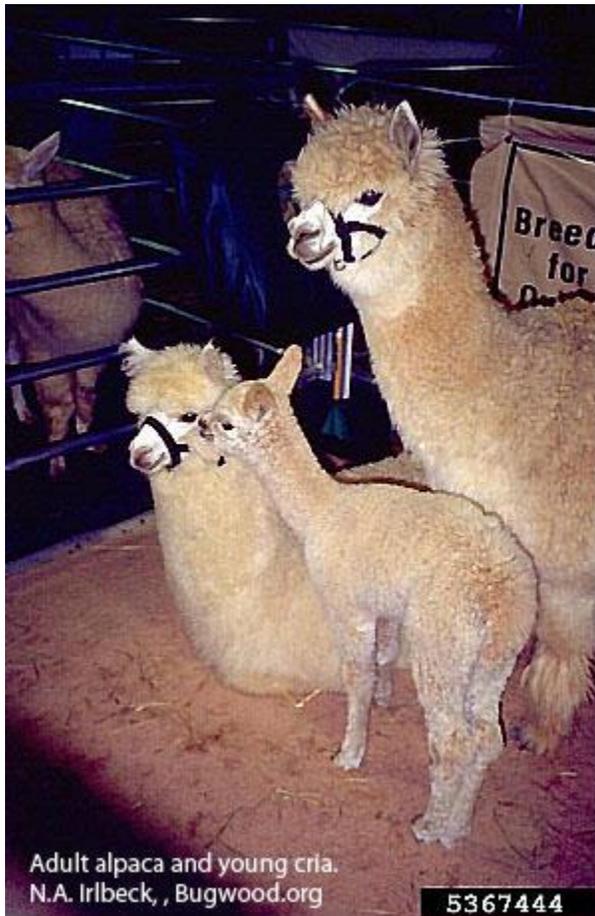


# UNL Extension: Acreage Insights

## Acreage eNews-July 2013

<http://acreage.unl.edu>

### Llamas and Alpacas- An Acreage Enterprise Upcoming Events and Information Sources



Adult alpaca and young cria.  
N.A. Irlbeck, Bugwood.org 5367444

Llamas and alpacas, members of the camel family, are gaining popularity as livestock for the the farm or acreage. Many are kept as pets, but they also produce high quality fiber. Alpaca fleece comes in over 20 different colors and is considered to be as soft as cashmere. It is much lighter than sheep's wool and is free of lanolin, making it a hypoallergenic material. Llamas coaser outer guard hairs are used for rugs, wall-hangings and lead ropes, while their fine undercoat which can be used to make garments .

Llamas, as the larger of these two animals, can also be used as a pack animal, and serves as a good guardian for sheep against predation from coyotes.

If you would like to learn more about llamas or alpacas, two July events provide more information.

### Upcoming Nebraska Llama & Alpaca Events:

- [Llama Camp](#), Waco, NE, July 5-6. This two-day camp is offered to Girl and Boy Scouts, 4-H, and FFA members, or any child or adult interested in learning more.
- [Summer Tours in the County- Alpacas of the Heartland](#), Washington County, NE, July 25. For more information, contact Steve Tonn, (402) 426-9455.

### **More Information:**

- [Llamas and Alpacas](#), PennState College of Agriculture Sciences
- [Guard Llamas: A Part of Integrated Sheep Protection](#), Iowa State University Extension
- [General Information for the Potential Camelid Owner](#), Oklahoma Cooperative Extension Service

### **Event Highlights**

For a complete listing, visit the  
[Upcoming Events Calendar](#)

- [Llama Camp](#), Waco, NE, July 5-6
  - [Platte County Fair](#), Columbus, NE, July 8-14
  - [Gardening Tidbits- Plant Propagation](#), Omaha, NE, July 24
  - [Summer Tours in the County- Alpacas of the Heartland](#), Washington County, NE, July 25
  - [BioEnergy Friday Webinar- Exploring Energy Efficiency and Alternatives](#), Webinar, July 26
  - [Greater Omaha Iris Sale](#), Omaha, NE, July 26-27
  - [Garden Tidbits- Two Weeds and a Bug](#), Omaha, NE, July 31
  - [Dodge County Fair](#), Scribner, NE, July 31- Aug 4
  - [Lancaster County Super Fair](#), Lincoln, NE, Aug 1-10
  - [Recipe to Reality](#), Lincoln, NE, Aug 16
  - [BioEnergy Friday Webinar- Ethanol Use in Legacy Engines](#), Webinar, Aug 30
-

## Renovation of Strawberry Plantings

By [Sarah Browning](#), UNL Extension Horticulture Educator



Strawberry plantings can produce for several years, but yields decrease with each year of harvest. Diseases, weeds and weak plants limit the life span of a single planting, so do not expect a bed to maintain its quality for more than three fruiting seasons. By following the recommended renovation or renewal procedures, you can maximize the life and productivity of your planting.

### June Bearing Strawberries

Most June bearing strawberries are planted using the matted row system. Plants are originally planted 18-24 inches apart, then are allowed to grow together forming thick mats of foliage. To renovate a planting in a matted row system, narrow the rows immediately after harvest to a width of 10-15 inches, by running a tiller along the edges of the rows, removing all the extra plants.

Sometimes strawberries are allowed to grow together in one thick, matted bed with no walkways. In this case, run the tiller through the strawberry planting creating 24 inch wide walkways through the bed and leaving 10-15 inch wide rows of strawberries.

After tilling, mow off the old leaves to one inch above the crown. Remove all the leaf debris and plants destroyed by tilling. This will reduce disease problems on newly developing foliage, and allow you to see the plants. Thin out the remaining plants to three plants per square foot, or thin plants to a spacing of 7-11 inches apart, by removing old mother plants and weak new runner plants.

Apply 2 ½-3 pounds of a complete fertilizer such as 10-10-10 or 12-12-12 per 100 feet of row.

If weather and time permit, thin out weak plants again in late September. By mid-October there should be only five to seven plants per square foot to get top yields the following spring. Thinning out the plants only after harvest usually is not sufficient to maintain the plant density required to optimize yields and quality.

### **Ever-bearing Strawberries**

Renovation as described for June bearing strawberries, is not practiced with day neutral or everbearing strawberries. To maintain productive everbearing strawberries, when using the hill planting system, set new plants into new hills each year, and remove plantings more than 3 years old. Runners are normally removed as they appear, especially if the hill system is used.

To plant new hills, homegrown plants obtained by digging new runner plants from existing parent plants can be used if disease has not been a problem. A few hills of strawberries can be allowed to produce runners during the season to provide a stock of crowns for transplanting each spring. These runners can then be dug up in spring and moved to the new location. If the runners from your plants lack vigor, purchase new virus-free stock in spring.

When preparing strawberry plants for planting, never allow them to dry out. Cover the roots with moist peat moss or cloth, and keep the plants shaded at all times. Before planting, remove all but two or three well-developed leaves per plant. Clip off any flower clusters that are visible to save the labor of removing them later in the field.

Spread out the roots when planting and place the plant at a depth so that only the base of the crown is covered by soil. If the crown is too high, the roots will be exposed and quickly will dry out. If the crown is too deep, it easily can be covered with soil and smothered.

### **Follow-up Care**

Irrigation and mulch are important for plant recovery following renovation, and good flower bud development in later summer.

Strawberries must be irrigated to produce quality fruit with high yields. Plants generally require 1.5-2 inches of water or more per week, both rain and irrigation, depending on soil type, climatic conditions such as temperatures and wind, and the plant's stage of development.

Crucial water-use times for strawberries occur following renovation, and in late summer when flower buds are forming. Because the strawberry fruit is 90 percent water, any moisture stress during fruit development will reduce yield. If signs of water deficits, such as wilting, occur, apply water as soon as possible. Apply enough water to wet the soil to a depth of six to eight inches, the zone in which most of the plant's roots occur.

Most home strawberry plantings are mulched. Any organic material, free of weed seeds, makes good mulch, like hay, straw, and pine needles. In spring, after the danger of frost is past, rake half the mulch off the plants and into the area between the rows. Mulch left around and under the plants will help keep the berries clean, conserve moisture, and inhibit weed growth.

Black plastic is frequently used as mulch for strawberries. It is effective in inhibiting weed growth and preventing the evaporation of moisture from the soil surface. However, it does eliminate the ability of runners to put down roots.

---

## Summer Garden Maintenance - Weeds

By [John Fech](#), and [Nicole Stoner](#), UNL Extension Horticulture Educators



Bindweed is a common garden problem.

You've planted and watered, and now comes the hard part. Weeding the garden. It's no fun, but it has to be done. This is one instance where the adage "work smarter, not harder" applies. If you have lots of weeds, it's not a surprise. It is estimated that the average cubic foot of soil has more than 10,000 weed seeds in it!!!

There are many different weeds that can be found in your vegetable garden including, but not limited to, bindweed, crabgrass, burcucumber, wild cucumber, purslane, foxtail, and lambsquarter. Weeds compete with vegetables for water and nutrients; they also crowd desired plants, making vegetables less productive. Finally, they offer food and habitat for insects.

**Start off with a clean slate.** This means removing all of the weeds that sprouted along with the beans and corn. A clean slate means weed removal, and that most likely means hoeing. There is a right way and a wrong way to hoe. First, sharpen your hoe. You remove twice as many weeds with less effort with a clean, sharp tool. Next, use the proper technique. The key is to slide or scrape the hoe over the soil surface, not chop at it. They are very easy to get out with a hoe if you do this at least once a week.

If you must pull weeds by hand, it's most easily done when they are small versus allowing them to grow large and have a more developed root system.

**Apply a preemergence herbicide.** Once all the soil around your veggie plants is free from weeds, keep them out by applying a preemergence herbicide such as Dacthal or Preen.

**Mulch will keep weeds out of your garden.** In a vegetable garden, transplants and seeds are planted with room to grow so there is a lot of empty space available for weeds to take over. A thin, 1-2 inch layer of mulch helps to suppress weed seed germination, and control the weeds. Mulch acts by shading the soil surface, and reducing weed seed germination. Mulch also increased soil water holding capacity as it breaks down, and reduces the amount of water lost through evaporation.

Use straw, dried grass clippings, ground corncobs, pine needles, sawdust, newspapers, cardboard, and wood chips for mulch. The “woodier” the material is, the more nitrogen soil microbes with use while breaking it down. So, when using wood chips or sawdust, simply apply a little extra nitrogen periodically during the growing season.

Inorganic materials such as rocks and tire mulches are not advised because they do not hold any water for the plants and they make a much hotter surface to reflect back onto the plants.

---

## Controlling Squash Bugs on Melons & Cucumbers

By [Sarah Browning](#), UNL Extension Horticulture Educator



Squash bugs are a common pest of cucurbits, with a preference first for winter squash and pumpkins, followed by gourds, summer squash and melons, and occasionally cucumbers. Among squash, winter varieties such as hubbards and marrows, are most severely effected.

Now is a good time to scout your vegetable garden for adults, nymphs and eggs, and take steps to control them.

### Damage

Both adults and nymphs feed on plant leaves and stems by sucking sap from the plant tissues. While feeding, they inject a toxic substance into the plant, which causes yellowing of the leaf foliage and eventually wilting and death of the plant. This condition is called Anasa wilt of cucurbits.

Squash bugs are also the vector for a recently recognized wilt of cucurbits called Yellow Vine Decline. Plants are infected with the bacteria through feeding of squash bugs. Symptoms usually begin with the plant turning yellow. When cut, affected stems show a brown ring of discoloration in the phloem cells. Eventually affected plants wilt and die.

### **Description & Lifecycle**

Adult squash bugs are 5/8 inches long and approximately 1/3 inch wide. The adults are winged, brownish black insects, sometimes mottled with gray or light brown on the back, and have a flat back. They have an unpleasant odor when crushed.

Adults overwinter in leaf litter and debris, emerging in spring as the cucurbit vines begin to grow. After mating, females lay clusters of brick-red eggs in the angles between leaf veins on the underside of the leaves. Hatching occurs in 7-14 days. Young nymphs have a green abdomen, and crimson head, thorax and legs. Older nymphs are light gray with black legs.

One generation of insect occurs each year, but the extended egg-laying period of female insects results in all life stages occurring throughout the summer months.

Squash bug adults and nymphs hide on the undersides of leaves, near the crown of the plant, under clods of dirt or any other protective cover. They are gregarious, feeding in groups, and quickly move away when disturbed.



**Control**

Early detection of squash bugs is vital to effective control. Adults are very difficult to kill and can kill entire plantings if not controlled.

Begin scouting plants for adults insects and egg masses as soon as plants emerge in spring. One egg mass per plant indicates control measures are needed. Begin control as soon as insects are found, and prevent large populations from developing.

1. Cultural Control- Remove and bury or burn all garden debris in the fall to eliminate insect overwintering sites. Mow vegetation around the garden or planting field to minimize insect habitat. Plant varieties of squash and pumpkin that are resistant, including Butternut, Royal Acorn and Sweet Cheese.

2. Manual Control- Home gardeners can handpick adults and crush egg masses to reduce insect numbers in the garden. Place boards under plants, to provide aggregation sites for the insects. This can simplify collecting and destroying of the insects.
3. Chemical Control- Adults are difficult to kill with insecticides, so control should be targeted at the nymphs to prevent them from surviving. Homeowners can spray plants with an insecticide, such as Sevin (carbaryl) or Eight (permethrin), being sure to target the undersides of leaves. Reapply the insecticide as directed on the label.

Recommendations for commercial growers can be found in the [2013 Midwest Vegetable Production Guide for Commercial Growers](#). Check out page 108- Insect Control for all Cucurbits.

Always read and follow all directions and precautions on the insecticide label.

---

## Grilling What You're Growing

By [Lindsay Chichester](#), UNL Extension Livestock Educator



Asparagus and bacon in foil packet.  
Image by Lindsay Chichester, UNL Extension.

Synonymous with summer time is barbeque time – at least in my opinion. Below are some tips and guidelines to make your outdoor grilling experiences great this summer. Before preparing and cooking any of your food items, you should wash your hands with warm water and soap. In addition, make sure all of your preparation surfaces and tools (knives, cutting boards, etc.) have been thoroughly cleaned. Be sure and keep raw meats separate from raw fruits and vegetables, and thoroughly clean raw meat trays before placing cooked items on the same trays. Finally, all perishable items should be kept refrigerated prior to cooking and not left on the counter, and leftovers should be refrigerated or placed on ice following the meal to decrease the potential for foodborne illness exposure.

**Meat** - When choosing the perfect meats to grill you have many options. Hamburgers, brats, ribs, steaks, chops, and kabobs are some of the most common and preferred. When preparing your kabobs, leave a small space between all items on the skewer so the meat and vegetables can get heat and cook from all sides. No matter what your meat preference is, there are some things to keep in mind. First, use a meat thermometer to ensure that your meat product has reached the

[safe minimum cooking temperatures](#). Remember, placement of your thermometer in the meat product is important for an accurate reading. The best place for an accurate reading is in the center of the thickest part of the meat product – it should not be touching bone, fat, or gristle. It can be difficult to tell if a meat product is done just by looking, as the color of smoked or cured products may be slightly different than the color of a raw product.

**Marinades** are great for flank steak, chicken, stew meat used for kabobs, seafood, low cost meat options, or cuts of meat you want to add some extra flavor to. Marinades are also great when you are short on time, as your meat product should only be marinated 30 minutes to less than 24 hours (depending on meat type). Marinades often contain an acid source (citrus juices, vinegars, or tomato based products), oil, and flavorings. The most ideal way to use a marinade is to make enough to marinate the raw meat (which is discarded after the meat is put on the grill), and have a fresh batch that has not come into contact with raw meat to pour over, baste, or dip meat in after cooking. If this is not an option, the marinade that was in contact with the raw meat can be boiled for a minimum of 5 minutes (reaching 165 degrees F), which will kill any foodborne bacteria. [More information on marinades and recipes](#).

**Fruit and vegetables** take on a great flavor profile when barbequed. There are several ways to cook fruits/vegetables on the grill:

- Foil packets work great to keep small fruit/vegetable pieces from falling through the slats of your grill. A foil packet should contain spices/herbs/flavorings as well as an adequate amount of liquid (i.e. water, oil, butter, citrus juices, etc.) which will steam them and keep them from burning. These usually cook fairly quickly, so you may want to start your meat items first, and then add the foil packets in the last 5-10 minutes of cook time, to not overcook these items (you can carefully and gently open the packet during cooking to check for doneness too). Foil packets work great with apples, pears, asparagus, potatoes, mushrooms, carrots, broccoli, cauliflower, and corn on the cob to name just a few.
- You can also leave your corn on the cob in the husks, and grill it that way – let them soak in water for at least 30 minutes prior to grilling; the wet husks will help steam it!

Keep in mind with the foil packets and corn on the cob in husks; they will be very hot when opening – so use caution! When these are done cooking, slide onto a serving tray/cookie sheet and transport back to the kitchen, you can also open them up and serve directly out of the foil packet, making clean-up a breeze!

- Kabob sticks – are great for grilling fruit/vegetables (be sure to soak the wooden sticks for at least 30-60 minutes prior to use). Kabob sticks work great for pineapple, apples, pears, squash, peppers, eggplant, and others! You may find it convenient to brush a sauce or marinade on your vegetables while they are cooking for added flavor (i.e. teriyaki sauce, soy sauce, barbeque sauce).
- Foil directly on your grill – this will keep some of the “messier” fruits/vegetables from sticking/falling through the grill (i.e. plantain, tomatoes, okra, eggplant, etc.) while making the clean-up process easier. You can then just slide the piece of foil onto a

serving tray/cookie sheet for transport back to the kitchen.

- Direct placement on the grill - larger pieces of fruit and vegetables can be placed directly on your grill such as peppers, onions, garlic, artichokes, squash, peaches and eggplant. Keep garlic intact as a bulb in the skin. After cooking the cloves squeeze out easily and can be used as a paste.

It may be helpful to brush these with olive oil prior to placing on the grill as it will help keep them moist and help keep them from sticking to the grill!

Barbequed food items not only taste great, offer a healthy grilled option, and are versatile, but it helps keep your house cooler during the hot summer months when you don't have to start the oven/stove to cook your meals! Have fun and experiment with different meats, fruits, and vegetables on the grill this summer!

---

## July Is National Picnic Month

By [Lisa Franzen-Castle](#), UNL Extension Nutrition Specialist



More Good Foundation, [www.flickr.com](http://www.flickr.com) Summer holidays provide a break from school and work, but we shouldn't break from being smart about food safety. More care is needed since foodborne illnesses increase during the summer. July is National Picnic month and summer picnics are a great way to enjoy the outdoors and each others' company. Bacteria love the hot, humid days of summer, and grow faster than at any other time of the year. At the same time temperatures rise, we're more likely to leave food unrefrigerated for longer periods of time at picnics, barbecues and during travel. Keep your picnics with family and friends healthy and safe this summer by remembering the following tips.

### Tips to stay food safety savvy on picnics:

- **Temperature and time.** Keep picnics safe by remembering that the time perishable food can be left outside the refrigerator or freezer drops from two hours to one hour in

temperatures above 90 degrees Fahrenheit.

- **Hot and cold.** Keep hot food hot and cold food cold on the way to, and throughout picnics and outdoor gatherings. Holding food at an unsafe temperature is a prime cause of foodborne illness.
- **Food thermometer.** According to United States Department of Agriculture (USDA) research, 1 out of every 4 hamburgers turns brown in the middle before reaching a safe internal temperature. The only way to be sure food is safely cooked is to use a food thermometer to measure the internal temperature.
- **USDA recommendations.** USDA has revised its recommended cooking temperature for all whole cuts (steaks, roasts, and chops) of meat, including pork, beef, lamb and veal to 145 °F and then allowing a 3 minute rest time before carving or consuming. During the 3 minutes after meat is removed from the heat source, its temperature remains constant or continues to rise, which destroys pathogens.
- **Bring non-perishable foods.** Reduce the worry of keeping foods at certain temperatures by limiting the number of perishable foods. Try bringing baked potato chips or pretzels instead of potato salad; washed whole fruit, dried fruit, or fruit cups instead of a fruit salad; and other snacks such as trail mix, nuts, or sunflower seeds.
- **Two coolers are better than one.** Bring two coolers to the park or gathering, one for perishable food and one for beverages. Keep perishable foods cool by transporting them in an insulated cooler kept cold with ice or frozen gel packs. Open as infrequently as possible. Store drinks in another cooler.
- **Keep it clean.** Make sure you check ahead and find out if there's a source of safe drinking water at your destination. If not, bring water for preparation and cleaning; or pack clean, wet, disposable cloths or moist towelettes and paper towels for cleaning hands and surfaces.
- **Don't cross contaminate.** Cross-contamination is the transfer of harmful bacteria to food from other foods, cutting boards, utensils, etc., if they are not handled properly. Wash your hands before and after handling food, and don't use the same platter and utensils for raw and cooked meat and poultry. Include lots of clean utensils, not only for eating but also for serving the safely cooked food.

Picnics are popular throughout the summer and one of the reasons they are so popular in July is because many families take vacations in July and spend much of their time outdoors. The "road" to food safety, however, can be bumpy or smooth — depending on what precautions are taken handling meals as we travel. Go to <http://food.unl.edu/web/safety/home> for more tips and resources on safe food storage, preparation, and handling.

---

## Before Initiating Water Treatment

By [Sharon Skipton](#), UNL Extension Water Quality Educator



If you get your drinking water from a private well, you are responsible for the quality of your water supply. This includes system maintenance, source water protection, and water quality testing. It also includes water treatment, if treatment is necessary.

Before initiating treatment, find out what contaminants are in the water, and their quantities or concentrations. Also, be sure you understand the reason for removing them. For example, is there a health risk from ingestion? Is there a health risk from skin exposure or inhalation? Or are they just a nuisance?

### Water Testing

The first step is to initiate appropriate water testing. There is no single test to determine the safety of drinking water. Many contaminants can present a health risk if present in sufficient concentrations. These include biological contaminants such as bacteria and viruses, inorganic chemicals such as lead and nitrate, and organic chemicals such as insecticides and herbicides.

Other contaminants, while not a health risk, can make water less desirable for domestic use. These are referred to as nuisance contaminants and might include calcium, magnesium, iron, and manganese. It would be very costly — and in most cases unnecessary — to test private water supplies for the nearly 100 contaminants for which public water supplies are required to test. You must decide which contaminants to have your water tested for and must order tests accordingly.

## **Water Treatment Considerations**

The characteristics (age, health) of people in your household and the contaminant (whether it poses a health risk or is just a nuisance) should guide your decisions on which contaminants to strive to remove or reduce. Information on contaminant risks and nuisance problems should help you decide if you should treat all of the water in the home with a point-of-entry (POE) treatment device, or if you might treat only the water used for cooking and drinking with a point-of-use (POU) device.

Often, POE treatment is used for nuisance contaminants such as a water softener for hard water minerals or a filter for iron. POU might be used for contaminants that only pose a health risk from ingestion, such as nitrate. In this case, a Reverse Osmosis unit often is installed at the kitchen faucet.

The Extension Circular 703, [Drinking Water Treatment: An Overview](#) provides information that will help you select treatment options effective for the contaminant you wish to manage. In addition, the publication gives brief descriptions for treatment methods. More detailed information on contaminants and treatment methods can be found in NebGuides available at <http://water.unl.edu/web/drinkingwater/publications>.

## **Water Treatment Equipment**

Consider the long-term energy requirements and maintenance as you investigate treatment options and equipment. After making a decision about the best treatment option for your situation, you will need to compare models from different companies. Testing of water treatment devices is not required by Federal or State of Nebraska statutes. Testing and approval is completely optional and is a decision made by the manufacturer.

The [NSF](#) (formerly known as the National Sanitation Foundation) is a third-party non-profit organization that tests equipment that has been submitted voluntarily by the manufacturer. Products that meet NSF standards are entitled to display the NSF certification mark on the product. The [Water Quality Association](#) (WQA) is the trade organization of the water treatment industry. The WQA uses the same NSF standards and provides equivalent American National Standards Institute (ANSI) accredited product certification. WQA certified products carry the Water Quality Association Gold Seal.

Once appropriate equipment has been selected, installed, and is operating, follow the management and maintenance suggested for the equipment. You should have a way to determine if the targeted contaminant is being removed. Plan to retest the water periodically after the equipment is in use to see if the equipment is operating effectively.