), these and other xeriscape plants will thrive in summer. Plants that have silvery, gray foliage or foliage with a tough or fuzzy feel can often be great choices for the low water garden.

GREEN ACRES

Some Other Factors To Consider

Don Janssen
UNL Extension Educator

Note: This is the final of a series of articles related to acreage enterprises.

Farm community. An active farm community promotes group learning, innovation and cooperation. Quality suppliers of equipment, services and information are more available where there is a "critical mass" of farmers. Nevertheless, isolated farmers can join commodity organizations and take other steps to improve their technical and marketing skills.

Isolation. If you are isolated, you must carry larger parts and supply inventories and, most significantly, you probably cannot contract as easily for custom farm work. Thus, you must have the ability and equipment to do all of the work yourself. This requires a much higher up-front investment in capital, time and skills. In addition, it will be more difficult to attract buyers for the crop.

Labor pool. Many horticultural crops are very perishable and must be harvested and marketed in a timely fashion. Access to reliable and productive labor can mean the difference between success and failure. Are you comfortable managing labor? Are you willing/able to supervise and do the additional paperwork involved with having employees? Can you pay for labor before you are paid for your crop?

Access to markets. This factor is crucial for the small farmer who must get a high percentage of the crop dollar to survive.

Summary

Small-farm operators develop economic vitality by:

- Having a passion for what they do.
- Watching their cash-flow cycle.
- Producing crops for small but well-paying markets.
- Utilizing diverse marketing outlets but understanding the costs of low-volume locations.
- Marketing aggressively and creatively.
- Searching out and using information to reduce production and marketing risks.
- Understanding there is a learning curve to new enterprises and not expecting to make any money for several years.
- Investing in good soils and water.
- Locating near a major population center on a paved road.
- Employing used (versus new) equipment and being able to do at least preventive maintenance on the farm.
- Using contractors to carry out some capital-intensive parts of the enterprise in the beginning.
- Matching work to the family's time, desires and abilities.
- Diversifying sources of earnings, including off-farm income, to produce a solid, year-round cash flow.

Small farms can be a springboard to significant business opportunities. They can be an incubator for skills and creativity. Many large enterprises started from very modest bases. However, there are significant risks associated with a commercial farm. Successful enterprises are exceedingly well managed and focused on a profitable marketing niche.

June

Ron Dowding

Lancaster County 4-H is proud to announce Ron Dowding of Bennet as winner of June's "Heart of 4-H Award" in recognition of outstanding volunteer service.

Ron has volunteered for Lancaster County 4-H for more than 20 years. He was organizational leader of Happy Go Lucky club for many years (in photo, he is wearing a belt buckle presented to him by the club). The club has been one of the larger 4-H clubs in Lancaster County. Ron has served as a county fair 4-H Sheep superintendant, 4-H recruiter, 4-H Council member, livestock VIPS committee member and Extension Board member. He also sponsors several livestock trophies.

"Being a 4-H volunteer is a great opportunity to give back to a program that's been a big part of my life," says Ron. "From that first rabbit at 8 years old to showing swine, sheep, dairy and beef cattle in Otoe County 4-H, to raising a small herd of registered shorthorns today in Lancaster County. My favorite part of volunteering is watching the youth not only of our club, but the youth of all Lancaster County 4-H grow into champions!!! It is very rewarding watching that little brother or sister too young for 4-H grow and mature through 4-H."

Ron has been married to Arlene for 30 years and their children Jana and Nate were 4-H members. Recently, Ron became a grandpa to daughter Jana's quadruplets! He works at Goodyear Tire & Rubber Co. Ron is a Lancaster County Agricultural Society board member (he currently is Vice President) and he volunteers through his church.

Congratulations to Ron! Volunteers like him are indeed the heart of 4-H!

Nominate your favorite 4-H volunteer by submitting the form online at http://lancaster.unl.edu/4h or available at the extension office. Nominations of co-volunteers welcome.

Pre-Fair Leader Training, May 23

New leaders, experienced leaders, 4-H members and parents are invited to this leader training on Tuesday, May 23, 9:30 a.m. or 7 p.m. at the Lancaster Extension Education Center. Come and receive information on how to fill out the entry tags, the in's and out's of interview judging, contests and other important county fair information. Preregister by May 22 by calling 441-7180.

Presentation Workshop, June 15

There will be a Presentation Contest workshop on Thursday, June 15, 1:30 p.m. at the Lancaster Extension Education Center. Attend this workshop to prepare for the Presentation Contest. This workshop will teach youth and volunteers about the three presentation classes, give tips on how to be a great presenter and help with presentation ideas!

Animal ID's Due June 15

All identifications for 4-H/FFA sheep, goats, swine, breeding beef, bucket calves, dairy cattle and rabbits which will be entered in the Lancaster County Fair are due to extension by Thursday, June 15.

Nebraska State Fair 4-H Broiler Show

Broilers for the Nebraska State Fair 4-H Broiler Show must be ordered by June 30 from Gage County Extension Office. There is a minimum order of 50 birds. Cost is $1.10 per bird. The order form can be picked up at extension or online at http://lancaster.unl.edu/4h

Life Challenge Contests

4-H Life Challenge judging contests help youth learn more about issues related to family and consumer science (FCS). Contests are open to all 4-H'ers, need not be enrolled in a specific project. Preregistration is not needed for the county-level contests. Contact Tracy at 441-7180 for more information.

County-level Senior Life Challenge (for ages 12 and up) is scheduled for Friday, June 9, 10 a.m. at the Lancaster Extension Education Center. Contest questions will be based on the following 4-H manuals: Fast Foods, You're the Chef, Foodworks, Youth in Motion, Shopping in Style, Attention Shoppers, Design Decisions and Home Building Blocks.

The statewide FCS Life Challenge (for ages 12 and up) will be held Monday, June 26 and Tuesday, June 27 on UNL East Campus. To participate, please contact Tracy by June 5.

The county-level Junior Life Challenge (ages 8–11) will be held Friday, July 7 at the Lancaster Extension Education Center. Contest questions will be based on the following 4-H manuals: Six Easy Bites, Attention Shoppers, Health A "Discovering Myself" and The Sitter.

Premier Animal Science Events, June 26–27

The statewide 4-H Premier Animal Science Events (PASE) will be held June 26–27 at the Animal Science Department on UNL's East Campus. If you are interested in being on one of the county's livestock judging, meats, poultry or dairy judging teams, please contact Deanna by June 5 to register for the event.

Horticulture Judging Contest, July 7

The Horticulture Judging Contest will be held Friday, July 7, 10 a.m.–Noon at the Lancaster Extension Education Center. Contest is open to all 4-H'ers — need not be enrolled in a horticulture project. Preregistration is not required. Study material is available from extension. Contact Mary Jane at 441-7180 for more information.

Youth choose which of the following portions of the contest to participate in:

- **Tree Identification** — identify 20 tree samples with proper name and spelling.
- **Grass & Weed Identification** — identify 20 grass and weed samples with proper name and spelling.
- **Horticulture Judging Contest** — consists of a written test, identification and judging.

Presentations Contests, July 15 and August 5

Presentations provide 4-H members the opportunity to learn to express themselves clearly and convincingly, organize their ideas and present them in logical order, research subjects, have confidence in themselves and emphasize the major points through the use of visuals or examples. There are three methods in which 4-H'ers may present: 1) presentation using LCD, slide, video or overhead projector; 2) presentation using posters; or 3) multimedia presentation. You choose which date works for you: Friday, July 14 beginning at 1 p.m. or Saturday, Aug. 5 beginning at 8 a.m. Preregister by Friday, July 7. See Fair Book page 35 for complete contest information.

HORSE BITS

New Horse Rules Book is Available

The new revised 4-H Horse Show and Judging Guide is now available at the extension office.

Salt Creek Wranglers Hold Pre-Districts Practice, May 20 and June 11

The Salt Creek Wranglers are providing a chance to practice for districts within their 4-H Silver Dollar Series. The show on Saturday, May 20 will highlight the English classes using the district format. Sunday, June 11 the western classes will be run in the district format. Registration starts at 8 a.m. Showbills on these and other area horse shows are online at http://lancaster.unl.edu/4h/news.htm

County Fair Horse IDs Due June 1

4-H horse identifications for the Lancaster County Fair are due in the extension office by Thursday, June 1. Late ID forms WILL NOT be accepted.

Please take the time to fill forms out completely and thoroughly. Draw your horse's markings on the picture as accurately as you can. Also, be sure to indicate the horse's color on the drawing. ID forms can be picked up at the extension office.

Ft. Robinson Horse Camp, June 8–10

The 2006 4-H Horse Camp at Ft. Robinson State Park near Crawford, NE will be held June 8, 9 and 10. For registration and further information call the Dawes County Extension Office at (308) 432-3373.

State Hippology and Judging Forms Due June 1

Hippology and judging entry forms for the State 4-H Horse Exposition at Fonner Park are due to the extension office on Thursday, June 1. Contest entry forms are available at the extension office or online at http://lancaster.unl.edu/4h

Note: to be eligible for the State 4-H Horse Show All-Around Awards, a 4-H member must compete in either the Horse Judging Contest or the Hippology Contest, or have competed in one of the contests associated with the 4-H Horse Stampede.

2006 4-H Horse Judging Clinics

May 31, 8:30 a.m — Pitzer Ranch at Ericson, NE. Contact Steve Niemeyer at (308) 346-4200

June 8, 9:30 a.m. — Huffman Ranch at Whitman, NE. Contact Jay Jenkens at (402) 376-1850

June 29, 8:30 a.m. — Pine Ridge Stables at Ashland NE. Contact Monte Stauffer at (402) 444-7804

Riding Skills Group Testings, June 13 & July 8

As of March 18, 2006, all riding skills level tests must be done in group testings. Individual tests done by leaders will no longer be accepted. Remaining test dates (location and times to be announced) will be Tuesday, June 13 and Saturday, July 8.

Please RSVP at least one week in advance of the test date to Marty at 441-7180 or mcruickshank2@unl.edu.

County Fair Entry Forms Due July 7

All County Fair Horse Entry Forms are due in the extension office by Friday July 7. NO LATE ENTRIES will be accepted.

Reminder....You must have passed all Level I Horsemanship requirements to show at the County Fair. You must have passed Level II to participate in off-the-horse roping classes. Bareback Equitation requires a level III.

Clover College

Tue., June 20–Fri., June 23

Lancaster Extension Education Center, 444 Cherrycreek Rd

Open to 4-H & non-4-H youth ages 6–19

Four days of "hands-on" workshops full of fun and learning! Youth may attend as many workshops as they wish. Youth attending workshops that overlap the lunch period should bring a sack lunch. Food will not be available (unless otherwise stated in the workshop description). If you have questions, contact Tracy Kulm at 441-7180.

	TUE, JUN 20	WED, JUN 21	THU, JUN 22	FRI, JUN 23
8:00–10:00	CLOVER KIDS ROCKETS BEG. LEATHER CRAFT BREAD PUDDING FACE PAINTING	CLOVER KIDS ROCKETS BEG. LEATHER CRAFT ETIQUETTE	CLOVER KIDS ROCKETS BEG. LEATHER CRAFT TABLE SETTING FUN	CLOVER KIDS ROCKETS BEG. LEATHER CRAFT FLOWER BABIES
10:15–12:15	CLOVER KIDS ADV. LEATHER CRAFT APPLE PIE NATURE ART MARTIAL ARTS	CLOVER KIDS ADV. LEATHER CRAFT FISHING FUN BANANA U MONEY, MONEY, MONEY	CLOVER KIDS ADV. LEATHER CRAFT CHECKMATE BLOCK PRINTING	CLOVER KIDS ADV. LEATHER CRAFT CHECKMATE GREAT GOATS SCRAPBOOKING
12:45–2:45	BIRDHOUSE/FEEDER HORSE OF COURSE I FUN IN THE KITCHEN PRIMITIVE ROPE MAKING	BIRDHOUSE/FEEDER MEMORY BOXES CLAY CUTTERS COLOR GALLERIA	BIRDHOUSE/FEEDER FRAMING FUN PERFECTLY PATRIOTIC HORTICULTURE	BIRDHOUSE/FEEDER GPS BASICS PERFECTLY PATRIOTIC RED, WHITE & GLUE
3:00–5:00	THEATRE ARTS HORSE OF COURSE II CANDY BAR BOUQUET SILK WREATH	THEATRE ARTS AQUARIUS BEADS SUMMERTIME CRAFTS BABYSITTING BASICS	THEATRE ARTS FISH TOPIC STYLE REVUE CAN'T RESIST FABRIC	IRIS PAPER FOLDING GARBAGE GETTERS CHOCOLATE CANDY PAWS UP!

Note: Many classes are already full — only classes with openings as of May 15 are listed.

4-Day Workshops

#4 Advanced Leather Craft
Practice the eight steps of leather craft to make a sampler coaster and book mark. Need to have had minimal prior leather work experience. Tools provided, please bring if you have them.
TUE-FRI, JUNE 20-23; 10:15AM-12:15PM
AGES: 11 & up • FEE: $8
INSTRUCTOR: Jane Dowd, 4-H volunteer

3-Day Workshop

#6 Theater Arts Adventures
Create characters, make puppets, learn stage direction, learn to act and more!
TUE-THUR, JUNE 20-22; 3–5PM
AGES: 8-10 • FEE: $5
INSTRUCTOR: Teri Hlava, Extension Assistant

2-Day Workshops

#7 Checkmate
Learn basic tactics of chess and the secrets of good positional play. For beginning and intermediate players.
THUR&FRI, JUNE 22-23; 10:15AM-12:15PM
AGES: 8 & up • FEE: $5
INSTRUCTOR: James Walla, 4-H Checkmates leader

#8 Perfectly Patriotic
Create a unique quilted American flag wall hanging you'll be proud to display. All materials provided. Bring a sewing machine if you have one; otherwise one will be provided.
New!
THUR&FRI, JUNE 22-23; 12:45-2:45PM
AGES: 8 & up • FEE: $7.50
INSTRUCTORS: Kathy Hansen, 4-H Volunteer & Karen Wedding, Extension Staff

1-Day Workshops

#9 MMM, Good Ole' Fashioned Bread Pudding
Learn how to make Grandma's bread pudding and take home a sample.
TUE, JUNE 20; 8-10AM
AGES: 9 & up • FEE: $10
INSTRUCTOR: Evan Kucera, 4-H Volunteer

10 Fabulous Face Painting
Learn fun techniques of face and body painting. You'll learn how to paint faces, arms and legs. Lots of glitter will be used so plan to sparkle when you leave.
TUE, JUNE 20; 8-10AM
AGES: 10 & up • FEE: $10
INSTRUCTOR: Jhoni Kucera, 4-H volunteer

11 Paper Bag Apple Pie
Make this amazingly delicious pie you actually bake in a paper bag.
TUE, JUNE 20; 10:15AM-12:15PM
AGES: 9 & up • FEE: $10
INSTRUCTOR: Evan Kucera, 4-H Volunteer

15 Fun in the Kitchen
It's easier than it looks to mix and shape bread and rolls. Learn mixing and shaping techniques through this hands-on workshop.
TUE, JUNE 20; 12:45-2:45PM
AGES: 10 & up • FEE: $5
INSTRUCTOR: Lorene Bartos, Extension Educator

19 Patriotic Silk Wreath
Learn from a floral arrangement expert how to make your own beautiful 4th of July silk flower wreath to take home and use now and in years to come. Bring wire cutters and if you have one, a craft glue gun and glue pan.
TUE, JUNE 20; 3-5PM
AGES: 10 & up • FEE: $22.50
INSTRUCTOR: Gary Tharnish, Burton Tyrell's Flowers

20 Etiquette Essentials
Etiquette is an essential life skill! Do you know which fork is for your salad? Can you properly introduce yourself to a stranger? This class will teach you this and more.
WED, JUNE 21; 8-10AM
AGES: 8–13 • FEE: $5.00
INSTRUCTOR: Muffy Vrana, Etiquette Specialist

23 Money, Money, Money
Learn the basics of banking and how to spend and save wisely.
WED, JUNE 21; 10:15AM-12:15PM
AGES: 10 & up • FEE: No charge
INSTRUCTOR: TierOne Bank, Clocktower Branch

24 Memory Boxes
Create your own personal memory box for all your special keepsake items.
WED, JUNE 21; 12:45-2:45PM
AGES: 8 & up • FEE: $3.50
INSTRUCTOR: Debi Schulz, Extension Intern

26 Color Galleria
Learn how to look your best by wearing the right colors. Make your own color book in this interactive and fun workshop! Bring empty 4X6 photo album and fabric scissors.
WED, JUNE 21; 12:45-2:45PM
AGES: 8 & up • FEE: $8
INSTRUCTOR: Jackie Zimmerman, Full Image Consultant

27 Aquarius Beads
Boys and girls can learn the basics of making beaded jewelry! Choose memory wire or macrame hemp jewelry. Make more than one piece of jewelry.
WED, JUNE 21; 3-5PM
AGES: 8 & up • FEE: $10
INSTRUCTOR: Sara Sutton, Aquarius Beads & Gifts, Inc

28 Sensational Summertime Crafts
Create your own sensational summertime arts & crafts in this hands-on workshop.
WED, JUNE 21; 3-5PM
AGES: 8 & up • FEE: $5
INSTRUCTOR: Jami Rutt, Extension Intern

29 Babysitting Basics
Learn the basic skills needed to be a responsible and creative babysitter. Focus is on activities, making snacks and toys.
WED, JUNE 21; 3-5PM
AGES: 11 & up • FEE: $5
INSTRUCTOR: Lorene Bartos, Extension Educator

30 Table Setting Fun
Create your own rose-covered votive centerpiece and matching tablecloth while you learn all you need to know to participate in the table setting contest.
THUR, JUNE 22; 8-10AM
AGES: 8 & up • FEE: $3
INSTRUCTOR: Karen Wedding, Extension Staff

32 Framing Fun
Decorate picture frames using a variety of embellishing methods.
THUR, JUNE 22, 12:45-2:45PM
AGES: 8 & up • FEE: $4
INSTRUCTOR: Deb Schulz, Extension Intern

33 Everything Horticulture
If you like to eat plants, plant plants, look at plants, or identify plants this is your class. This will be a two-hour crash course in all things horticulture.
THUR, JUNE 22, 12:45-2:45PM
AGES: 8 & up • FEE: $5
INSTRUCTORS: Nebraska Junior Horticultural Association members

35 Style Revue Workshop
Style Revue will be here soon! Learn new styling procedures and practice your modeling technique.
THUR, JUNE 22, 3-5PM
AGES: 8 & up • FEE: No charge

36 Can't Resist Fabric
Bring white pre-washed tank top or T-shirt and create your own unique design using a resist method. Finished projects available Friday, June 23.
THUR, JUNE 22, 3-5PM
AGES: 8 & up • FEE: $3
INSTRUCTORS: Jessica and Jaime Stephenson, 4-H volunteers

42 Iris Paper Folding
Learn to make adorable cards for friends and family using the simple and unique iris folding technique.
FRI, JUNE 23; 3-5PM
AGES: 10 & up • FEE: $2.50
INSTRUCTOR: Marian Hanigan, 4-H Volunteer

43 Garbage Getters
Learn about the world of worms and how they turn our garbage into healthy food (called vermicompost) for your plants and flowers. Create a worm habitat and take home your very own worm friends.
FRI, JUNE 23; 3-5PM
AGE: 8 & up • FEE: $8
INSTRUCTOR: Roberta Sandhorst, Master Gardener

45 Paws Up!
Meet and play with advanced therapy dogs and learn what will keep your pets safe in case of disaster. Begin a pet emergency preparedness kit!
FRI, JUNE 23; 3-5PM
AGE: 8 & up • FEE: $7
INSTRUCTOR: Paws Up! volunteers

For the current listing of full classes, please go to http://lancaster.unl.edu/4h/programs/clovercollege/

Be a 4-H Clover College Volunteer!

Adult and teens volunteers are needed to help during Clover College! No experience needed! Volunteer for one session or all four days! If you are interested in this opportunity, contact Tracy at 441-7180 or tkulm1@unl.edu.

CLOVER COLLEGE REGISTRATION FORM

To register, complete the registration form (one person per form) and return with payment (make check payable to Lancaster County Extension). Registrations must be received by June 12. Registrations are handled on a "first come" basis and will only be accepted upon receipt of fees. Classes fill up quickly — early registration is recommended. Telephone registration not accepted. All fees are nonrefundable unless a class is filled to capacity or canceled. May photocopy form if needed.

Assume your registration is confirmed unless we contact you about filled classes.

Name _____ Age _____

Parents Name(s) _____

Address _____

City _____ State _____ Zip _____

Daytime Phone _____ Evening Phone _____

Special Needs (allergies, etc.) _____

Workshop(s) #_____ Title _____ Fee _____

#_____ Title _____ Fee _____

_____ Title _____ Fee _____

#_____ Title _____ Fee _____

#_____ Title _____ Fee _____

Use additional sheet of paper if needed

Total _____

I give permission to use my child's name/photograph in publications, news articles, advertisements or Web sites pertaining to 4-H. ❑ yes ❑ no

Parent/Guardian Signature: _____ Date: _____

Bennet Celebrates Successful Visioning Process

Yelena Mitrofanova
UNL Extension Educator

Attendees at the Community Visioning Celebration pose by a banner with the community slogan.

Saturday, April 29 was supposed to be a rainy day; fortunately, the forecast was wrong. We were blessed with good weather, some sunshine and enjoyed spending the late afternoon in the Bennet Park celebrating the success of Bennet Visioning Process.

Members of the Bennet Advisory Committee organized a Community Visioning Celebration to recognize their achievements and honor the volunteers who committed a lot of time and energy to the visioning process.

Successful Visioning Process

The Bennet Community Visioning Process took about six months to complete and Bennet residents have a lot to be proud of:

- The Citizens' Advisory Committee has been formed and become active in the community; the advisory committee will work in partnership with the Village Board and Planning and Zoning Committee on the projects which will improve the quality of life in Bennet. These local leaders will be the liaison between local officials and the whole community and make sure communication goes both ways.
- The Vision Statement was created and will be incorporated into the comprehensive plan; it will guide the community in shaping Bennet's future. The Vision Statement was created from information gathered at the listening sessions and from the themes which were prioritized by Bennet residents during the second Town Hall meeting. The Vision Statement reflects community residents' goals, objectives and desires.
- The Citizens' Advisory Committee decided to promote Bennet and distinguish their community among others in Lancaster County by creating a community slogan. Four different slogans were proposed and the advisory committee distributed voting cards asking Bennet residents to choose their favorite. Based on the results, the new Bennet Community Slogan is, "Remember yesterday's values; live today's dreams; invest in tomorrow's families."
- The Citizens' Advisory Committee raised the money ($200) to present Community Visioning Celebration. They also contracted local business owner, Todd Calfee, to create a banner with the Bennet Community Slogan.

Visioning Celebration

Lee Anderbery, Cathy Jones, Doug Janak, Guenter Schwerdtle and Tyler Goodrich took leadership roles in organizing the Community Visioning Celebration. Flyers announcing the event were distributed around town and announcements were published in The Voice and Lincoln Journal Star newspapers. Heartland Community Bank, Bennet Builders and Bennet Youth Group donated money for the event.

About 25 people attended the celebration, enjoying ice cream from the University of Nebraska–Lincoln Dairy Store and live music. There was a volunteer recognition, and the new vision statement and community slogan were promoted.

The majority of attendees were aware of the visioning process and had participated in Listening Sessions and Town Hall meetings. Some attendees had not known about the visioning process, but enjoyed the opportunity to learn what was going on in the community.

For more information about the Bennet visioning process, visit the Web site at http://lancaster.unl.edu/community/community_Bennet.shtml.

Community Garden Open House, June 24

Community CROPS, Lincoln's community garden and farm project, will be having a garden open house on Saturday, June 24, 10 a.m.-2 p.m. Select gardens will be open for visiting with gardeners on-site to showcase their plots. We will have various garden and food related demonstrations and refreshments at each garden. Tickets will be available to purchase at all open garden locations, including the 46th and Pioneers Community Garden and the 23rd and P Community Garden.

Community CROPS: Combining Resources, Opportunities and People for Sustainability is a community-supported project that provides garden space to people in the Lincoln area, as well as helping refugee and immigrants to start farming for market. For more information about the open house, go to www.communitycrops.org or call 730-2532.

When Property with Private Water, Wastewater is Sold, Systems Must be Inspected

By John Chess
Lincoln-Lancaster County Health Department

Effective May 29, 2006, Lancaster County Resolution R-06-0005 and Lincoln Municipal Code 24.42 requires prior to the sale, transfer or conveyance of property upon which an on-site wastewater treatment system and/or on-site water supply system is located, it shall be the duty of the owner to have each system inspected by a Property Transfer Inspector (PTI) and secure a determination letter from the Lincoln-Lancaster County Health Department (LLCHD).

PTIs must hold a valid permit from LLCHD to conduct inspections on the on-site wastewater system and/or the on-site water system. A current list of PTIs is available by contacting the LLCHD.

The PTI will conduct inspections of the on-site wastewater and/or the onsite water system based on the criteria set by the LLCHD. The inspection results will be submitted to the LLCHD, along with a $75.00 fee for review and issuance of a determination letter. After reviewing the inspection report, LLCHD will issue one of three letters of determination. They are:

Approval: This means at the time of inspection the on-site wastewater system and/or the on-site water system found the structure and operational status were in substantial compliance with applicable local and state codes.

Denial: This means either one or both of the on-site systems may adversely affect public health. The denial status does not preclude the sale, transfer or conveyance of property. However, if a serious public health violation does exist, LLCHD may take legal steps to make sure the violation is corrected.

Undetermined: This means the system could not be inspected due to weather conditions. The inspection must be completed when the weather conditions are acceptable.

The property code does provide exceptions to the inspection requirement and issuance of the determination letter. Examples of the most common exceptions: 1) when a determination letter was issued within the past 36 months; 2) a new system installed in the previous 36 months; 3) transfers from spouse to spouse; and 4) transfers between immediate family members.

If you have questions about the property transfer code, contact John Chess at 441-8027 or Doug Smith at 441-8031.

EXTENSION CALENDAR

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

May

23 4-H Leader Training . . . . . 9:30 or 7 p.m.

June

1 County Fair 4-H Horse ID's Due to Extension Office
1 ABC's for Good Health - 3 part series . . . . . 10 a.m. or 6 p.m.
2 Animal Science Field Day, *UNL East Campus - Animal Science Bldg* . . . . . 9 a.m.–3:30 p.m.
6 4-H Council Meeting . . . . . 7 p.m.
8 ABC's for Good Health - 3 part series . . . . . 10 a.m. or 6 p.m.
9 4-H County-Level Senior Life Challenge . . . . . 10 a.m.
13 4-H Horse Riding Skills Group Test, *location TBA* . . . . . TBA
15 ABC's for Good Health - 3 part series . . . . . 10 a.m. or 6 p.m.
15 4-H Presentations Workshop . . . . . 1:30 p.m.
15 All County Fair 4-H/FFA Animal ID's Due to Extension
17 Jammie Jamboree . . . . . 9 a.m.
19–22 District 4-H Horse Shows *(Beatrice-19, O'Neil-20, Oakland-21, Lincoln-22)*
20–23 Clover College
27–30 District 4-H Horse Shows *(Sydney-27, Valentine-28, McCook-29, Lexington-30)*
26 Family & Community Education (FCE) Council Meeting . . . . . 7 p.m.
26–27 4-H PASE/Life Challenge, *UNL East Campus*

Bio-Fuels

continued from page 1

systems necessary to reduce emissions. The standard is being resisted by petroleum refiners as being too costly.

Rotary distributor injection pumps rely on the diesel fuel itself for lubrication. Sulfur compounds in diesel fuel have lubricating properties. The main lubricity problem is these pumps sustain accelerated wear with lower sulfur diesel. Newer pumps built to new, low-sulfur standards can handle the lower sulfur content, but older models will need lubricity enhancers added to the fuel. The addition of biodiesel, at the rate of 2 percent (B2), increases fuel lubricity of present day low lubricity #1 and #2 diesel to benchmark standards or better. As sulfur content drops to meet the new 2006 standards, older engines would likely benefit from somewhat higher concentrations of biodiesel. The lubricity characteristics of biodiesel, plus the long-term benefits of replacing a portion of fossil fuel with a renewable source should result in a growing and on-going demand for biodiesel in the future.

Statistics show an estimated 45 billion gallons of diesel fuel was used by over-the-road trucks in 2001. If all over-the-road truck diesel fuel contained a 2 percent blend of biodiesel (B2), about a billion gallons of petroleum diesel per year would be replaced by biodiesel which, in turn, would reduce our dependence on foreign oil.

A biodiesel plant converts vegetable oil (such as soybean oil) to biodiesel.

Many Nebraska farmers are using B2 in their diesel tractors, combines and pickups. In fact, at least one major farm equipment manufacturer is shipping their tractors with a tank of biodiesel. The number of diesel automobiles is expected to double in the next 20 years. If biodiesel were used not only in trucks and cars but also in diesel-electric locomotives, construction equipment, etc., we could further reduce our dependence on foreign oil.

What Does the Future hold for Biofuel Production in Nebraska?

Nebraska will continue to be a reliable supply of feed grain and oilseed, as a result of our irrigated crop production. Some of this production is already going into biofuel production and as more biofuel plants go into production, they can be located so as to be assured of a reliable supply of feedstock. Nebraska has a very well-developed transportation infrastructure — truck and rail. Our central location within the country puts us in an ideal position to be a supplier of biofuels to the Midwest region and both coasts.

When cellulosic ethanol production is perfected, Nebraska has millions of acres of forage production as well as millions of tons of crop residues which could be utilized for ethanol production.

Finally, we have a thriving cattle and hog feeding and dairy industry to utilize the by-products of the grain ethanol plants and oilseed crushing industries, thus adding to the profitability of both the biofuel industry and the livestock industry in the state.

I have often said, Nebraska is the Saudi Arabia of fresh water, having two billion of the estimated total 2.98 billion acre-feet of water stored in the High Plains Aquifer. Someday, we also could be known as the Saudi Arabia of renewable fuels.

ABC's for Good Health, June 1, 8 & 15

A 3-Part Series Which can Change Your Life

UNL Extension Nutrition Education Program (NEP) is presenting "ABC's for Good Health," a free series aimed at limited- to moderate-income women. Upcoming dates are Thursdays, June 1, 8 and 15. Choose between two time slots, 10 a.m.–12:30 p.m. or 6–8:30 p.m.

Learn that good health is as easy as:

A) Aim for fitness — Increase your physical activity with a personalized walking program.
B) Build a healthy base — Use MyPyramid to guide your food choices.
C) Choose sensibly — Balance the foods you need and enjoy.

Participants receive:

- A pedometer and inspiration to stay fit
- A notebook with practical nutrition information
- New recipes and food preparation ideas
- A cookbook (valued at $15) after completing the series

Sessions are held at the Lancaster Extension Education Center, 444 Cherrycreek Road in Lincoln. Please register by May 24. Call NEP at 441-7180 for more information or to register.

IANR

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

University of Nebraska–Lincoln Extension in Lancaster County
444 Cherrycreek Road, Suite A
Lincoln, NE 68528-1507
Phone: (402) 441-7180
Web site: http://lancaster.unl.edu
E-mail: lancaster@unl.edu • Fax: 441-7148

Lancaster Extension Education Center
Conference Facilities
444 Cherrycreek Road, Lincoln
Lobby Phone: 441-7170

THE NEBLINE

THE NEBLINE is published monthly (except December) and mailed to more than 10,500 households in Lancaster County.

Subscribe!

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

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Address _____

City_____ Zip _____

Mail to: UNL Extension in Lancaster County
444 Cherrycreek Road, Suite A • Lincoln, Nebraska 68528-1507

Can You Guess It?

Did you guess it? Find out at
http://lancaster.unl.edu

Did you guess it from the May NEBLINE?
The answer was bark on a birch tree.

Animal Science Youth Field Day, June 2

Open to all youth ages 10 and up, University of Nebraska–Lincoln Animal Science Field Days present a variety of fun, hands-on activities which teach about beef, sheep and swine evaluation, breeding, meats and feeds. In Lincoln, a Field Day will be held on Friday, June 2, from 9 a.m. to 3:30 p.m. at the Animal Science Department on UNL's East Campus. No preregistration is needed. There is a $5 registration fee payable the day of the event — lunch is included. Parents and other adults with interests in the livestock industry and educating youth are also encouraged to attend and participate. If you need additional information please call Deanna at 441-7180.

University of Nebraska Lincoln

Jammie Jamboree

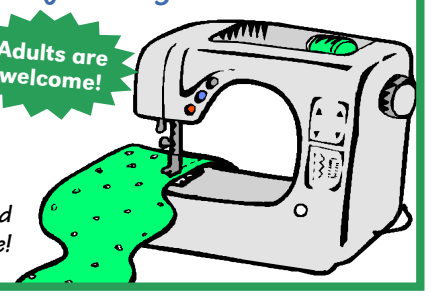
Saturday, June 17, 9 a.m.

Lancaster Extension Education Center
444 Cherrycreek Road, Lincoln

Join us at the Jammie Jamboree and make jammie bottoms! Bring the Simplicity pattern 5338, prewashed flannel or 100% cotton fabric for the bottoms only and matching thread. Also bring your sewing machine, basic sewing equipment such as scissors, pins, measuring tape, etc. and a sack lunch.

Sign up by June 12 by calling 441-7180.

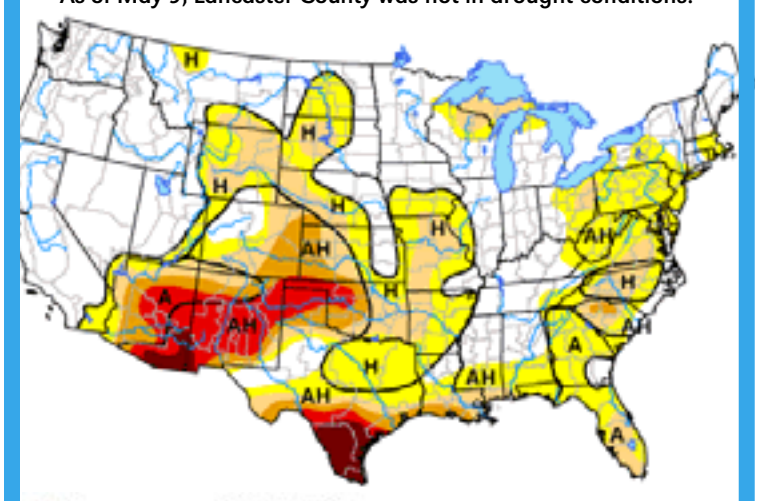
FREE workshop! Open to 4-H and non-4-H youth! Adults are welcome!



Jammie bottoms may be entered at the County Fair and styled in the 4-H Style Revue!

U.S. Drought Monitor Map

As of May 9, Lancaster County was not in drought conditions.



For the most recent map, visit http://www.drought.unl.edu/dm

Source: National Drought Mitigation Center, University of Nebraska–Lincoln

4-H Speech & PSA Contest Winners

This year was the second year the Lancaster County 4-H Speech and Public Service Announcement (PSA) Contest was split into two events and dates to make it easier for youth to participate in both contests. These are the first 2006 Lancaster County Fair 4-H contests. Waverly Grange and Lancaster County Farm Bureau donated cash awards. The top three winners in each division will go to regionals, held May 30 at UNL East Campus. Complete results and photos are online at http:/lancaster.unl.edu/4h/Fair

SENIOR PSA: Amanda Peterson (1st), Kyle Pedersen (2nd)
INTERMEDIATE PSA: Jessica Stephenson (1st), Erica Peterson (2nd), Rachel Pickrel (3rd)
JUNIOR PSA: Trenton Craig (1st)
NOVICE PSA: Jaime Stephenson (1st), Jacob Pickrel (2nd)
SENIOR SPEECH: Amanda Peterson (1st), Catherine Dowd (2nd), Kyle Pedersen (3rd)
INTERMEDIATE SPEECH: Caleb Swanson (1st), Jessica Stephenson (2nd); Erica Peterson (3rd)
JUNIOR SPEECH: Charles Dowd (1st), Abigail Swanson (2nd)
NOVICE SPEECH: Jaime Stephenson (1st), Molly Noel (2nd), Mary Dowd (3rd)

(Left to right) Amanda Peterson, Alice Doane (representing Waverly Grange), Kyle Pedersen and Catherine Dowd.

Rabbits 'R' Us 4-H Club Donates Aprons

When the 4-H Council discussed purchasing aprons for 4-H'ers working in the 4-H Food Booth at the Lancaster County Fair, members of the Rabbits "R" Us 4-H Club stepped forward with a plan. They volunteered to purchase, decorate and donate 100 aprons to the 4-H Council to be used at the 4-H Food Booth and other approved events, as they arise.

The funds to purchase the aprons came from the club's main fundraiser, the Dunking Booth and Duck Pond at the Lancaster County Fair. Funds generated from the Dunking Booth and Duck Pond are annually used to do landscaping work at the Lancaster Event Center and other community service projects.

Approximately 15 Rabbits 'R' Us club members helped decorate the aprons with the 4-H logo using a fabric resist method. One of the members, Jessica Stephenson, had demonstrated the technique as part of last year's Presentations Contest. Therefore, Jessica and her sister Jaime, led Rabbits 'R' Us members in the process and laundered the aprons after the meeting. They will also be presenting this technique at this year's Clover College (see page 9). Thanks to the Event Center for providing space for the club to decorate the aprons.

—Submitted by Chris and Jessica Stephenson

Club members wore the new aprons at the 4-H Spring Rabbit Show which Rabbits 'R' Us presents every year.

Choose from More than 40 Nebraska 4-H Summer Camps

Open to all youth ages 5-19, 4-H summer camps are a great opportunity to meet new friends and experience a wide variety of exciting activities such as canoeing, mountain biking, horseback riding, rappelling or climbing, volleyball, basketball, art, dancing, backpacking, shooting sports, water skiing and fishing!

There are more than 40 camps and trips scheduled in May, June, July and August at the three 4-H camp locations in Nebraska:

- Eastern Nebraska 4-H Center, Gretna
- Nebraska State 4-H Camp, Halsey
- South Central 4-H Center, Alma

Most camps include one to three overnight stays in comfortable cabins. Four camps aimed at youth ages 5–8 are one-day camps — adult chaperones are invited!

Brochures with camp descriptions, registration forms and more information are available online at http://4h.unl.edu/camp or at the extension office. New this year, register online!