The NEBLINE, July 2010

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When you drive south of Denton on Southwest 98th Street you pass through a range of large hills, most of which are covered with perennial grass pastures and hay meadows. Some of this land has never been tilled. One of the never-tilled remnants of the tallgrass prairies and the only one open to the public can be found at Spring Creek Prairie Audubon Center. The address is 11700 S.W. 100th Street. The entrance to the center is on the east side of the road. If you are coming from the north, the entrance to the property is about a quarter mile south of the county road maintenance yard (two large piles of gravel) at the corner of Southwest 100 Street and Saltillo Road (98th Street jogs over a couple of blocks at this corner).

A crushed rock foot path leads you from the parking lot to the education building, built in 2006. This facility supports the mission of the Spring Creek Prairie Audubon Center by providing educational services, coordinating efforts with regional partners to advocate for prairie preservation, and planting the seeds of a community that cares about their prairie.

There are miles of hiking trails within the 808 acres of land that comprises the Spring Creek Prairie Audubon Center. All but 90 acres of the land have never been plowed and this recently-acquired 90 acres is being converted to native plant species. The center hosts a multitude of wildlife species. The Web site states “Hundreds of species of creatures find areas to breed, forage for food, roost, and winter safely in a variety of habitats on the preserve.” These include 215 species of birds, 30 species of mammals, 51 species of butterflies, and 32 species of Dragonflies/Damselflies.

As I walked on one of the hiking trails on May 26, 2010, I saw and heard at least ten different species of birds and the throaty croak of a couple of bullfrogs in the pond. I also watched a muskrat swim across the pond and disappear into its burrow in the bank.

One historic feature on the property is a wagon trail. The trail was originally used by horse-drawn freighter wagons following the “Nebraska City-Fort Kearny Cutoff.” Opened in 1860 as the shortest route from Missouri River ports to Fort Kearny and points west, the road was established by military freight contractors. It became a popular year-round highway for commerce, immigration, and local traffic.

The present-day prairie is being actively managed using controlled burns and other techniques to reduce invasion by introduced non-native plant species while encouraging native species of plants.

Some of the property is rented to a local cattle producer under the watchful eye of Gordon Warrick, habitat program manager. The photos presented here are samples of the landscape scenes and plant and animal life I experienced along the hiking trail that day. I wish to thank Gordon for guiding me as I explored the property.

For more information, go to www.springcreekprairie.org or call (402) 797-2301.
Use of Copper Compounds to Control Algae in Farm Ponds

Tom Dorn  
UNL Extension Educator

Copper has been used for many years as an effective algicide in farm ponds, livestock water tanks, and nurse tanks used by farmers as a source of water for mixing pesticides. This article will discuss the use of copper to control algae in farm ponds.

It is vitally important to accurately identify whether the problem is indeed algae when attempting control measures. I often get calling asking to know how to kill “algae” in a pond, but after a short conversation, I discover the caller actually has aquatic weeds, not algae. Copper, in the concentrations used in a pond, will have no effect on higher plants and would be a waste of time and money.

The three most common types of algae are single-celled (planktonic) algae, filamentous algae, and higher algae (Chara). Single-celled algae is too small to see individually. They turn the water a uniform green color. Plants most often mistaken for single-celled algae are Duckweed and Watermilfoil. These are small multi-celled plants that float on the surface and are pushed from one side of the pond to another by the wind.

Common filamentous algae are: 

- Spirogyra spp. — slimy and green.
- Chlamydomonas spp. — cotton mat type.
- Nitella spp. and Chara spp. (also called muskgrass) — are large green algae anchored to the bottom, but do not extend above the surface. Chara are stem-like, with thin, leaf-like structures, they are often confused with seed plants. When crushed, Chara produces a musky odor. Higher plants often confused with Chara are pond Najad, and Cootail. See Aquatic Plants and Their Control from Kansas State University, in the reference list below.

According to: Managing Iowa Fisheries, Use of Copper Compounds in Aquatic Systems (see reference list below), only a thin line separates effective algae-treatment levels from lethal overdoses to fish. And not all fish are equally tolerant of copper sulfate; for example, the compound is highly toxic to salmonoids (trout and salmon). The fact sheet explains that when and how to use copper in aquatic systems and which precautions to take before using it.

Copper comes in several readily water soluble forms, the cheapest and most commonly used of which is copper sulfate (copper disulfatepentahydrate). This form is available as either blue or powder and is known as “bluestone” or “powder blue.” When copper sulfate is bought from a commercial manufacturer of copper, the percentage of copper in the formula should be carefully noted. The following dosage rates assume 25 percent metallic copper.

Several companies market copper in chelated liquid and crystal forms. Chelated copper compounds stay in solution longer than copper sulfate does, tend to control algae better, and seem safer to fish. Chelated copper compounds will have higher initial costs than copper sulfate. Dosage rates of copper compounds depend upon both manufacturer instructions and chemical type (liquid or granular).

Determination of Dosage Rates

Determine dosage rates before using any type of copper treatment. First, measure the total alkalinity, (Not the hardness of your water), in parts per million (ppm), and the pH, since the toxicity of copper to fish increases as the total alkalinity and pH decrease. Dosage rates for copper sulfate are listed below, by alkalinity level:

<table>
<thead>
<tr>
<th>Depth</th>
<th>0-40 ppm</th>
<th>40-60 ppm</th>
<th>60-90 ppm</th>
<th>90-200 ppm</th>
<th>Above 200 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 ft.</td>
<td>0.0 ppm</td>
<td>0.33 ppm</td>
<td>0.5 ppm</td>
<td>1.0 ppm</td>
<td>2.0 ppm</td>
</tr>
<tr>
<td>1 ft.</td>
<td>2.7 ppm</td>
<td>3.3 ppm</td>
<td>4.5 ppm</td>
<td>6.0 ppm</td>
<td>8.0 ppm</td>
</tr>
<tr>
<td>2 ft.</td>
<td>5.4 ppm</td>
<td>6.6 ppm</td>
<td>9.0 ppm</td>
<td>12.0 ppm</td>
<td>16.0 ppm</td>
</tr>
<tr>
<td>3 ft.</td>
<td>10.8 ppm</td>
<td>13.2 ppm</td>
<td>18.0 ppm</td>
<td>24.0 ppm</td>
<td>32.0 ppm</td>
</tr>
<tr>
<td>4 ft.</td>
<td>21.6 ppm</td>
<td>26.4 ppm</td>
<td>36.0 ppm</td>
<td>48.0 ppm</td>
<td>64.0 ppm</td>
</tr>
</tbody>
</table>

The maximum copper sulfate dosage rate is 2.0 ppm. One (1.0) ppm equivalents are as follows:

- 0.0038 grams per gallon,
- 0.0083 grams per cubic foot,
- 0.00006 pounds per cubic foot,
- 1.0 milligrams per liter,
- 2.7 pounds per acre-foot.

For example: the maximum dosage rate for a half acre pond with an average depth of 10 feet, would be calculated as follows.

Volume = 0.5 acre x 10 feet = 5 acre-feet
Maximum dosage = 2.7 pounds/acre-foot x 2 x 5 = 54 pounds per acre-foot.

Maximum pounds of copper sulfate = 5.4 pounds/acre-foot x 5 x acre-feet = 27 pounds per acre-foot.

If total alkalinity is less than 40 ppm, copper treatments are not recommended because of the risk to fish. Algae control in waters with high alkalinity levels (greater than 250-300 ppm) can be improved by use of chelated copper compounds.

Copper sulfate in waters with high total alkalinity levels will settle before algae is completely controlled. Alkalinity is variable especially in eastern Nebraska, so if you do not know the concentration, find out before treating with copper.

Sources:

- Managing Iowa Fisheries, Use of Copper Compounds in Aquatic Systems — Iowa State University: http://www.extension.iastate.edu/Publications/P1M1352.pdf
- Aquatic Plants and Their Control — Kansas State University: http://www.kansstate.edu/library/cppl/ct67.pdf
- USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora
Safe Homes for Seniors
A Program to Rid Homes of Hazardous Waste

If you know a senior citizen who has lifetime accumulation of insecticides, herbicides, and toxic cleaning products and would like to get rid of them, there is a free program that can help. The Safe Homes for Seniors Program provides free and convenient home assessments and removal of hazardous products for persons in Lancaster County who are age 60 and over. This service is provided by the Aging Partners Home Handyman Program and Lincoln–Lancaster County Health Department.

Bullsnakes are Beneficial

Bullsnakes are one of the largest and most often seen snakes of Nebraska. Members of this species sometimes are called pine snakes or gopher snakes. The Lakota call them “sinte wanglelega.”

If you see a bullsnake, it may vibrate its tail against dry leaves and grass, raise up, flatten its head and make a hissing noise trying to mimic a rattlesnake. At the same time, the bullsnake will try to back away. If these tactics don’t work, the bullsnake may lunge at you. Unfortunately, bullsnakes may do too good a job acting like a rattlesnake and end up being killed by mistake.

Some people believe rattlesnakes and bullsnakes mate and produce offspring with poisonous venom. This isn’t true. Rattlesnakes and bullsnakes cannot mate. These two species of snakes have unique differences. Bullsnakes lay eggs. Rattlesnakes give birth to live young. Bullsnakes have a long lithe body and pointed tail. Rattlesnakes have a chunky body, blunt tail and a rattle. The bullsnake’s head and neck are the same width. The rattlesnake has a large head and narrow neck. Bullsnakes have round pupils and rattle-snakes have pupils that are vertical slits. Bullsnakes are not poisonous; rattle-snakes are poisonous. Bullsnakes are constrictors and grab their prey with their mouth. If the prey is large, the snake wraps several coils around its prey and kills it by squeezing it tightly. These snakes hunt in the morning and evenings. During the heat of the summer, they are more active at night.

Because they consume so many rodents, bullsnakes are normally considered beneficial. Farmers with free range ducks and chickens should be aware these snakes are very good at finding and eating eggs. Bullsnakes should not be killed. They are of no danger to humans and eat large numbers of rodents. Bullsnakes are important members of the food chain.

Some people actually allow a few bullsnakes to hang out in their barns to keep rodent populations down. But if you want to discourage bullsnakes from outbuildings, focus on controlling rodent populations. Keep vegetation closely mowed around buildings. Remove bushes, shrubs, rocks, boards, and debris on the ground. These all provide habitat for both snakes and rodents. Repellents are not effective for snakes. There are few natural predators of adult bullsnakes. The young are preyed upon by raptors and skunks.

In urban areas like Lincoln, most people versus snake encounters involve harmless garter snakes. Rarely will you stumble upon a bullsnake in town. But if you happen to come across this large snake at a lake or park, just give it some space and let it go on its way.

FOR MORE INFORMATION
The Amphibians and Reptiles of Nebraska Web site at http://unl.edu/herpneb

Devices to Prevent Mosquito Bites

What Works/What Doesn’t

Barb Ogg
UNL Extension Educator

Mosquito larvae require a moist or wet environment to develop. They breed in water-filled stagnant pools of water, tree holes, discarded tires, and a variety of other artificial receptacles that retain water. The abundance of rainy weather has provided breeding locations in urban and rural areas of eastern Nebraska.

Mosquitoes are annoying when we spend time outdoors. But they also can carry diseases, like West Nile virus (WNV), which is currently the most important mosquito-vectored disease in the U.S. It first appeared in the U.S. in 1999. It is believed 80 percent of people acquiring WNV from the bite of an infected mosquito show no symptoms of the disease. Infrequently, WNV can cause encephalitis or meningitis, which can be serious. From 2001-2009, there were more than 1,108 deaths in the U.S. attributed to WNV. Most of these deaths were people older than 65; most of the rest were people with underlying health problems.

West Nile encephalitis primarily circulates in a bird-mosquito cycle when birds are resting in spring and early summer. By late June, the mosquitoes begin feeding on humans and other animals. The most capable vector of WNV in Nebraska is Colesius turanicus, a mosquito found in Nebraska and the western U.S. University of Nebraska–Lincoln Extension recommends people use repellents to prevent mosquito bites. For details about repellents, check out the article in last month’s Nebraska, online at http://dlc.unl.edu/nebrline/2010/jun10/page03.pdf. Instead of using repellents, many people say they are easier to use some sort of device to capture or repel mosquitoes. Unfortunately, not all devices on the market are very effective.

There are three types of devices sold to kill or repel mosquitoes:

Mosquito Magnet® — The “Mosquito Magnet®” does attract and entrap mosquitoes. It uses propane to produce carbon dioxide to attract mosquitoes. Octenol, another attractant, is recommended to increase the trap catch. But, consumers will find it is a very expensive way to kill mosquitoes — about $350–$500 plus the continual cost of propane and octenol. There have been reports of Mosquito Magnets® being física and not reliable. Before you buy one, it would make sense to see if you can rent one to see if it works for you.

Bug Zappers — Electrocuting devices, popularly known as “bug zappers,” emit ultraviolet light (UV) which attracts insects. But bug zappers do not discriminate between insects — they only kill insects attracted to UV light. Unfortunately, mosquitoes are not very attracted to UV light and make up less than one percent of the insects killed by these devices.

Ultrasonic Devices — High-frequency ultrasonic devices are advertised to repel mosquitoes. Most of these ultrasonic mosquito repel-"
Barbecue and Food Safety

Cooking outdoors was once only a summer activity shared with family and friends. Now more than half of Americans say they are cooking outdoors year round. So whether the snow is blowing or the sun is shining brightly, it’s important to follow food safety guidelines to prevent harmful bacteria from multiplying and causing foodborne illness. Use these simple guidelines for grilling food safely.

From the Store: Home First
- When shopping, buy cold food like meat and poultry last, right before checkout. Separate raw meat and poultry from other food in your shopping cart. To guard against cross-contamination — which can happen when raw meat or poultry juices drip on other food — put packages of raw meat and poultry into plastic bags.
- Plan to drive directly home from the grocery store. You may want to take a cooler with ice for perishables. Always refrigerate perishable food within 2 hours, or 1 hour if the temperature is above 90°F.

Thaw Safely
- At home, place meat and poultry in the refrigerator immediately. Freeze poultry and ground meat that won’t be used in 1 or 2 days; freeze other meat within 4 to 5 days.

Marinating
- A marinade is a savory, acidic sauce in which a food is soaked to enrich its flavor or to tenderize it. Marinate food in the refrigerator, not on the counter.

Keep Cold Food Cold
- Keep meat and poultry refrigerated until ready to use. Only take out the meat and poultry that will immediately be placed on the grill.
- When using a cooler, keep it out of the direct sun by placing it in the shade or shelter. Avoid opening the lid too often, which lets cold air out and warm air in. Pack beverages in one cooler and perishables in a separate cooler.

Keep Everything Clean
- Be sure there are plenty of clean utensils and platters. To prevent foodborne illness, don’t use the same platter and utensils for raw and cooked meat and poultry. Harmful bacteria present in raw meat and poultry and their juices can contaminate safely cooked food.
- If you’re eating away from home, find out if there’s a source of clean water. If not, bring water home, find out if there’s a source of clean water, and their juices can contaminate safely cooked food.

Leftovers
- Refrigerate any leftovers promptly in shallow containers. Discard any food left out more than 2 hours (1 hour if temperatures are above 90°F).

Poultry and cubed meat or stew meat can be marinated up to 2 days. Beef, veal, pork, and lamb roasts, chops, and steaks may be marinated up to 5 days. If some of the marinade is to be used as a sauce on the cooked food, reserve a portion of the marinade before putting raw meat and poultry in it. However, if the marinade used on raw meat or poultry is to be reused, make sure to let it come to a boil first to destroy any harmful bacteria.

Transporting
- When carrying food to another location, keep it cold to minimize bacterial growth. Use an insulated cooler with sufficient ice or ice packs to keep the food at 40°F or below. Pack food right from the refrigerator into the cooler immediately before leaving home.

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- If you’re eating away from home, find out if there’s a source of clean water. If not, bring water for preparation and cleaning. Or pack clean cloths, and wet towelettes for cleaning surfaces and hands.

Precooking
- Precoking food partially in the microwave, oven, or stovetop is a good way of reducing grilling time. Just make sure the food goes immediately on the preheated grill to complete cooking.

Cook Thoroughly
- Cook food to a safe minimum internal temperature to destroy harmful bacteria. Meat and poultry cooked on a grill often brown very fast on the outside. Use a food thermometer to be sure the food has reached a safe minimum internal temperature.

Safe Minimum Internal Temperatures
- Whole poultry 165°F
- Poultry breasts 165°F
- Ground poultry 165°F
- Hamburgers, beef 160°F
- Beef, veal, and lamb steaks, roasts and chops can be cooked to 145°F. Hamburgers made of ground beef should reach 160°F. All cuts of pork should reach 160°F. All poultry should reach a minimum of 165°F.

Foods labeled “Organic,” are not necessarily more nutritious and healthier than conventional food products. According to United States Department of Agriculture (USDA), there is not enough evidence to support the claim organic foods are significantly healthier and more nutritious than conventional foods. The “USDA Organic” label refers to the way farmers grow and process the product not to the nutrition contents.

3. Foods labeled “Fat Free/Low Fat” are not always low in calories. There may be no significant difference in calories between low fat and regular food products. It is a common misconception fat free/low fat foods are significantly lower in calories. See NUTRITION on page 11
Presidents View Irene’s Items

Irene Colborn FCE Council Chair

Another holiday Independence Day 4th of July a day to celebrate with family and friends the freedoms we take for granted by living in America. If I remember right, we had rain last year that dampened our celebration. So much as I appreciate the rains, I hope you will all have a chance to enjoy a good holiday.

You still have time to register for our Sizzling Summer Sampler, July 8, 6 p.m. See details below. This fun evening is open to everyone.

Sizzling Summer Sampler is our money maker for the scholarship fund. We awarded a $400 scholarship to a graduate of a high school in Lancaster County or a permanent resident of Lancaster County majoring in a Family and Consumer Science or a Health Occupation at a college.

We need participation from club members. We will need volunteers. Tickets for the raffle will be available at the meeting.

June Council Meeting, June 28

The June FCE Council meeting is Monday, June 28, 12:30 p.m. at Stauftier's Restaurant (formerly The Ville Grille), 2701 N. 48th St. We will have lunch and a business meeting at the restaurant. Following the meeting, we'll visit the Food Bank of Lincoln, 4840 Dora Bair Circle, Suite A.

Basket Raffle at Sizzling Summer Sampler

Clubs and individuals are reminded, baskets are needed for the Scholarship Raffle at the Sizzling Summer Sampler (SSS). Each year a $400 scholarship is awarded to a college student majoring in Family and Consumer Science or a Health occupation. Tickets for the raffle will be available at the SSS.

Lancaster County Association for Family and Community Education presents

SIZZLING SUMMER SAMPLER

Thursday, July 8 6 to 9 p.m.

Light Supper at 6 p.m.

Lancaster Extension Education Center

444 Cherry Creek Rd, Lincoln

Program

SCARVES TIED SIMPLY presented by Lona Thompson

JAMES ARTHUR VINEYARD presented by representative from James Arthur Vineyard

Cost $10. Make checks payable to FCE Council.

Send reservations and check by July 1 to Clarice Steffens, 11804 S. 5 Street, Roca, NE 68430

Healthy Indoor Air: Prevent Mold and Mildew Growth

Healthy indoor air is important. Often indoor air is more polluted because most particulates are generated within the living space.

Mold and mildew in the home generates spores that become airborne. Moisture or a high humidity level is required for mold growth. Common places mold grows are:

- walls, floors, carpeting
- on stored materials in damp basements and crawl spaces
- bathrooms without exhaust fans
- laundry areas where dryers are not vented outside or clothes are hung to dry
- homes with new construction materials
- homes where there have been spills, leaks, or other water damage
- homes with a humidifier or an unvented combustion heater is used
- Mold thrives on organic material, such as natural fibers (cotton), paper, wood, and leather. Prevention in warm temperatures, generally 77–86°F.

Mold also requires moisture. Moisture required for mold growth can come from water leaks, high relative humidity, and condensation. Relative humidity levels above 70 percent seem optimal for mold spore growth. Even at low relative humidity levels spores can be released into the air. Oxygen is also required for mold to grow.

Mold can be detected by the musty odor and it is visible on surfaces. Mold can be found wherever moisture or relative humidity levels are high. It may appear in any room in the house.

To prevent mold growth; keep it clean; keep it dry; reduce and remove moisture; keep bathrooms clean; fish tanks clean; shallow water dishes; and increase air movement.

Mold kills furniture; keep it dry; increase ventilation, air circulation; and clean. Mold on upholstery should be removed to keep the bleach solution from damaging some hard surfaces.

Products claiming to be disinfectants must be registered with the Environmental Protection Agency and have an EPA registration number on the product label. Always read and follow label directions. It is important to choose a product that disinfects and is appropriate for the material being treated. Chlorine bleach is an effective and inexpensive disinfectant. Use bleach that is 5.25 percent sodium hypochlorite. A chlorine releasing material used for disinfection.

Always test before using. Thoroughly clean and dry all surfaces with a detergent solution before disinfecting. The general recommendation for disinfecting some hard surfaces is a solution of one cup bleach to one gallon of water. The area should be kept wet with the bleach solution for at least 10–15 minutes to kill or reduce mold. On porous surfaces such as wood, the bleach solution should be reapplied to keep the surface wet for the required time. Chlorine, phenolic, pine oil, and quaternary ammonia or ammonium chloride compounds are four commonly used disinfectants. Pine oil and phenolic disinfectants can be used on most textiles.

Beehive is the best way to avoid mold. Reduce moisture and the humidity level and increase ventilation, air circulation, and cleaning. Fix leaks and drainage. When making new purchases, keep in mind items that have antimicrobial additives to guard against mold, mildew, fungal, and bacterial organisms.

Summer Safety Tips

The 4th of July and summer are a time for travel, picnics, water sports, ball games, and other fun activities. With families busy lifestyles, we many times are in a hurry to get to or complete an activity and forget to take the time to be safe.

The 4th of July is a time when picnics and fireworks are a favorite activity. The National Safety Council on Fireworks Safety offers the following safety tips to remember during your celebrations.

- A responsible adult should supervise all fireworks.
- Never give fireworks to young children.
- Always purchase fireworks from reliable sources.
- Follow label directions carefully.
- Never point or throw fireworks at another person.
- Use fireworks outdoors in a clear area away from buildings and vehicles.
- Never carry fireworks in your pocket or shoot them in metal or glass containers.
- Light them one at a time then move back quickly.
- Don’t experiment with homemade fireworks.
- Observe local laws and use common sense.
- Sparklers, fountains, and other items many states allow for use by consumers are not appropriate when a large crowd is present.
- If attending a community display, leave your own fireworks at home; there will be plenty of excitement provided by the display.
- In addition to these safety tips, it is important to:
  - Be a defensive driver when traveling, keep your eyes on the road and never drink and drive.
  - Be sure to store and serve food properly especially when picnicking in hot weather.
  - Use safety when barbecuing. Be sure all coals are completely out before leaving the area.
  - Keep a bucket of water handy in case of fire or malfunction of fireworks.
  - Take precautions to protect yourself and children from sun exposure.
  - When hiking or outside doing activities watch for poisonous plants.
  - Take precaution to protect against insect bites and stings.
  - Make sure children are supervised around water.

Summer activities will be fun and enjoyable if everyone takes precaution to be safe.
There is Still Time to Control Bagworms in Early July

Mary Jane Frogge
UNL Extension Associate

Bagworm larvae hatched in early June, and have been feeding on plant material for nearly a month. They are about half of their mature size and may be hard to see in leafy plant material. Take a walk through your landscape and check all your landscape plants, especially spruce and junipers. If you find an outbreak of bagworms, chemical control may be needed. Bacillus thuringiensis is available at nurseries and garden centers as Dipel or Thuricide. Other insecticides currently labeled for bagworm control include acephate, carbaryl, cyfluthrin, and malathion and permethrin.

AFFECTED PLANTS

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Nebraska’s Noxious Weeds

The term “noxious” means to be harmful or destructive and comes from the Latin word “nocere,” meaning to harm, or the Greek word “nekros,” meaning dead body. In its current usage, “noxious” is a legal term used to denote a destructive or harmful pest for purposes of regulation. When a specific pest, in this case, a weed, is determined to pose a serious threat to the well-being of the residents of the state, it may be declared noxious.

Noxious weeds compete with pasture and crops, reducing yields substantially. Some noxious weeds are directly poisonous or injurious to man, livestock, and wildlife. The losses resulting from noxious weed infestations can be staggering, costing residents millions of dollars due to lost production. This not only directly affects the landowner, but erodes the tax base for all residents of the state. The control of noxious weeds is everyone’s concern, and their control is to everyone’s benefit. The support of all individuals within the state is needed to prevent the spread of noxious weeds within Nebraska.

The Director of Agriculture determines which plants are to be deemed as “noxious” and the control measures to be used in preventing their spread. Nebraskans are encouraged to report any noxious weed infestations to their county weed control authority. County weed superintendents and weed inspectors are available to help identify noxious weeds and to assist with proper control recommendations.

For more information on Nebraska’s noxious weed program, contact your local county weed control superintendent. In Lancaster County, call the Lancaster County Weed Control Authority at 441-7817.

Nebraska has nine plants designated as Noxious weeds (pictured below).

Sources: Nebraska Department of Agriculture, Lancaster County Weed Control Authority, The Nebraska Weed Control Association

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**Herbal Festival**

A day to enjoy the tastes, smells, and beauty of herbs, and learn more about how you can enrich your life.

**Saturday, July 24, 9 a.m.–2:30 p.m.**

**Pioneers Park Nature Center**

- 9:00 – Check-in and herbal refreshments
- 9:30 – Workshops: Simply Dill — Judy a la Carte
- 10:45 – Workshops: Herbal Lans of the Middle East — Maggie Reskas
- 11:50 – Demonstration of the New Herb Garden: Garden — Becky Seth
- 12:00 – Lunch
- 1:15 – Workshops: Simply Herbs — Judy a la Carte
- 2:00 – Creating a Container Herb Garden — LuAnn Finke
- 2:15 – Herb Garden Tours — Becky Seth

$35/person. Participants register for one of the two workshops in each time period. Workshops are limited and will be filled on a first-come, first-served basis.

Made possible by the Doole Family Charitable Foundation and the Friends of Pioneers Park Nature Center.

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**Herbs for Now and The Future**

Most herbs can be cut and used fresh throughout the growing season. They can also be harvested, dried, and stored for use during the winter months.

Many herbs, such as sage, rosemary, and basil, are harvested for their leaves. These herbs should be gathered when the flowers are about to open. The oils in the leaves which give each herb its distinctive flavor and aroma are at their maximum levels at this stage of growth.

Remove approximately 1/3 of the current year’s growth on perennial herbs. Annual herbs can be cut back more severely. Make the cuts on annuals approximately 4–6 inches above the soil surface. The annuals can be cut at ground level when harvesting in the fall before the first frost. Most annual and perennial herbs can be harvested in midsummer and again in the fall.

Herbs should be harvested in the early morning, after the dew has evaporated and before the sun becomes too hot. After harvesting, rinse the herbs in cool water. Shake off excess water and place them on paper towel to dry for a few minutes.

Air drying is the most popular method used to dry herbs. To dry whole branches or stems, gather 8–12 stems in a bunch. Tie the ends of the stems together and hang each bunch upside down in a warm (70–80°F) area. Don’t dry the herbs in direct sunlight. The herbs should be dry in 2–4 weeks. When thoroughly dry, strip the leaves from the plants. Crush or crumble the leaves and store in airtight jars in a cool, dry place.

Another way to air dry herbs is to place them on a drying tray. A simple drying tray consists of fine mesh screen or cheesecloth attached to a wooden frame. A small window screen also works well. Place blocks under the corners of the drying tray to insure good air circulation. Place a single layer of leaves or branches on the drying surface and keep the herbs in a warm, dry area until they are thoroughly dry.

A gas or electric oven can also be used to dry herbs. To oven dry, spread a layer of leaves or stems on a cookie sheet or shallow baking pan. Place the herbs in a warm oven (up to 180°F) for 3–4 hours. Leave the door open and stir the herbs periodically until they are thoroughly dry.

Herbs can also be dried in a microwave oven. Place the herbs on a paper towel and cover with a second sheet. Set the micro-wave control on high and dry the herbs for 1–3 minutes. (This drying method requires experimentation to determine the exact drying time.) Then remove the herbs and let them cool.

Some herbs, such as dill, coriander, and caraway, are valued for their seed. The seedheads should be harvested just before they turn brown so the seeds don’t fall off while cutting. Cut off the entire head and place in a paper bag. Then place the bags in a warm, dry area. After drying, shake the seeds loose into the bag. Remove any chaff by pouring from one container to another outside in a gentle wind.
There are new statewide events about each of the following:

- Clover Kids Show & Tell — Sunday, Aug. 8, 1 p.m.
- Table Setting Contest — Friday, Aug. 6, 5 p.m.
- Style Revue — Thursday, Aug. 5, 7 p.m.
- All livestock animals — check-in and weigh-in Tuesday, Aug. 3,begin Noon
- Horse show pre-fair briefing/cleaning and decorating horse stalls — Monday, Aug. 2, 6–9:30 p.m.
- Cleaning and decorating horse stalls — Tuesday, Aug. 3, begin Noon
- No horses before Tuesday, Aug. 3, at 5 p.m.!
- All livestock animals — check-in and weigh-in Thursday, Aug. 5, in the morning; animals must be in stalls by Noon
- Style Revue — Thursday, Aug. 5, 7 p.m.
- Table Setting Contest — Friday, Aug. 6, 5 p.m.
- Clover Kids Show & Tell — Sunday, Aug. 8, 1 p.m.

**New in 4-H at Fair**

See the Fair Book for detailed information about each of the following:

- There are new statewide “Express Yourself!” exhibits which relate to the new communications curriculum, “Picking Up the Pieces,” “Putting It Together,” and “The Perfect Fit.” Unit 2 and 3 exhibits are eligible for the State Fair.
- There are no longer State Fair entries for Banners and Posters categories. They will remain as county only exhibits. Some of the new Express Yourself classes are similar to older poster classes (i.e. 4-H Advertisement Flyer and Electronic Etiquette). For more information on other project areas still have state-fair eligible poster classes that relate to specific projects.
- There are new statewide “Power of Winds” exhibits which relate to the new manual “Wind Energy.” Units 2 and 3 are eligible for the State Fair.
- **Power Mechanics** — miscellaneous engineering exhibits have been added (for example lawn mower engine, restored car, restored motorcycle, lawn mower overhaul, etc.)
- **Houseplants** have replaced Horticulture Container Plants.
- **Style Revue** now has a class for Clothing Level 1 — “Make One Buy One.”
- **A Dog Skill-A-Thon** Contest has been added to help prepare youth for the statewide Dog Skill-A-Thon. Non-adult members may also participate. The theme “Super Dogs at the Super Fair!” Entries will be judged on originality, creativity, and decoration.
- **Rabbit Breeds** have been added after the Rabbit Specialty Show.
- **Lancaster County Born and Raised Breeding Beef** is a new class (in addition to Lancaster County Born and Raised Market Beef).
- **Marketing Swine** is now up to the exhibitor — children are no longer be involved in this process.
- **Horse Dressage classes** will now have age divisions instead of all ages.
- **Livestock trailer parking** will be just north of the Cattle Tents.

**LOOK FOR “HELPFUL RESOURCES”**

The Fair Book lets you know if additional helpful resources are available, if they are handouts or YouTube videos and where they are available!

Most of the resources and many forms are online at http://lancaster.unl.edu/4h/Fair

**Animal Entries Due July 6**

All 4-H & FFA county fair animal entry forms are due to extension by Tuesday, July 6, 4:30 p.m. or post-marked by July 6. Note entries will be accepted! **One Livestock Entry Form MUST be completed for each exhibitor entering livestock** (beef, dairy, backet, cafeteria, goat, sheep, swine). Bedding fees ($6/Head) for beef, dairy and bucket calves are being collected with entry forms — bedding for other animals must be purchased at the fair. Entry forms are available at the extension office or online at http://lancaster.unl.edu/4h/Fair

**Livestock Clinics**

- **4-H/FFA** is offering several livestock clinics:
  - Sheep Fitting Clinic: Thursday, Aug. 5, 2–3 p.m.
  - Swine Fitting Clinic: Thursday, Aug. 5, 3–4 p.m.
  - Catlle Fitting Clinic: Thursday, Aug. 5, 3–4 p.m. (followed by the cattle fitting Contest)
  - Dairy Clinic: Friday, Aug. 6, 10 a.m.

**4-H/FFA Livestock Auction — Buyers Needed**

It is with great excitement to announce the Lancaster County Livestock Booster Club has taken the leadership and organized a livestock auction for this year’s fair. There will be a buyer meet and greet on Sunday, Aug. 8, 2010, in the east arena of Pavilion 1 with the auction starting at 6 p.m. Proceeds will fund 4-H and FFA member’s future projects and career goals. A portion of all proceeds will be set aside to start a scholarship program open to all 4-H and FFA members in Lancaster County and another portion will be set aside to pay additional premiums to breeding animals.

To ensure this auction will be a success, we ask you to contact anyone you know who could be a potential buyer or donor and invite them to the auction. To obtain more information, call Scott Heinrich, Auction Committee Chair at 540-0597.

**Livestock Booster Club Holding Raffle**

4-H and FFA members will be selling raffle tickets to help build a base for the county fair livestock auction. Raffle tickets will sell for $5 each with the grand prizes being a Kawasaki ATV and a big screen TV. A limited number of tickets will be sold — so buy yours soon! Contact a 4-H or FFA member or stop at the extension office to purchase tickets. Your support is greatly appreciated!

**Clothing Level 1 Pattern Suggestions**

Contact Tracy for a list of the Clothing Level 1 pattern suggestions or look online at http://lancaster.unl.edu/4h/Fair

**Quilt Quest Class Addition**

A quilted “accessory” will be allowed in Quilt Quest class 10. It will now read: Class 40, Wearable Art - Quilted clothing or accessory. Must have a recognizable amount of quilting. May include fabric manipulation. Quilting must be done by 4-H’er. Attach card.

**Volunteers Needed**

Adults and youth are needed to help during the Lancaster County Fair. If you can help, please contact the extension office at 441-7180. Help is especially needed in the following areas:

- **Static exhibit check-in** on Monday, July 26 at 4:30 p.m. (pizza will be served) and Saturday, July 31 at 8 a.m. (doughnuts will be served) in the static exhibit area.
- **During judging of static exhibits** on Wednesday, Aug. 4 in Lincoln Room
- **Teen tour guides are needed for Fair Fun Day for children** groups on Friday, Aug. 6 at 9:30 a.m. and 1 p.m.

**Food Booth Training, July 29**

The 4-H food booth at the county fair is the primary fundraiser for Lancaster County 4-H Council. This year, the 4-H Corner Stop will be back at its former location in the Lincoln Room! 4-H Council asks clubs to help by staffing a 3–4 hour shift at the Clover Kitchen. See back page for more information. ALL food booth volunteers are STRONGLY ENCOURAGED to attend the training on Thursday, July 29, 6–7 p.m. at the Lancaster Event Center, Lincoln Room. Learn about food safety, customer service, and volunteer responsibilities.

**Static Exhibit Check-In**

Tuesday, Aug. 3, 4–8 p.m.

Static exhibits do not preregister, but MUST be physically checked in during Static Exhibit Check-in on Tuesday, Aug. 3 between 4–8 p.m. at the Lancaster Event Center, Lincoln Room. An adult — such as a club leader or parent — should assist 4-H members in entering exhibits. All entry tags, additional information, recipe cards, data tags, etc. MUST be attached at this time.

**Interview Judging, Aug. 4**

Interview judging is Wednesday, Aug. 4 starting at 9 a.m. in the Lincoln Room. 4-H’ers have the opportunity to talk to judges about their fair exhibits and share their trials and lessons they learned. 4-H’ers also learn what the judges look for and how to improve skills. 4-H’ers may interview judge ONE exhibit during the fair. See page 15 of the Fair Book for project areas which have interview judging. Members, parents or leaders can call to extend the registration deadline at 441-7180 up to members for a five-minute time slot—preregister between July 26 and 30. If slots are still available, may sign up during Static Exhibit Check-in on Tuesday, Aug. 3, 4–8 p.m.

**Clover Kids Show & Tell, Aug. 8**

All Clover Kids, youth age 5-7 by January 1, 2010, are invited to show & tell their 4-H exhibits at the Lancaster County Fair, Sunday, Aug. 8, starting at 1 p.m.

Clover Kids Show & Tell is held in the Lincoln Room at the Lancaster Event Center. Youth are also invited to do 4-H or FFA at this time. See page 10 of the Fair Book for more information. To register, call 441-7180 by July 30, or sign up at the static exhibit area Tuesday, Aug. 3, 4–8 p.m.
4-H Produce Market on Saturdays

This summer, a 4-H produce market will open on Saturdays from 12-2 p.m. at the parking lot of Tractor Supply Company (TSC) located at 9000 Amber Hill Cl, Lincoln. If you are a 4-H member and have fresh produce to sell, contact Lisa Noel at 435-0857 or Tracy Kuldin at 441-7180 for more information.

Donated Sewing Machine to go to a 4-H’er

This is the second year that Kath Conroy, a 4-H clothing superintendent, is gratefully donating a brand new Bernette sewing machine to one Lancaster County 4-H youth. All 4-H youth who would like to be considered to receive this brand new sewing machine should submit a paper describing the clothing projects they have done in the past and plan to do in the future as well as why they think they should be the one youth to receive it. All papers should be sent to Tracy Kuldin, Lancaster Extension Education Center, 444 Cherrycreek Road, Ste. A, Lincoln, NE 68528 by June 30.

Ak-Sar-Ben’s 4-H Livestock

Exposition Entries Due Aug. 9

The 83rd Ak-Sar-Ben 4-H Youth Livestock Exposition will be held Sept. 23–26 at the Qwest Center in Omaha. The Ak-Sar-Ben 4-H livestock show will be held Sept. 18–19 at the Lancaster Extension Center in Lincoln. Categories of this 4-H only competition are dairy, feeders, beef, market broilers, meat goats, market lamb, market swine, and horse. Exhibitors must be at least 10 years of age by Jan. 1. Registrations are due to extension staff by Monday, Aug. 9 (may turn in at the Lancaster County Super Fair). For more information, entry forms and tentative schedule, go to http://lancaster.unl.edu/4h/Fair.

New this year, Lancaster County 4-H will hold a local 4-H Dog Skill-a-Thon as a pre-fair contest on Thursday, July 15, 1 p.m. at the Lancaster Extension Education Center (note: date has been changed from July 8). Participants do not need to be enrolled in the dog project and they do not need a dog. Must preregister by July 2 by calling 441-7180 (there is no entry form). Youth will take a quiz on dog knowledge including breeds, parts of the animals, nutrition, diseases, grooming, and showing. A complete study guide is online at http://lancaster.unl.edu/4h/Fair/. For more information or to preregister, please contact 4-H intern Cole Meador at 441-7180.

Presentations Contest, July 17

This year’s presentation contest will be Saturday, July 17 beginning at 9 a.m. at the Lancaster Extension Education Center. Open to all 4-H’ers ages 8–18. There are three methods in which 4-H’ers may present: 1) presentation using LCD projector; 2) presentation using posters; or 3) multimedia presentation. See Fair Book page 12 for complete contest information. A handout is available at http://lancaster.unl.edu/4h/Fair and the extension office. All participants are strongly encouraged to read the handout. Must preregister by July 12.

Conflict Information

Junior Life Challenge Contest, July 10

The junior division Life Challenge will be held Saturday, July 10 at 9 a.m. at the Lancaster Extension Education Center. Open to all 4-H’ers ages 8–11 (need not be enrolled in a specific project). Contact Karen Clinic of the following portions. Preregister by July 9 by calling 441-7180.

Dog Skill-a-Thon, July 15

New this year, Lancaster County 4-H will hold a local 4-H Dog Skill-a-Thon as a pre-fair contest on Thursday, July 15, 1 p.m. at the Lancaster Extension Education Center (note: date has been changed from July 8). Participants do not need to be enrolled in the dog project and they do not need a dog. Must preregister by July 2 by calling 441-7180 (there is no entry form). Youth will take a quiz on dog knowledge including breeds, parts of the animals, nutrition, diseases, grooming, and showing. A complete study guide is online at http://lancaster.unl.edu/4h/Fair/. For more information or to preregister, please contact 4-H intern Cole Meador at 441-7180.
Tips to Trim Vacation Costs: Travel, Lodging and Meals

1. Travel: Prices continue and may reduce repair costs in the long run. Consider renting a vehicle that gets better gas mileage than the family minivan. The rental price option.
2. Lodging: Consider renting a vehicle to defray the cost. If camping is out of the question, look for lodging that offers incentive packages. Some hotels and motels offer free meals for children, fuel cards, and discounts on admission for local vacation venues. If these attractions are already on the agenda then the incentive programs can add up to real savings.
3. Meals: Even when camping is not on the agenda, packing an ice chest with cool drinks and snacks will keep the vacation budget to a minimum. Beverages and snacks purchased while on the road are often more expensive than those bought in local grocery stores.

By searching online for last minute deals available for Amtrak and airfares. These options don’t lend themselves to planning a budget, but in certain cases they provide a better low-price option.

Eating out three times a day adds up to real savings. Consider renting a vehicle that gets better gas mileage than the family minivan. The rental price option.

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Nutrition Labels continued from page 4 in calories than regular food packages.

4. A food that is labeled as “high in” may not be as high as you think it is for a specific nutrient. Likewise for other nutrient claims. The Food and Drug Administration only requires that a food meet the following criteria to list these nutrient claims:

   “High in...” — provides 20% or more of the DV of a specified nutrient per serving.

   “Good Source of...” — provides at least 10% of the DV of a particular vitamin or nutrient per serving.

   “Reduced...” — provides less than 25% of a particular nutrient per serving.

   “Low calorie...” — provide less than 40 calories per serving.

5. Nutritionally, there is no difference between “name” brands versus generic brand of the same food item. They are often made from the same ingredients. The generic brands tend to be cheaper than the “name” brands. The University of Nebraska-Lincoln extension educational programs abide with the nondiscrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture. We assure reasonable accommodation under the Americans with Disabilities Act; for assistance contact UNL Extension in Lancaster County at (402) 441-7180.

4-H District Speech & PSA Contest Results

Fourteen Lancaster County 4-H’ers participated in the Southeast District Speech and Public Service Announcement (PSA) Contest. District Contest winners in the senior division in Speech and PSA advance to the State Contest which will be held during the Nebraska State Fair. Congratulations to all the participants! The following youth earned purses in their division – the top five in each division received medals.

Senior Speech — Jessica Stephenson (medal), Caleb Swanson (medal)
Intermediate Speech — Anne Greff, Molly Noel, Jaime Stephenson
Junior Speech — Sophia Swanson (medal), Alyssa Catt
Senior PSA — Rachel Pickrel (medal), Jessica Stephenson (medal)
Intermediate PSA — Victoria Gorza (medal)
Junior PSA — Julia Stephenson (medal)
Take the 100 Gallon Water Challenge!

University of Nebraska–Lincoln Extension challenges Nebraskans to take the 100 Gallon Challenge! Pledge to increase water efficiency by making changes in your home and landscape. It’s easy to save water by following the tips listed here. An online version of the 100 Gallon Challenge at http://water.unl.edu will automatically calculate your water savings based on the steps you pledge to take.

Why Water Efficiency is Important

Water efficiency is important whether your water comes from a public water source or a private well. Our public water supply infrastructure is aging. The same is true for the public wastewater infrastructure by which used water is carried away, treated, and returned to the environment. In addition, many private wells and onsite wastewater treatment systems are aging, and some might not be in compliance with current standards designed to protect human health and the environment. Water efficiency can reduce the stress on public and private water and wastewater treatment systems. In some cases, large scale efficiency might increase the life of public water or wastewater infrastructure, and reduce the need for additional or new infrastructure.

Outdoor Water Saving Tips

No Cost/Easy to Do:

- Water only between 4 and 8 am to reduce evaporation and interference from wind. (40–70 gallons per week*)
- Adjust sprinkler heads to prevent spraying the street, sidewalk, and other non pervious surfaces. (30–50 gallons per week*)
- Reduce each lawn irrigation cycle by 2 minutes (50–90 gallons per week*)
- Use a bucket of soapy water to wash your car, using a hose only for rinsing. Use a self closing nozzle to make it easier. (30–70 gallons per week*)
- Use a broom instead of a hose to clean driveway and sidewalks. (20–40 gallons per week*)

Low Cost/Some Time & Effort Required:

- Repair leaks in hoses, valves, and sprinkler heads. (10–50 gallons per week*)
- Repair or replace leaking outdoor hose bibs. (90–100 gallons per week*)

Moderate Cost/Some Time & Effort Required:

- Install drip irrigation for flowers, fruit, and vegetables (50–70 gallons per week*)
- Install a “smart irrigation controller” that shuts the irrigation system down when it rains (60–100 gallons per week*)
- Replace a portion of your lawn with drought tolerant perennials and ground covers. (30–50 gallons per week*)

* Estimated gallons saved per week. Savings assumes typical existing conditions and scheduled irrigation activities and a traditional watering pattern of one inch per week in April, May, June, September, and October. 1/16 to 1/8 inch in July and August, equal to expected amount twice a week.

Indoor Water Saving Tips

No or Low Cost/ Easy to Do:

- Not use the toilet as a wastebasket; use trash can for waste other than sanitary waste. @ times per week (1.6 gallons per time*)
- Install aerator on faucet @ faucets (35 gallons per faucet per week*)
- Turn off water while brushing teeth @ brushings per week (4 gallons per brush*)
- Not rinse dishes before putting them into the dishwasher @ loads per week (5 gallons per load*)
- Fill the bathtub only 1/2 full while bathing @ baths per week (18 gallons per bath*)

Moderate Cost/Some Time and Effort Required:

- Replace showerhead with water-saving model @ 4-minute showers per week (12 gallons per shower*)
- Fix leaking toilet valve @ toilets (154 gallons per toilet per week*)

Higher Cost/Some Time and Effort Required:

- Replace toilet with low-flush model @ flushes per week (2 gallons per flush*)
- Replace washing machine with water-saving model @ loads per week (20 gallons per load*)
- Replace dishwasher with water-saving model @ loads per week (7 gallons per load*)

*Amounts saved are estimates based on national averages. Actual savings will vary with household size, equipment efficiency, etc.

FOR MORE INFORMATION
University of Nebraska–Lincoln’s Water Web site is your natural resource for reliable water information. Go to http://water.unl.edu.

Volunteer at 4-H Corner Stop
Help Raise Money for 4-H and Have Fun!

The 4-H Corner Stop concession stand at the county fair is Lancaster County 4-H Council’s primary fundraiser. A non-profit organization, 4-H Council financially supports several 4-H programs and activities such as:

- Achievement Night
- College and camp scholarships
- Support for state and national contest registrations
- 4-H promotional activities

4-H Council asks clubs to help by staffing a 3-4 hour shift at the 4-H Corner Stop. At any given time, 3-5 youth (age 9 & up) are needed with 2 adults supervising. Youth gain practical experience handling food safely and counting change. They also gain life skills, such as responsibility, critical thinking, and social skills.

Choose a Shift

<table>
<thead>
<tr>
<th>Days</th>
<th>Shifts each day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, Aug. 4</td>
<td>8:30–11:30 a.m., 11:15 a.m.–3:15 p.m. or close</td>
</tr>
<tr>
<td>Thursday, Aug. 5</td>
<td>8:00–11:45 a.m., 11:30 a.m.–3:15 p.m., 4:30–6:45 p.m., 6:30–9:30 p.m.</td>
</tr>
<tr>
<td>Friday, Aug. 6</td>
<td>8:00–11:45 a.m., 11:30 a.m.–3:15 p.m., 4:30–6:45 p.m., 6:30–9:30 p.m.</td>
</tr>
<tr>
<td>Saturday, Aug. 7</td>
<td>8:00–11:45 a.m., 11:30 a.m.–3:15 p.m., 4:30–6:45 p.m., 6:30–9:30 p.m.</td>
</tr>
<tr>
<td>Sunday, Aug. 8</td>
<td>8:00–11:45 a.m., 11:30 a.m.–3:15 p.m., 4:30–6:45 p.m., 6:30–9:30 p.m.</td>
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</tbody>
</table>

To Sign Up

Return postcard by June 15 to Lynnette Nelson or email dlnelson@windstream.net – confirmation of schedule will be sent to participating groups. Call Lynnette with any changes at 796-2686. Find a replacement if you or your club are unable to work at the designated time.

The answer was: Lone Star tick mouthparts.