Proper Timing Crucial for Bagworm Control

袋虫控制的关键时机

Mary Jane Frogge
UNL Extension Associate

Take a drive through Lincoln from West Fletcher Road to South 27th Street and you will see tiny brown bagworm bags dangling on nearby dead spruce trees and juniper shrubs. The bags are brown, one to two inches long, covered with dead plant material and tightly attached to twigs. These bags overwintered from last year’s bagworms and the female bags contain as many as 300 to 1,000 eggs each! Bagworms have become an increasing problem in Lancaster county and surrounding areas. Last year, Lancaster County horticulture extension staff and Master Gardeners received hundreds of calls on bagworms whereas previously there were few calls. There is potential for a similar outbreak this year if populations go untreated.

Damage to Plants

Bagworms can severely defoliate and kill evergreens such as spruce and junipers. Once the eggs hatch approximately in early June, large bagworm populations can completely defoliate and kill evergreens during the summer. Bagworms may also feed on shade and ornamental trees, fruit trees, ornamental shrubs and perennial flowers. Since deciduous plants grow new leaves each year, the defoliation caused by the feeding usually does not kill them.

Lifecycle

Bagworm eggs hatch in late May and early June. Young bagworms are as small as one-eighth inch long and can be difficult to see. After hatching, the larvae emerge from a hole at the base of the bag and spin down a strand of silk. The tiny insect is often caught by the wind and ballooned to nearby plants. Once a host is found, larvae begin to form a new bag around their body. The larva is a brown or tan caterpillar with black markings. Larvae remain in their protective bag, sticking their head out to feed. Bagworm larvae feed up until late August. The mature larvae then attach their bag to a branch with a strong band of silk and begin to pupate. Adult males emerge in September. They are small, furry gray moths with clear wings. The adult female does not have wings and never leaves the bag. After mating, the male moth dies. The female lays eggs in the bag. The female dies in the bag, mummified around the egg mass that overwinters until the following June.

Inspect Your Landscape

Removing bagworms from your landscape plants before mid May was an effective control measure. Now bagworm larvae will be emerging from the bags through early June. If you notice bagworms at this time, chemical control may be necessary.

Chemical Control Needs to be Applied Mid to Late June

Insecticide control needs to be aimed at young larvae in June to be effective. To get the best control for wind breaks or large stands of trees, late June is the best time to apply insecticides for bagworm control. Spraying trees and shrubs can be expensive. To get the best control, wait until the bagworms have completely hatched out and are done ballooning to other plants. Late June would be the best time to apply chemical control if you can only do one chemical application.

Bacillus thuringiensis is available at nurseries and garden centers as Dipel or Thuricide. Other insecticides currently labeled for bagworm control include acephate, carbaryl, cythrin, malathion, and permethrin. Affected plants must be thoroughly covered with the insecticide in June so the insects ingest it as they are feeding. Be sure to read and follow all label directions.

Feeding by mature caterpillars slows in August before pupation into adults, so chemical control in late summer and fall is not effective. By that time your valuable landscape plants are already severely damaged by the maturing bagworms.

For more information

If you would like more information about bagworms, go to http://lancaster.unl.edu/hort/bagworms.shtml to view a YouTube video. You can contact University of Nebraska–Lincoln Extension in Lancaster County at 441-7180, Mon.–Fri., 8 a.m.–noon with horticulture questions.
Enjoy Eating Locally Grown Foods!  

By Alice Henneman and Jenny Rees, UNL Extension Educators

Enjoy fresh ingredients from the Farmers’ Market with this recipe for a spinach salad from Dr. Georgia Jones, UNL Extension Food Specialist.

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Effortless Spinach Salad with Raspberry Dressing

(Serves 6)

6 cups spinach (washed and dried) 
1/2 of a small red onion 
2 cups fresh strawberries, sliced 
1/2 cup diced apricots 
1/4 cup chopped pecans, toasted Raspberry Dressing (recipe below)

Place spinach in a large bowl. Top with red onion, sliced strawberries, diced apricots and pecans.

Raspberry Dressing

Makes about 1/3 cup

2 tablespoons seedless raspberry jam 
2 tablespoons balsamic vinegar 
1/2 to 1 tablespoon extra virgin olive oil 
1/4 teaspoon salt

Combine jam, vinegar, oil and salt. Stir until smooth. Serve with desired salad.

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Drink Your “D” with Dairy

Thankfully, our best food source of vitamin D also happens to be one of the best food sources of vitamin D. Fluid milk is fortified with vitamin D to provide 100 IU per cup — 25% of the daily value for vitamin D. Certain brands of yogurt may also be fortified with vitamin D. By choosing vitamin D containing milk and yogurt to fulfill the recommended three cups of milk a day, we can ensure we are getting at least 75% of our daily vitamin D needs. So choose some low-fat vitamin D fortified dairy and start drinking your “D” today!

The following cholesterol-banana milkshakes make for a great snack — and is a good source of bone-building vitamin D and calcium.

Choco-nana Milk Blast

(Serves 2)

1 ripe medium banana 
1 cup lowfat chocolate milk 
1 cup lowfat frozen yogurt

Peel banana; break into chunks and place in blender container. Add milk and yogurt. Cover and blend until smooth. Pour into two glasses and enjoy!


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Enjoy Nebraska Goods!

By Alice Henneman and Jenny Rees, UNL Extension Educators

Nebraska is a state of apples, beans, corn, cattle, and corn. In the last two centuries, we have remained a rural state, with a large agricultural presence. This page is dedicated to the produce and people that give Nebraska its character.

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Food & Fitness

Page 2

June 2009

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Buy Fresh Buy Local Nebraska (BFBLN)

Mission: “Buy Fresh Buy Local Nebraska encourages the purchase and enjoyment of locally grown food.”

BFBLN is a program that promotes local markets for local growers, helps consumers find fresh local products, educates the community about the economic and environmental benefits of locally grown food and helps keep family farms financially viable.

With its partners — University of Nebraska-Lincoln Nebraska Cooperative Development Center, Nebraska Sustainable Agriculture Society, Nebraska Great Plains RC&D, South Central Nebraska RC&D, Loup Basin and Prairieland RC&Ds and its national partner FoodRoutes Network — BFBLN is currently expanding the program’s reach into the central part of our state. Thirty three counties, including Lancaster County, are now actively involved in the promotion of local food and bringing our food closer to our forks.

Members are engaged in the production, distribution and retail sales of local food products and also include partner organizations, agencies and individuals that support the development of a community-based food system.

BFBLN prints a yearly Local Food Guide to inform consumers where they can buy local foods, what is available, and helps the community embrace the production, distribution and sale of fresh, local foods.

For more information about Buy Fresh Buy Local Nebraska or to become a member, contact Billene Nemec at bnemec2@unl.edu or 472-5273.

FOR MORE INFO For information about fruit, vegetables, meat, and dairy using produce purchased at a farmer’s market, go to http://lancaster.unl.edu/food/pomosition.html.

For information about buying local foods, including from community supported agriculture in Nebraska, go to http://buylocalnebraska.org

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Resurgence in Farmers’ Markets is Good News

Jennifer Abel, Master’s Degree Candidate
Joan Thomson, Associate Professor
Aurey Marecki, Professor
The Pennsylvania State University

Follow Guidelines when Selling Crops

Directly to Consumers

Dale T. Lindgren
UNL Horticulture Specialist
Laurie Hodges
UNL Vegetable Specialist

Growers raising horticultural crops in Nebraska sell part of their crop through direct marketing outlets, such as pick-your-own farms, roadside stands and farmers’ markets. Produce sold through these marketing outlets usually is sold by number or count, such as a single without tops or a dozen ears of sweet corn; weight, such as one pound of snap beans; or volume, as a bushel, lug, carton, crate or quart.

Although many sell fresh produce using a unit count, growers are encouraged to sell by legal net weight since this is most accurate for both the consumer and the grower. Produce sold by weight can be weighed, packaged and then label the package with net weight at home or sold by weight at the time of sale using a state-certified scale.

Here are some guidelines for selling horticultural crops for direct marketing to consumers:

- **Asparagus** sold in one-half to 2-pound bunches, 45-pound bushel, 10-pound or 50-pound bales or 32-pound crate.
- **Snap, green and wax beans** by pound; 1 bushel is 28 to 40 pounds.
- **Beets** sold by head; in 2-pound bunches; with tops 50- to 86-pounds per bushel.
- **Broccoli** by head or bunch, a 25- to 25-pound crate or bushel.
- **Brussel sprouts** by quart or weight (approximately 1.5 pounds per quart).
- **Cabbage** by head or bunch, sold by pound.
- **Carrots** sold by head or bunch, sold by pound or by 40-pound bushel.
- **Cherries** sold by pound or by weight. Blackberries, sold in quarts that weigh 1.5 pounds.
- **Cheese**, sold in quarts that weigh between 1 and 1.75 pounds, bushels that weigh 56 pounds or bags that weigh 15 to 16 pounds.
- **Peaches**, sold by pound or by individual count or in a 70- to 90-pound crate.
- **Apricots**, sold by pound or by individual count or in a 70- to 90-pound crate.
- **Watermelon**, sold by pound or by individual count or in a 70- to 90-pound crate.
- **Sweet potatoes** sold by bunch, sold by weight, sold in 1 to 1.5 pound bunches or in a 18-pound bushel.
- **Spinach**, sold in 1 to 1.5 pound bunches or in a 18-pound bushel.
- **Sweet corn**, sold by head or in a 50- to 50-pound bushel.
- **Cucumbers**, sold by pound or by count; 48- to 50-pound bushel.
- **Garlic**, sold in bunches or bags.
- **Gourds**, sold by count.
- **Herseradish**, sold in 2- to 4-pound bags or in a 50-pound bushel.
- **Kale**, sold in 1- to 1-1/2 pound bunches or 18- to 20-pound bunches.
- **Lettuce**, sold by bunch or head or in a carton of 2 doz.
- **Musk melon**, sold by count or in a 48-pound bushel.
- **Okra**, sold by pound or in a 26- to 50-pound bag.
- **Onions**, dry bulb types, often sold by count or in bags of 5, 10 or 50 pounds.
- **Parsnips**, sold by pound or in 48-pound bushel.
- **Peas in edible pods**, sold per pound or in a 8- to 10-pound bag.
- **Sweet bell peppers**, sold by count or in a 25- to 30-pound bushel.
- **Potatoes**, sold in 5- to 10-pound bags or in a 50-pound bushel.
- **Shallots**, sold in bunches of 12 or in a 25-pound bushel.

containing 5 dozen bunches of 12.

FOR MORE INFO

http://www.ianrpubs.unl.edu/sendIt/g1640.pdf

Ten Lawn Irrigation Tips

John C. Fech
UNL Extension Educator

1. Measure the amount of water applied in a 15-minute period using collection devices such as tuna or coffee cans. Adjust the runtime to deliver the required amount.

2. Kentucky bluegrass lawns, in general, require 1 inch per week in April and May, 1-1/4 inch per week in June, 1-1/2 inch in July and August, 1-1/4 inch in September and 1 inch in October.

3. Use a screwdriver or soil probe to measure moisture (rainfall + irrigation water) penetration into the lawn.

4. Water to the bottom of the roots. Use a small shovel to determine how deep the roots are. Actually the soil should be kept moist to about an inch deeper than the deepest roots to encourage downward growth. Roots are shallow in summer and deeper in spring/fall.

5. When watering on a slope, use "delayed starts." Run your sprinklers until you notice runoff, then stop. Wait 3 hours, then resume. Aerate to increase infiltration.

6. Water in the early morning (4 a.m. to 10 a.m.). This allows the grass blades to dry, making them less susceptible to foliar diseases. Watering is more efficient in morning due to less evaporation and wind speed. Change the time your system runs monthly, or at least seasonally. Contact a lawn sprinkler professional to determine a good schedule.

7. Observe your sprinkler system once per month. Look for heads that don’t turn, heads that spray into the street or onto a sidewalk, bent or damaged heads, clogged or worn nozzles or orifices, turf growth around heads that impede water delivery, puddling and runoff.

8. Adjust sprinkler heads as landscape plants grow larger and begin to block the spray pattern. New installations of benches, decks, etc. can also decrease irrigation efficiency.

9. On days when temperatures are above 90°F, run your sprinklers 5–10 minutes per zone in the afternoon to cool the turf and reduce stress. This is called "spritzing," and it reduces the symptoms of summer patch disease.

10. Create water zones by putting plants together that have similar water needs. Each turf species has a different water requirement which is a characteristic of that species. Ornamental plants should be grouped into low-, moderate- and high-water users. Each zone of plants should be irrigated according to its needs.

FOR MORE INFO

NebGuide G1640 “Weights and Measures for Horticultural Crops” is available at the extension office and online at http://www.ianrpubs.unl.edu/sendIt/g1640.pdf
Determining and Sharing Irrigation Costs

Tom Dorn
UNL Extension Educator

I get calls each year regarding the water section which is split into two 80 acre parcels each owned by a different party. One of the owners has installed a center pivot sprinkler with the pivot point nearly on the boundary between the two parcels with the intention of irrigating a half circle on each 80 acre parcel. The party without irrigation has asked what the pivot owner would charge to run a full circle instead of running their pivot in a "windshield wiper" fashion. The same question wants guidance on it, is what a "fair" price to have the irrigation system irrigate the neighbor's field?

Many times, the original thought is the two parties would split the energy (fuel) cost, since each has essentially the same number of acres irrigated by the pivot. The reasoning is that the call center energy cost is not the only cost of owning and operating an irrigation system. A large share of the total cost of irrigation results from ownership costs. A large percentage of these costs are not annual out-of-pocket costs, but rather are sunk costs. Examples of sunk costs include, a fair return on capital investment and depreciation costs. Taxes and insurance are out-of-pocket, annual ownership costs.

One factor should not be overlooked in this situation. Ownership costs are largely the result of sunk cost and are essentially the same regardless if the pivot makes a full circle or a half circle. This means the annual ownership component of the total cost, expressed on a per acre basis, will be double if the pivot irrigates only a half circle. Therefore, if the neighbor is willing to pay his/ her full share of all the operating costs plus a full share of the ownership costs, the owner will deliver the same amount of water per acre and per acre-inch of water applied as compared to using the system on only a half circle. In fact, as long as the neighbor pays their full share of the operating cost plus any portion of the ownership costs, the owner is better off from a total annual per cost per acre basis as compared to irrigating a half circle.

I developed a computerized worksheet that can assist with estimating the costs of owning and operating an irrigation system. It provides an estimate of the energy costs based on the work done to pump the acre inches of water delivered, the height the water must be lifted to reach the surface (lift) and the system pressure measured at the pump. The worksheet also provides estimates of the average annual repair and labor costs for operation and management. The worksheet is accessible FREE on the Web at http://lancaster.unl.edu/ag/crops/irrigate.shtml under the heading "Annualized Cost of an Irrigation System."

The worksheet (irrigcost.xls) is presented in Microsoft Excel® (xls) format. The notebook presents eight scenarios, each on a separate tab. Four scenarios assume the irrigation system is a center pivot powered by one of four energy sources (diesel, natural gas (either $/mcf or 8/hrm), propane or electricity). The other four use a gate pipe irrigation system with the same four energy choices. The underling programming is actually the same on every scenario. Different scenarios are presented on different tabs to facilitate comparisons between alternatives.

To prevent corruption of the programming code, the entire workbook has been protected except for the cells requiring user input (blue font). If none of the scenarios fit the situation, the entire workbook has been protected except for the cells requiring user input (blue font). In this example, ownership costs = $20.59/acre inch AND operating costs = $8.46/acre inch; total costs = $29.05/acre inch.

When to Harvest Bromegrass Hay

Many people cut bromegrass hay in mid- to late-summer—July, August, even September. One person might ask the question to ask yourself or others: Do people cut their bromegrass hay at this time because it makes the best hay or because it is what other people are cutting their hay?

Cutting bromegrass in mid- to late-summer has its advantages. Weather conditions are less likely because hay matures 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?

Bromegrass 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 UNL Extension Forage Specialist Bruce Anderson, that's plenty adequate for wintering most beef cows and for most pleasure horses without adding additional energy or protein. However when cut in late summer, crude protein content may drop to 8 percent or less. Anderson says all species of livestock need some supplements if fed this kind of hay. Another advantage is that cutting bromegrass hay earlier is the possibility of grazing the regrowth in September, provided we get some rain in July and August to 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.

Farm Views

Pocket Gophers in Dryland Alfalfa Needed

In order to finish up a pocket gopher trapping study, a UNL researcher still needs access to dryland alfalfa fields containing ACTIVE pocket gopher damage. Here are the study plot criteria:

- Must be within 3 hours of Lincoln, NE
- Plot criteria:
  - Must be in Gophers Pocket Gophers. Here are the study

The researcher will trap for one night. Landowners should contact the researcher directly: Stephen Vantassel, Project Coordinator, Internet Center for Wildlife Damage Management, svantassel2@unl.edu or 472-8961.
President’s View — Bonnie’s Bits

Bonnie Krueger
FCE Council Chair

June is here and the year is half over, buy how time flies when you’re busy and having fun.

Flag Day, June 14 is a day to salute the flag. The first observance, 1877, was our country’s anniversary of the red, white and blue banner. Congress officially recognized it by passing National Flag Day bill in 1949 during President Harry Truman’s administration.

In Spokane, Washington by Sonora Smart Dodd who thought of the idea for Father’s Day while listening to a Mother’s Day sermon in 1919. This holiday was not officially recognized until 1972 during the presidency of Richard Nixon.

Categories are sculpture, fiber arts (articles made of thread), scrapbooking and photography. All FCE members are invited to attend.

FCE News & Events

FCE Council Meeting June 22

“The Re-Connecting Children, and Families with Nature” presented by McKenzie Barry, environmental specialist at the Lower Platte South NRD. Entries for the Heritage Skills Contest should be brought to this meeting.

“Room Unit Maintenance

A yearly service call by a professional should include washing the condensing coils and vacuuming the evaporator coils. During the summer, there are a few things you should monitor.

- Disposable filters should be changed several times during the season. Permanent filters should be washed, using the same method as for room unit air conditioners.
- Leaves and fallen branches can clog the fan grille on the outdoor condensing unit, which can cause moisture buildup and affect the air conditioner’s efficiency. Check the unit regularly, especially after winds and rain.
- Always follow the manufacturer’s instructions for your unit.

Room Unit Maintenance

Turn off the power or unplug the unit before you begin.

- At the time of the service call, air conditioners are often cleaned; this can be a dangerous task.
- The first aid kit, medications, entertain.

Japanese wrapping techniques will be demonstrated presented by Sheila Green

Sizzling Summer Sampler

Thursday, July 9 • 6 to 9 p.m.
Light Supper at 6 p.m.
Lancaster Extension Education Center

Cost $10. Make checks payable to FCE Council. Send registration and check by July 1 to: Clarice Steffens, 11804 S. 5 Street, Roca, NE 68430

Program
MUSICAL ENTERTAINMENT presented by Anne Bremer

WHY WE LAUGH
How cultural, social and generational differences affect the perception of what is funny presented by Richard Kimbrough

Asian Cloth Wrapping Techniques
Poigji (Korean) and Furoshiki (Japanese) wrapping techniques will be demonstrated presented by Sheila Green

Central System Maintenance

A yearly service call by a professional should include washing the condensing coils and vacuuming the evaporator coils. During the summer, there are a few things you should monitor.

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- Always follow the manufacturer’s instructions for your unit.

Household Hazardous Waste Collections

No latex paint will be accepted at these household hazardous waste collections. These collections are for household only, not for businesses. Only residents of Lincoln and Lancaster County can bring items to collections. For more information, call the Lincoln-Lancaster County Health Department at 402-441-6840.

Friday, June 12 • 9 a.m.–1 p.m.
Union College, 52 & Cooper Streets
Saturday, June 13 • 9 a.m.–1 p.m.
Wal-Mart South, 8700 Andermatt Drive

June — National Safety Month

Lorene Bartos
UNL Extension Educator

Having a safe home and being prepared for emergencies is important for all families. Have you checked your home for hazards? Do you have a emergency kit?

The National Safety Council gives the following tips for being prepared for emergencies.

- Designate a safe place to take shelter in the home during a weather event.
- Keep flashlights and extra batteries on each floor of the house, in easy-to-find places.
- Post emergency phone numbers near the phone. Keep cell phones charged and working.
- Create an emergency kit and keep it in a readily accessible place in the home. It should include a weather radio, batteries, a first aid kit, candles, flashlights and matches.
- Develop an emergency plan, detailing where to go in specific emergencies, and where everyone should meet after evacuation. This should include instructions pertaining to family pets.
- Make sure everyone in the family knows two ways out of the home. Get a safety ladder if an exit is on the second floor. Each family member must know how to operate locks, doors and windows.
- A larger emergency supply kit should be kept in a safe place, containing a three-day supply of water (one gallon per day, per person), a three-day supply of non-perishable food, a first aid kit, medications, entertainment items, family documents, extra clothing and bedding.
- Encourage family members to learn first aid and CPR.
- Install and check smoke alarms and CO Detectors. Have fire extinguishers handy and know how to use them.
- Know how to shut off water, gas and electricity to your home.
- In case of evacuation, determine several routes out of your town. Keep your car’s gas tank at least half-full and leave room in the trunk for emergency supplies.
- Make a written inventory with photographs of all valuable items, and keep an extra copy outside your home.

To keep your home safe:

- Make sure your smoke detectors are working.
- Keep all medicines in the original container and out of the reach of children.
- Check outside lighting. Replace any that is worn out.
- Check locks on doors and windows and keep them locked especially when leaving the home.
Ten Tips for Fertilizing Your Lawn

1. Get Tested — Have your soil tested for pH levels and the need for additional phosphorous and potassium. This will help determine which fertilizers and supplements are needed.

2. Buy What You Need — Buy organic or synthetic fertilizer. Do not use a weed and feed product unless you have widespread weed problems in your yard; instead, use straight fertilizer and spot treat or pull weeds.

3. Slow It Down — Select lawn-grade fertilizers that include Slow-Release Nitrogen to prevent lawn burn, reduce nutrient runoff and leaching of nutrients into groundwater.

4. Be Well Read — Read and follow all instructions when applying fertilizer. Incorrect application such as spilling onto paved surfaces can result in fertilizer being washed down storm sewers and ending up in our waterways.

5. Chill Out — Grass will not use fertilizer when it is not actively growing. To prevent runoff pollution of lakes and streams, never apply fertilizers to frozen ground or pavement.

6. Spread It Around — Be sure your spreader is working and adjusted properly. Read and follow the spreader setting instructions on the fertilizer label so that your spreader applies the correct amount of fertilizer.

7. Recycle Your Lawn — Leave grass long when mowing and leave the clippings on your lawn to decompose. “Grass-cycling” is a great source of nitrogen and saves water and fertilizer.

8. Recycle Your Yard — Compost leaves, yard debris and non-meat food scraps make great mulch for the garden.

9. Slenderize Your Yard — Keep your yard healthy by controlling how much fertilizer it gets. Follow recommended rates for lawns in your area.

10. Protect the Borders — When applying fertilizer, maintain a buffer strip or fertilizer-free zone around the edges of lakes and streams.

This information was adapted from the Environmental Guidelines for Responsible Lawn Care and Landscaping as developed by the members of the Lawns and Environment Initiative (L&E). To learn more about the development of the Environmental Guidelines for Responsible Lawn Care and Landscaping and the L&E Initiative go to www.lawnandenvironment.org.
After you read this, some of you—no, probably most of you—will think I am certifiably nuts.
I did the unthinkable. I fed bed bugs on myself...on purpose.

In mid-April, a young man brought live bed bugs (Cimex lectularius) to the extension office. They came from his girlfriend’s apartment in Lincoln. After a couple months of being bitten, they finally dismantled the bed and box springs and found the little tormentors. I didn’t count them all, but there must have been a couple dozen bugs in different stages of development. I was hoping to have live bed bugs to show at the May 21 workshop, so I was thrilled. I rolled up a length of corrugated cardboard, put it in a pint jar and threw the bugs in the jar. The little spaces in the cardboard make dandy hiding places for the bugs. 

Okay, how do I keep them alive for more than a month? I finally decided I would have to feed them. 

For those of you who are already grossed out by the mere thought of this, a U.S. Army medical entomologist, Harold Harlan, collected bed bugs in the late ’60s. He had fed them regularly, every week or two for more than 40 years. I comforted myself with the fact he seems to be quite healthy despite the feedings. And, we know while bed bugs can transmit diseases, researchers have never been able to determine they actually do. I felt reasonably safe.

At first, I thought I would feed them on the calf of my leg like Harold Harlan does. He holds a screened jar to his leg and the bed bugs feed through the screen. But, then I decided we should get video footage of a bed bug feeding. The calf of my leg just wouldn’t work, I would have to feed them on my arm.

**Feeding Bed Bugs**
I constructed a small arena to confine the bed bugs. This arena consisted of a very small (two-inch) food storage container with the bottom cut off (Figure 1). I took the arena to my arm with masking tape and dropped a bed bug into the container. In all, I fed seven bed bug different sizes, one for each bug. All bed bug feed, I wouldn’t have any need to scratch them.

**Stage 3:** About day nine, the feeding went down and the itching lessened. I looked closely and could see capillaries and tiny blood blisters around the center of each bite. 

**Stage 4:** About day 12, the area around each bite now looked like it was bruised. I have shown the progression of the bites in figures 2-5.

**What Did I Learn From This?**
• Even though the literature says bed bug feeding is painless, I was surprised how completely painless it was. Bed bugs are very well adapted to their lifestyle. 
• I was not prepared for the bites to be painful. I had always heard they were very itchy, but didn’t know there would be a burning, painful itchiness. Not everyone reacts the same way I did. 
• The probing of small bugs and large bugs seemed to produce bites equally painful and itchy.
• The act of probing and injection of salivary secretions is what causes the “bite” reaction, not the feeding itself. I ended up with about 15 “bites”, but only fed seven bed bugs. 
• Because I had a two to five day reaction delay to the bite, I realized some people may be bitten and not realize it for several days. If traveling, they may not know where they were bitten. 
• Not surprisingly, as the bites got worse and worse, I became less and less inclined to feed them again. I did feed another bug nine days after the first feedings. This time, my body reacted quicker and the bite was itching sooner. 
• If I were going to do this again, I would not have fed the bugs in such a localized area. I think it added to my discomfort. 
• I was surprised how long it took for the bites to go away. From beginning to end, I still had signs of bites three weeks after feeding. I noticed the swelling went down, the itchiness went away.

**Bite Reactions**
Not everyone reacts to bed bug bites, so I wasn’t sure if I would have a study reports most people do react, especially if bitten repeatedly over time, which is the case with bed bugs infesting someone’s home. This study also says bites don’t show up right away, especially when a person is bitten the first time. With repeated bites, the delay will get shorter and shorter. 

I had no reaction to the bites until day two after the initial bite, and several didn’t show up until day 13.

**Figures 2-5:** The initial reaction was similar to a mosquito bite. Each bite had a small, raised, light-colored “bump” in the middle. The bites were only just a little bit itchy.

**Stage 2:** From days 4-8, the bites were bright red, swollen and I felt a painful, burning itch, a little like chigger bites, only worse. I tried not to scratch them.

**Stage 1:** Days 2-3. The initial reaction was similar to a mosquito bite. Each bite had a small, raised, light-colored “bump” in the middle. The bites were only just a little bit itchy.

**Stage 4:** About day 12, the area around each bite now looked like it was bruised. I have shown the progression of the bites in figures 2-5.

Because visual inspections take so much time, these interceptors may be a cost effective method of finding bed bugs. They can also be reused. In last month’s NEBLINE, I wrote about using metal cans to intercept bed bugs from climbing bed legs. The researcher used ethylene glycol to catch bed bugs, but consumers should not do this. Ethylene glycol is a hazard to pets and children who might ingest it. A 1/2-inch layer of talcum powder and/or diatomaceous earth used in the bottom of cans to desiccate bugs, Interceptors may help prevent bed bugs from crawling up the legs of bed legs and may help monitor for bed bugs.

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Barb Ogg
UNL Extension Educator
Horse Bits

Lancaster County 4-H Horse VIPS Pre-Districts Format Clinic/Show/Fundraiser
June 6, 2009 • 9 a.m. Start
Lancaster Event Center Pavilion 3
(841h & Havelock, Lincoln, NE)

The Lancaster County Horse VIPS committee is hosting a very special clinic/show to help everyone prepare for Districts and State!

8:00 a.m. Registration & Warm-up for all entered in English classes
8:50 a.m. Posting of Colors and National Anthem
9:00 a.m. Individual class workouts on the road for English classes
Please listen to announcer for instructions
1. English Pleasure/Equitation (seniors)
2. English Pleasure/Equitation (juniors)
3. English Pleasure/Equitation (elementary)
Warm-up for all entered in Western classes
Individual class workouts on the road for Western classes
Please listen to announcer for instructions
4. Western Pleasure Ponies (all ages)
5. Western Pleasure/Horsemanship (seniors)
6. Western Pleasure/Horsemanship (juniors)
7. Western Pleasure/Horsemanship (elementary)
Warm-up for all entered in 4-H shows
8. Reining (seniors)
9. Reining (juniors)

Warm-up for all entered in Reining & Games
8. Reining (seniors)
9. Reining (juniors)

Break, arena worked, and set up for Games

4-H Horse ID’s Due June 1

4-H horse identification forms for the Lancaster County Fair are due in the extension office by Friday, 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.

State 4-H Hippology and Judging Forms Due June 1

Hippology and judging entry forms for the 4-H Horse Exhibit at Famer Park are due in the extension office on Monday, June 1. Contest entry forms are available at the extension office or online at http://lancaster.unl.edu/4h. All entry fees will be paid by the 4-H Council. For more information and contest rules go to http://www.aliacsonline.ne.unl.edu/extension/ equine/4h/districtstechsheets/state.html

2009 4-H Judging Clinics

There are two upcoming horse judging contests:
• Pfizer Ranch, Ericson, NE, May 27, 8:30 a.m. Contact Steve Niemeyer at 308-346-4200 for more information.
• Pine Ridge Stables, Ashland, NE, June 24, 8:30 a.m. Contact Monte Stauff at 402-444-7804 for more information.

4-H Riding Skills Level Testings, June 23 and July 7

Group level testings for 4-H Horse Advancement Levels will be held on June 23, 6:30 p.m. and Tuesday, July 7, 6:30 p.m. at the Lancaster Event Center - Pavilion 3. Please RSVP at least one week in advance of the test to Marty at 441-7180 or mcruickshank@unl.edu.
3-Day Workshop

Insect Collecting for Beginners
Learn the most common insect orders and make your own starter collection. You will collect insects so come dressed to enjoy the outdoors.
TUE-THU, JUNE 16, 18, 20, 8-2PM
AGES 10 & up • FEE: $15 INSTRUCTOR: Barb Ogg, Extension Educator

2-Day Workshops

Checkmate 1
Beginning chess players learn rules and values of the pieces. Build skills and play complete games in style.
TUES & WED, JUNE 16-17, 10:15AM-12:15PM
AGES 8 & up • FEE: $5 INSTRUCTOR: James Walla, 4-H volunteer

Checkmate 2
Intermediate chess players learn chess tactics, strategies, notation and rules of tournament play.
THU & FRI, JUNE 18-19, 10:15AM-12:15PM
AGES 8 & up • FEE: $5 INSTRUCTOR: James Walla, 4-H volunteer

ATV Training

If you are interested in attending an all terrain vehicle (ATV) safety training, please contact Tracy at 441-7180 by June 15.

3-Day Workshops

Fancy Walking & Stalking
Learn primitive walking techniques. Learn how to fox walk and the stalking steps needed for quiet, undetectable movement in the wilderness. Dress for the weather and bring a blindfold.
TUE, JUNE 16, 8-10AM
AGES 8 & up • FEE: $3 INSTRUCTOR: BJ Spurting, owner of Nyakwaly, Primitive Survival

Basketball Basics
Learn the basic skills needed to be a successful basketball player. Basketball included to take home.
TUE, JUNE 16, 16-24-26-28PM
AGES 8 & up • FEE: $10 INSTRUCTOR: Evan Kucera, All-State Basketball Player

Here’s My Nenno!
This temporary tattoo is made with all natural ingredients, is safe & will last 1-2 weeks.
TUE, JUNE 16, 3-5PM
AGES 10 & up • FEE: $10 INSTRUCTOR: Jami Rutt, 4-H volunteer

Savvy Shoppers
Get great finds for shopping smart, from creating a look for less to displaying what you learn. Especially designed for 4-H'ers emulating in Attention Shoppers.
WED, JUNE 17, 8-10AM
AGES: 8 & up • FEE: $5 INSTRUCTOR: Jennifer Smith, 4-H volunteer

Advanced Basketball
Learn higher level skills to outplay your competition and impress your friends. See instructor’s famous dunks or other smart moves.
THU, JUNE 18, 12:15-2:15PM
AGES 10 & up • FEE: $10 INSTRUCTOR: Evan Kucera, All-State Basketball Player

Fabulous Face Painting
Learn how to paint awesome designs on faces, arms and legs.
WED, JUNE 17, 1-3PM
AGES 10 & up • FEE: $10 INSTRUCTOR: Jami Rutt, 4-H volunteer

Super Sandwiches
Create unique sandwiches using your favorites and trying new ones.
WED, JUNE 17, 3-5PM
AGES: 8 & up • FEE: $5 INSTRUCTOR: Karol Swedek, 4-H volunteer

Can I Use My Fingertips?
Which fork do I use? Whose do I napkin? Where do I fold napkins? Attend this ‘party’ and find out!
THU, JUNE 18, 11-1:30AM
AGES 8 & up • FEE: $4 INSTRUCTOR: Judy Moural, 4-H volunteer

Mobile Rocks
Make a cool hanging mobile using natural wonders like pinecones, milkweed pods, bawgwarms, rose hips, shells and more.
THU, JUNE 18, 11AM-12:15PM
AGES 8 & up • FEE: $5 INSTRUCTOR: Soni Cochran, Extension Associate & Vicki Jedicka, Extension Assistant

Scrapbooking
Bring several photographs to create a personalized small photo album.
THU, JUNE 18, 12:45-2:45PM
AGES 10 & up • FEE: $10 INSTRUCTOR: Tammy Andersen, Creative Memories

Money, Money, Money
Learn the basics of banking and how to spend and save wisely.
THU, JUNE 18, 2-4:30PM
AGES 10 & up • FEE: None INSTRUCTOR: Terri Bank, Clocktower Branch

Scarecrows!
Make your own scarecrow! Bring outfit for scarecrow, old pillowcase, hat, feathers and accessories.
THU, JUNE 18, 3-5PM
AGES: 10 & up • FEE: $5 INSTRUCTOR: Karol Swedek, 4-H volunteer

Baby Sitting Basics
Learn the basic skills to be a creative and responsible babysitter. Focus is on activities, making snacks and toys.
THU, JUNE 18, 3-5PM
AGES 10 & up • FEE: $5 INSTRUCTOR: Jami Rutt, 4-H volunteer

Gratifying Graffiti
Opening your mind and creativity to quickly turn any image into a piece of art using water colors, acrylics and markers.
THU, JUNE 18, 3-5PM
AGES: 10 & up • FEE: $5 INSTRUCTOR: Diana Karmazin, Extension Associate & Jessalyn Schrock, 4-H Intern

Style Revue
Style Revue at county fair will be here soon! Come to this workshop and learn new styling procedures and practice your modeling.
FRI, JUNE 19, 12-4:30PM
AGES 8 & up • FEE: $3 INSTRUCTOR: Jami Rutt, 4-H Intern

Terrific Table Setting
Create an awesome centerpiece and then learn how to know to to participate in the table setting contest. RJ, JUNE 19, 3-5PM
AGES 8 & up • FEE: $3 INSTRUCTOR: Jami Rutt, 4-H Intern

Perfect Purse
Sew your own perfect purse. Bring 1½ yd fabric (no stripes or matching plaids), 5/8 yd coordinating lining fabric, matching thread, basic sewing supplies and sewing machine.
FRI, JUNE 19, 8:30AM-12PM
AGES 10 & up • FEE: $3 INSTRUCTOR: Jami Rutt, 4-H Intern

وانه البريد: info@lancaster.unl.edu
Still Time to Sign Up for 4-H Summer Camps!

4-H Summer Camps & Trips are open to all youth ages 5-19—need not be in 4-H. Specializing in leadership development and team building, 4-H summer camps create positive memories which last a lifetime.

With three unique Nebraska locations at Halsey, Gretna and Alma, there are more than 40 camps ranging from half day to four days/three nights. Some camp sessions offer a range of activities while others focus on a specific theme. Most camps include one night stay in comfortable cabins. Six camps aimed at youth ages 5-8 are one-day camps and adult chaperones are invited.

UNL Extension, through its 4-H Youth Development Program, has been operating 4-H Camps for over 40 years. The 4-H camps and centers all meet over 300 standards established by the American Camping Association.

Since the eastern Nebraska 4-H Camp near Gretna is closest to Lincoln, many Lancaster County youth attend camps there, however local youth also attend camps at the other two locations.

2009 4-H Summer Camp brochures have complete information and registration forms — available online at http://4h.unl.edu/camp or at the extension office.

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<tr>
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<th>Days</th>
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<th>Ages</th>
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2009 EASTERN NEBRASKA 4-H CENTER SCHEDULE

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2009 SOUTH CENTRAL 4-H CENTER SCHEDULE

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**EXTENSION CALENDAR**

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

**May**
- 21: 4-H/FFA Sheep Weigh-In, Lancaster Event Center - Pavilion 2, 6-8 p.m.
- 21: Bed Bugs: What You Need to Know, 6:30-9:30 p.m.
- 28: 4-H District Speech Contest, East Campus Union, 1-7 p.m.
- 30: 4-H Life Challenge Contest - County-Level Senior Division, 9:30 a.m.

**June**
- 1: County Fair 4-H Horse ID’s Due to Extension
- 2: 4-H Council Meeting, 7 p.m.
- 4: 4-H Pre-Fair Leader Training, 9:30 a.m. and 6:30 p.m.
- 6: 4-H District Horse Show/clinic, Lancaster Event Center
- 9: 4-H District Horse Show at Jordan
- 10: 4-H District Horse Show at Ord
- 11: 4-H District Horse Show at Columbus
- 11: 4-H Rabbit VIPS Committee Meeting, Lancaster Event Centers
- 12: 4-H Office Updates, 7 p.m.
- 12: Extension Board Meeting, 8 a.m.
- 12: 4-H District Horse Show at Weeping Water
- 14: 4-H/FFA Livestock ID’s and DNA Samples Due
- 16: 4-H District Horse Show at Bridgeport
- 17: 4-H District Horse Show at Nelson
- 19-19: 4-H Clover College
- 20: Composting Demonstration, Pioneers Park Nature Center’s backyard composting demonstration area, 10 a.m.
- 22: Family Community Education (FCE) Council Meeting, 7 p.m.
- 23: Guardian/Conservator Training, 5:30-8:30 p.m.
- 24: 4-H Horse Level Testing, Lancaster Event Center, Pavilion 3, 6:30 p.m.
- 25: Parents Forever/Kids Talk About Divorce, 5:30-9:30 p.m.
- 29-30: 4-H PASE/Life Challenge, UNL East Campus

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**Explore Career Options at Big Red Academic Camps**

The 2009 Big Red Summer Academic Camps are a chance for high school youth to spend time investigating an interest or potential career, explore the UNL campus, meet people from across the state and have lots of fun. Held in June, Big Red Summer Academic Camps features 12 career exploration camps hosted by Nebraska 4-H and UNL faculty members. The camps are residence camps held on the University of Nebraska-Lincoln campus. Housing and food are provided.

After spending several fun-filled days exploring a specific topic such as movie-making or food molecular biology, youth showcase their work at a special “capstone event” which families are invited to attend. Brochures and registration forms are available at http://bigredcamps.unl.edu or at the extension office. For more information, call 472-2805.

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**4-H Speech & PSA Contest Winners**

The Lancaster County 4-H Speech and Public Service Announcement contest was held April 19. Over 50 Lancaster County 4-H youth competed in this year’s communication events. Photos are online at http://lancaster.unl.edu/4h — top PSAs will be posted online soon. In both contests, the top three winners in each division (listed below) will go to regionals, held May 28 at UNL East Campus.

**Junior Speech**: Samantha Leyden (1st), Alyssa Catt (2nd), Ivy Dearmont (3rd)

**Intermediate Speech**: Molly Noal (1st), Ann Gruff (2nd), Jaime Stephenson (3rd)

**Senior Speech**: Jessica Stephenson (1st), Elizabeth Boender (2nd), Erica Peterson (3rd)

**INTERMEDIATE PSA**: Charlotte Tvrdy (1st), Jaime Stephenson (2nd), Holly Hillebran (3rd)

**JUNIOR PSA**: Kailee Borton (1st), Samantha Leyden (2nd), Victoria Gorza (3rd)

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**Extension & Unit Leader**

Gary C. Brown

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Alice Henneman
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**The Nebline**

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Extension is Now on Popular Social Media Sites

For the past few years, teenagers and young adults have been the primary users of Web sites like Myspace and Facebook. But the face of social networking is changing as their parents and grandparents are embracing this new way to stay in touch. You Tube and Twitter have added even more opportunities to help people connect and learn. UNL Extension in Lancaster County staff use these social and media sharing sites to provide even more opportunities for you to engage with your local extension office.

You Tube, www.youtube.com — You Tube was founded in 2005. It is an online Web site where people connect, inform and inspire by sharing short videos. You Tube reports people are watching hundreds of millions of videos every day. And each minute, users are adding 10 hours of video to the site. UNL Extension in Lancaster County has a variety of videos on You Tube so you can watch, learn and enjoy at your convenience. Videos include Farmers’ Markets, Lancaster County Fair, Raising Rabbits, 4-H Clover College, Saving Money at Supermarkets and Bagworm Control. For a list of You Tube videos currently available from the extension office, go to http://lancaster.unl.edu/media

Twitter, www.twitter.com — President Obama uses Twitter. Celebrities use twitter. You can’t listen to the evening news without hearing one of the reporters talk about Twitter. Did you know 4-H clubs, government agencies, individuals and families are also using Twitter? Twitter is a free service that let’s you keep in touch, share links and ideas in a “tweet.” You can decide what you want to make private, and what you want to share. If you have teenagers, also review their privacy settings on Facebook.

Facebook, www.facebook.com — Facebook is a social networking site originally designed for college students, but is now open to anyone 13 years of age or older. Facebook users can create and customize their own profiles with photos, videos, and information about themselves. According to Inside Facebook, in February 2009, Facebook reported nearly 45.3 million active users. Women over age of 55 are the fastest growing users of Facebook, up 175% from November 2008. It’s easy to start your own free Facebook account and it only takes a few minutes. You’ll be asked to edit your profile with basic information and find people you know. Once you have an account, you’ll soon be connecting with friends and family, and joining groups of interest to you. Make sure you take time to learn about the privacy options on Facebook. You can decide what you want to make private, and what you want to share. If you have teenagers, also review their privacy settings on Facebook with them.

Once you are on Facebook, you can become a fan of 4-H EGG Cam. A link and directions are available at http://lancaster.unl.edu/media. Fans of 4-H EGG Cam get regular updates, share photos, comments, ideas and discuss what’s happening on the live streaming Web cam.

Can You Guess It? Did you guess it from the May Nauna? Aged horse manure — a great soil amendment for the garden

Attracting Wildlife: American Goldfinch

American Goldfinches are some of the most beautiful birds in our neighborhoods. They are sometimes called wild canaries. In summer, males are vivid yellow with black on the wings and top of head. Females are more drab olive.

Goldfinch fly as if they are on a rollercoaster, dipping up and down. While they fly, they sing a series of chirping notes. Unlike many songbirds, goldfinches do not carry droppings of the young away from their nest. The nest becomes very messy by the time the baby birds are ready to leave.

Goldfinches prefer shrubby, weedy fields, wood edges, pastures, meadows and open areas with scattered, brushty thickets and trees. They nest from June–September in shrubs or small trees, 4 to 14 feet high. This is relatively late compared to some other songbirds. The pale bluish white eggs hatch in about two weeks. Both parents feed the baby birds until they are ready to fly in 10–16 days.

Goldfinches are primarily seed eaters. They feed on thistle seeds and the seeds of ragweed, goldenrod and dandelion. They will eat some insects in spring. These delightful birds are common at backyard bird feeders. They feed on niger or thistle seeds. The birds will also eat broken sunflower hearts and black-oil sunflower seeds. Hanging Finch feeders work best, but these birds will also feed out of other types of feeders. A water source for drinking and bathing is an important attractant.

Goldfinches will not take advantage of man–made bird houses or nesting structures. You can attract them by planting or maintaining shrubby vegetation near pastures or weedy areas in rural areas. In urban backyards, plant zinnias, evening primrose and other plants with small seeds.

Source: Who’s Who in Great Plains Songbirds

U.S. Drought Monitor Map

Access these opportunities at http://lancaster.unl.edu/media

American Goldfinch

Female (left) and male (right) goldfinches (summer colors)