

# EXTENSION IS ON THE MOVE

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June, 2020

Volume 10, Number 3

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## Private Animal Sale for Consumption

*With current disruptions in the supply chain, producers may be looking at alternative options for marketing finished animals. Whether the direct sale is an animal or meat product can make a bit difference what safety and legal requirements must be met.*



### Self-Processing

Producers can slaughter and process their own animals that are fit for human consumption without USDA inspection as long as the product is for personal use and processing is done under sanitary conditions. Product can then be used by the livestock owner, member of the owner's household, a household employee, or household non-paying guest. The resulting products **CANNOT** be sold or donated.



### Custom Exempt Processing

A custom exempt operator (butcher) may slaughter and process animals belonging to someone else for the livestock owner's exclusive use or use by a member of the owner's household, household employee, or household non-paying guest. The resulting products will be marked "Not for Sale" and **CANNOT** be sold or donated.

The custom exempt operator can also act as an agent on behalf of the livestock owner and arrange for purchase, slaughter/processing, and delivery of the "Not for Sale" product to the livestock owner.

### • Joint Ownership

Under custom exempt processing, dual livestock ownership is allowed as long as proof of ownership is available upon request.



### Federally Inspected Processing

Any animal that is slaughtered/processed and the resulting products will be sold or donated must be slaughtered under USDA-FSIS inspection and be marked as such.

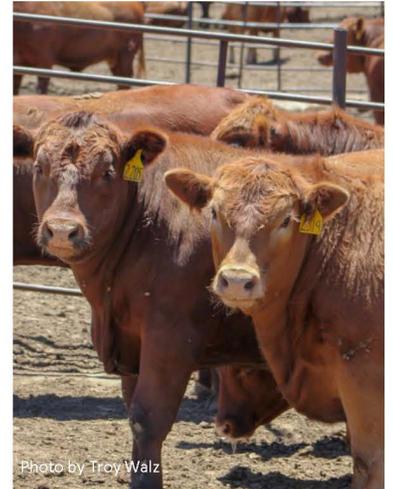


Photo by Troy Walz

[beef.unl.edu](http://beef.unl.edu) [@UNLBeefExtension](https://www.facebook.com/UNLBeefExtension) [@UNLBeef](https://twitter.com/UNLBeef) [UNL BeefWatch](https://www.instagram.com/UNLBeefWatch)

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# ON THE RANCH

## Key Points to Reduce Heat Stress

- **Supply access to abundant fresh water.** For every 1,000 lbs of weight, cattle can require at least 20 gallons of water per day when the ambient temperature is above 80°F.
- **Provide sprinklers to wet pen floor.** Use sprinklers with large droplet size to keep pen floor and mounds cool for cattle to rest on.
- **Provide shade in pens.** Shading has shown to reduce solar heat load by 5-10°F for cattle resting under it.
- **Allow Airflow.** Move cattle away from windbreaks and allow as much airflow through the pens as possible during high heat and humidity events.
- **Process cattle in early mornings.** If cattle need to be handled, it is recommended to do it during early mornings before 10:00 a.m.

to 18 feet through its roots each year. Roots can grow to a depth of 20 feet in the soil, but 90% of the plant's roots are generally in the top foot of soil. New plants have been found to grow from roots and root buds as deep as 14 feet.

Field bindweed produces shoots / vines that grow in a spiral fashion, horizontally or vertically, that can form dense tangled mats. Leaves

## Field Bindweed

By: Gary Stone, Nebraska Extension Educator

Early Detection and Rapid Response (EDRR) is a concept to identify potentially invasive species prior to or just as the establishment of the invasive is taking place. An Integrated Pest Management plan (IPM) can be developed to manage, contain and eradicate the invasive species before it can spread further. This will avoid costly, long-term control efforts.

### Field Bindweed

a.k.a. – Small bindweed, European bindweed, Creeping Jenny

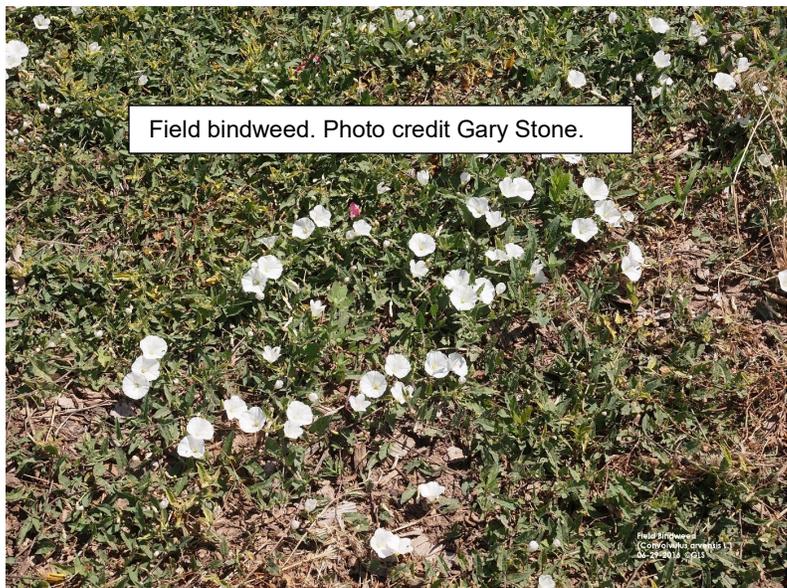
Scientific name: *Convolvulus arvensis* L.

Family: Convolvulaceae (Morningglory family)

### Description

Origin: Eurasia. Introduced into the United States as a contaminant in farm and garden seeds in the mid-1700s. It has been reported in every state in the United States and is a noxious weed in 22 states.

Field bindweed is non-native, long-lived perennial rhizomatous forb. It has an extensive deep fibrous root system and reproduces/spreads from seed and roots. A Field bindweed plant can produce up to 600 seeds per year, which 90% are viable. Approximately 25% of these seeds will germinate immediately while the remainder can remain viable for 60 years or more. Seeds can germinate throughout the growing season, from 40° to 100°F soil temperature, when adequate moisture is available. Seed is dispersed by movement of affected soil, wildlife, harvest equipment and harvested crops. The plant can spread 10



Field bindweed. Photo credit Gary Stone.

can be narrow or broad, 1 to 2 inches long and arrowhead shaped. Flowers are white but can be pink in color and are trumpet shaped, approximately 1

inch long and wide. Field bindweed contains alkaloids that are mildly toxic to certain types of livestock and cause digestive disturbances. Productivity of agricultural land may be reduced as much as 50%. Field bindweed is listed as one of the ten most serious weeds in the world.

### **Habitat**

Field bindweed is found in variety of habitats which include agricultural fields, turf, pastures, gardens, roadsides, non-crop sites and disturbed areas. The extensive root system of this plant makes it very hard to manage. It out-competes desirable plants for nutrients and moisture. The twining growth of the plant inhibits harvest of crops and can cause lodging.

### **Management**

Management and control of Field Bindweed is difficult due to its extensive root system and long life of the seeds. Depleting the root reserves of the plant and reducing sprouting is key to successful management. Whichever management methods are selected, it will take time and persistence. An Integrated Pest Management plan must be utilized using more than one option for effective control.

Prevention is the best and cheapest management option. Having well-established perennial grasses and forbs on a maintained pasture or hay field with proper grazing and rotational grazing techniques can go a long way to prevent its establishment.

Know and inspect where topsoil that is trucked in originates. For gardens and turf, check nursery stock prior to purchase, maintain a healthy lawn with proper fertilization, watering and mowing. Proper mulching techniques in flower beds and garden areas can slow the plants spread by preventing light to reach the soil surface. Purchase compost from reputable sources.

Mechanical methods include hand pulling seedling or young adult stage plants, hoeing, tilling or cultivation can be effective. Mechanical methods need to be repeated every two weeks during the growing season. Mowing has not been an effective management tool and burning has limited effect.

There are three insects that are considered biological control methods at this time. These are a tortoise beetle (*Chelymorpha cassidea*), native to the United States, which feeds on the leaves of the plant. There is a gall forming mite (*Aceria malherbae*) and the European moth (*Tyta luctuosa*) that as a caterpillar will defoliate the plant. Establishment of these insects has been poor and little success has been obtained.

There are numerous chemical treatment options available to manage Field Bindweed. Where turf, gardens and flower beds are the sites, pre-emergence products can control germinating seeds. Where possible a systemic herbicide labeled for the site, post-emergence products should be used in conjunction with the pre-emergence product. Systemic herbicides translocate and move through the plant to the root system.

Where agricultural land and pastures are affected, there is a broader range of systemic herbicides available. Products containing aminocyclopyrachlor, clopyralid, chlorsulfuron, dicamba, imazapic, imazapyr, metsulfuron, picloram (Restricted Use), triclopyr, glyphosate (non-selective) and 2,4-D have been shown to work. Timing and rate of product application will depend on the product label and the site / crop. An application of a labeled herbicide at first bloom will help reduce seed production. Additional herbicide applications may be necessary later in the season, if allowed by the herbicide label, to control additional flushes. Tank mixes of several of these herbicides may provide better control. The addition of a non-ionic surfactant to the herbicide mix will aid in control. Re-treatment will be necessary until the seed and root reserves in the soil is exhausted. Be sure to select a product labeled for the site. Read, understand and follow all label instructions when using any pesticide.

# Dealing with Blister Beetles

By: Dave Boxler, Nebraska Extension Educator

Horses are very susceptible to blister beetle poisoning. Photo credit Troy Walz.



Blister beetles, from the family Meloidae, are sometimes referred to as oil beetles and found in all parts of the United States and Canada. Adult blister beetles vary in size and color but are recognized by the elongated, narrow, cylindrical, and soft bodies. In Nebraska, the three-striped, grey, and black blister beetles (Fig. 1) are the most common species. Blister beetles produce a chemical called cantharidin which is toxic to animals and humans. The male blister beetle secretes cantharidin and presents it to the female after mating. The female beetle applies the chemical to her eggs to protect them from predators.

**Biology and Habits** - Most blister beetle species produce one generation per year. Female blister beetles deposit clusters of eggs in the soil in late summer. Eggs hatch in about 12 days, develop into active larvae and quickly start searching for grasshopper egg pods buried in the soil. Once egg pods are found, blister beetle larvae cease searching and begin to feed. As grasshopper egg predators they are considered beneficial. Over the course of a month larvae develop into the overwintering stage. The following spring, as temperature and moisture increases they enter the pupal stage from which the adults emerge. Adult blister beetles can generally be found in alfalfa through the second and third cuttings and in some years into the fourth cutting.

**Damage** - Blister beetles do not usually impact alfalfa and other plants. The major impact of blister beetles is the potential injury to horses (or less commonly to cattle and sheep) if they ingest blister beetles with harvested forage (Ray et al. 1989) (Gayle et al. 1981). After emergence, blister beetles are strongly attracted to alfalfa and weeds (e.g. goldenrod) during bloom, and feed on nectar and pollen. Beetle numbers can increase significantly, with the three striped blister beetle tending to congregate in swarms. High numbers in alfalfa or other hay crops should concern producers and horse owners because of the potentially large amounts of cantharidin contained in these congregations.

Cantharidin is a colorless fatty substance of the terpenoid class that blisters skin tissue upon contact. Horses are very susceptible to blister beetle poisoning. A horse's digestive tract can be severely irritated, leading to secondary infections and bleeding (Bauernfeind and Breeden 1984). Cantharidin is excreted through the kidneys, irritating the kidneys, ureter, bladder and urethra. The substance also lowers serum calcium levels and causes damage to heart muscle tissue. Animals can die within 72 hours, so it is important to contact a veterinarian as soon as blister beetle poisoning is suspected.

Toxicity to horses has not been definitely determined, but estimated minimum lethal dose is 1 milligram of cantharidin per 2.2 lbs of horse body weight. The number of beetles necessary to provide a lethal dose depends on the species of beetle and how much cantharidin it retains. Table 1 provides data on three of the most common blister beetles in Nebraska. Please note male blister beetles have a higher concentration of cantharidin than females, especially the Striped Blister Beetle, a very common species in Nebraska. Table 2 provides data on lethal doses of cantharidin depending upon the amount in the beetle and the weight of the horse.

Table 1. Cantharidin levels present in common species of blister beetles.<sup>1</sup>

Species	Sex	Milligrams of cantharidin / beetle	
		Average	Range
Black	Male	0.40	0.03 – 0.70
	Female	0.08	0.07 – 0.30
Ash Gray	Male	1.25	0.06 – 3.38
	Female	0.49	0.14 – 0.75
Striped	Male	5.21	1.43 – 11.13
	Female	4.52	2.18 – 8.50

<sup>1</sup> From "Blister Beetles in Alfalfa: Management Options to Minimize Poisoning in Horse, Minnesota Extension Service, AG-FO-5510-D, 1990.

Table 2. Estimated number of beetles necessary to provide a lethal dose to horses (estimated 1 mg lethal dose).<sup>1</sup>

Cantharidin per beetle	Horse Weight (lb)			
	275	555	835	1200
1.0	125	250	375	545
2.0	63	125	188	273
3.0	41	83	124	182
4.0	31	63	94	136
5.0	35	50	75	109

<sup>1</sup> From "Blister Beetles in Alfalfa: Management Options to Minimize Poisoning in Horse, Minnesota Extension Service, AG-FO-5510-D, 1990.

Clinical signs of cantharidin poisoning may include blisters and ulcers in the mouth, gastritis, colic, diarrhea and bloody feces. Another sign includes frequent attempts to urinate, but voiding little urine and blood in the urine. Poisoned horses may place their muzzle in water without drinking. Oral and intestinal ulcerations may be observed in cattle and sheep. Again, if cantharidin poisoning is suspected, consult a veterinarian.

**Reducing Impact of Blister Beetles** - Reducing the chance of blister beetle poisoning requires focused scouting and good management practices. A significant step is to harvest hay/alfalfa before flowering of alfalfa and weeds which attracts beetles to the fields. Cutting hay before 5 percent bloom reduces the risk of blister beetle contamination. Commonly, blister beetles are found within field borders, unless there is a population of flowering weeds in the field. Scout for blister beetle activity two



to three days prior to harvest. If sizeable beetle populations are discovered, producers should not harvest until beetles have moved out of the field. Research has shown that dead blister beetles contain toxic levels of cantharidin, so applying an insecticide treatment is not recommended. Dead beetles in the field could be incorporated into the hay during harvest and animals might be poisoned by ingesting beetles in cured hay. Since many species of blister beetles feed on grasshopper egg pods, hay fields adjacent to rangeland may have a greater risk of blister beetle infestations.

Hay harvesting methods can impact chances of cantharidin poisoning. Crimping and conditioning hay crushes and retains beetles that get incorporated into the hay. If hay is cut with a sickle bar or rotary mower and not crimped, beetles can leave the area after hay is cut. If beetle numbers need to be controlled prior to harvest, read the product label, and determine the harvest restriction intervals. Insecticides approved for use on alfalfa can be found at <https://entomology.unl.edu/extension/crops/alfalfa>. Again, please note dead beetles, still contain cantharidin and could be incorporated into the harvested product.

In Nebraska, the first cutting of hay usually occurs before blister beetles are present making it reasonable safe for horses. Hay harvested before mid-May or after early September is less likely to have blister beetles present.

Figure 1. Three-Striped Blister Beetle (Top), Ash Gray Blister Beetle (Middle), and Black Blister Beetle (Bottom). Photographs by James Kalisch, University of Nebraska.

# IN THE FIELD

## Sulphur Cinquefoil

Sulphur cinquefoil has a taproot, which dies back after a freeze.

Regrowth from the roots may produce several erect stems 0.3 to 0.9 meters (1 to 3 feet) tall. Leaves are composed of five- to seven-toothed leaflets that radiate from a common point. Long stiff hairs extend outward from the stems at right angles. Flowers are pale yellow/sulfur-colored with five heart-shaped petals produced at the end of the stems in June and July. Each flower produces hundreds of seeds, which can be scattered by water, wind, animals, and hay.

Sulphur cinquefoil has no forage value for livestock and contains high amounts of tannins, which can interfere with the digestive process.

Wildlife have been observed to graze on the seed heads in the fall.



## 2020 Soybean Gall Midge Alert Network

In 2018, soybean gall midge (Figure 1ab) emerged as a new species causing significant injury (Figure 1c) and yield loss to soybean in Nebraska, Iowa, South Dakota and Minnesota. The rapid widespread emergence of this new pest has left growers, consultants and researchers with significant gaps in critical information that is necessary to mitigate and manage this new threat.



Figure 1. Damage caused by soybean gall midge.

Soybean Research Program (NCSRP), Nebraska Soybean Board (NSB) and North Central IPM Center to monitor soybean gall midge adult (Figure 2) emergence using cages (Figure 3) across 27 sites in four states providing growers and consultants with information to aid in the timing of insecticide applications.



Figure 2. Soybean gall midge adult.

Figure 3. Emergence cages.



Continued support from the NCSRP and NSB has allowed for the establishment of 18 sites in Nebraska (Figure 4). Sites for tracking adult emergence are also set up in Iowa and Minnesota. Covid-19 restrictions have limited South Dakota's participation in the project.

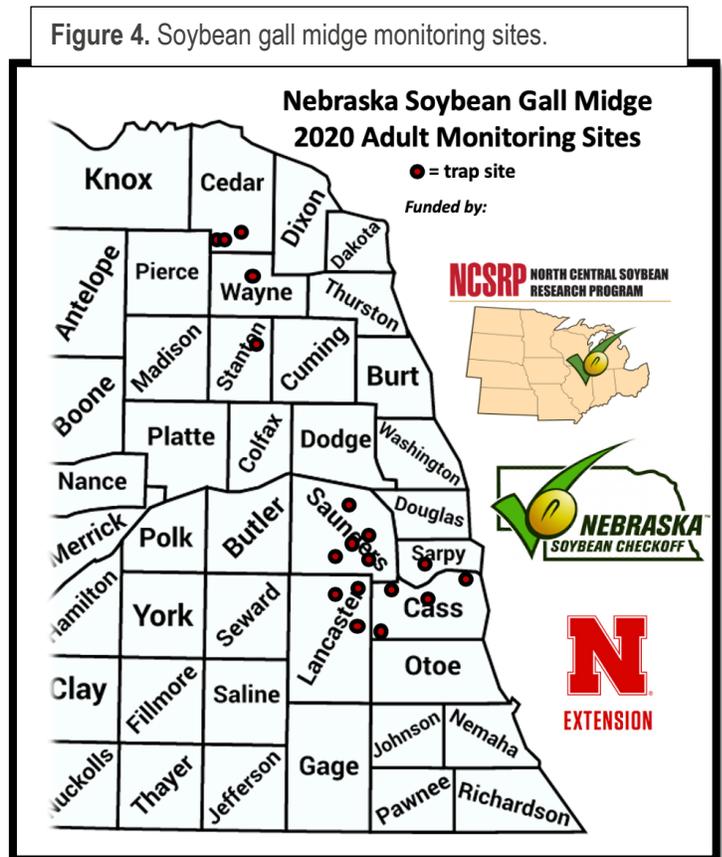
To sign up to receive alerts regarding adult emergence, send an email with your name, phone number and email address to [justin.mcmechan@unl.edu](mailto:justin.mcmechan@unl.edu) with the subject line "SGM Alert Network". Those that signed up in 2018/19 do not need to sign up again.

## Soybean Gall Midge Management Strategies

As a grower or consultant, many of you may be wondering what the best strategies are for managing soybean gall midge in 2020. Our 2019 data suggests that we had no single management strategy that could eliminate soybean gall midge injury. Here are some potential considerations for high risk fields during 2020 season.

1. Plant your high-risk fields last
2. Mowing grassy borders around infested fields prior to emergence showed a potential for reduced infestation in 2019 (this was one field and more research is needed)
3. Seed treatments may reduce infestation, but more data is needed
4. Foliar insecticides (pyrethroids) applied at 2 days prior to adult emergence and up to 10 days after first emergence showed a yield response. Caution should be taken as this study was conducted on a field with soybean the previous year.
5. Soybean gall midge egg laying appears to be limited to plants that are at about the V3 stage and later, as they may need natural fissures (cracks) that form at the base of the stem. Insecticide applications should be delayed until plants are susceptible to gall midge.

Figure 4. Soybean gall midge monitoring sites.

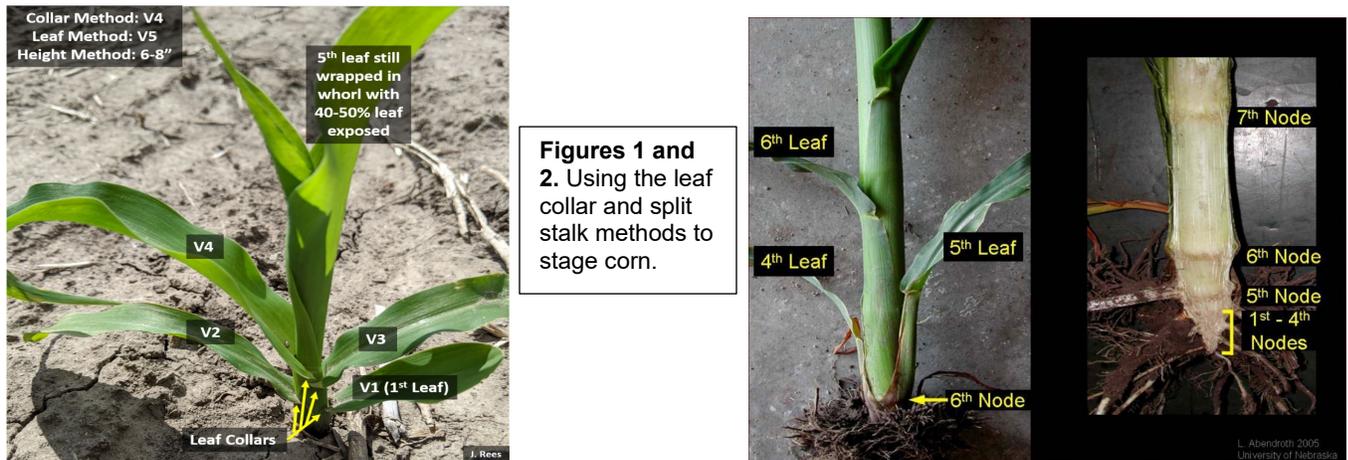


As growers consider these management practices, one primary consideration should be the duration of soybean gall midge adult emergence. Data from 2019 indicated an average of 16 days of adult emergence from a given site. This means that foliar insecticide application is unlikely to provide protection for the entire duration of adult emergence.

Although there is no specific indication of when soybean gall midge adults will emerge, we anticipate emergence will occur sometime in early to mid-June.

# Corn Ear Development Impacts from Post-emergence Pesticide Applications

Corn ear abnormalities have been noted the past few years. Tracing back the information on various field calls often pointed to a misunderstanding of proper growth stages when making post-emergence herbicide applications in addition to pre-tassel fungicide and insecticide applications. Please see Figures 1 and 2 and [Accurately Growth Staging Corn after Lower Leaf Loss and Implication for Post-emergence Herbicide Application](https://cropwatch.unl.edu/2020/accurately-growth-staging-corn-after-lower-leaf-loss-and-implication-post-emergence-herbicide) <https://cropwatch.unl.edu/2020/accurately-growth-staging-corn-after-lower-leaf-loss-and-implication-post-emergence-herbicide> for more information on proper growth staging of corn.



**Development Staging Misunderstandings:** Because some herbicide labels use the ‘plant height method’ of staging, it’s important to understand the role of environment on plant heights. The growth stage that is most restrictive should be followed when both corn leaf stage and height are listed on the label. Warm conditions can lead to rapid plant growth, longer internodes, and taller plants while cooler spring conditions, such as in 2019, lead to shorter plants due to shortened internode lengths. What may look like a V8 (8th leaf stage) plant one year or in one field may be a V10 plant in another field based on height. In 2019, many problematic situations authors were called out to appeared to be in the V8-V10 by plant height when they were actually V11-V13 (due to shortened internode length and splitting stalks). The farmers and/or agronomists were misled (due to shortened internode length. The actual development stage can be determined by splitting stalks).

Another misunderstanding we have encountered is incorrect corn development staging even when stalks are split. There are 4 nodes (from which the first 4 leaves develop) found in the inverted triangle at the stalk base. Those who don’t account for these 4 nodes can mistake a V12 plant for a V8 plant ( $12-4=8$ ). This makes a large difference in regards to post-emergence herbicide application timing and potential impact to ear development.

Uneven crop emergence in the field can also result in crop injury. Especially as one considers VT fungicide applications, injury has the potential to occur on plants that are behind and in the vegetative stages compared to the majority of plants in the field. Consider applications at full brown silk instead to account for plant-to-plant variation within the field.

**Abnormal Observations by Development Stage: V5-V8:** In general, number of rows around for a particular hybrid are determined between V5-V8. In most hybrids, the primary ear shoot initiates around V6 with row number often determined around V7. Iowa State’s “How a Corn Plant Develops” states, “The row number is strongly related to a hybrid’s genetics and impacted only by serious environmental factors such as drought, nutrient deficiencies, and improper herbicide applications.”

We’ve also seen impacts to kernel row number when products were applied in a tank-mix in this time-frame. When combining herbicides, fungicides, insecticides, and nutrient products, it’s important to consider the surfactant load of those products and also any potential antagonism with each other. Sometimes the combination can cause one of the individual products to be “hotter” (stronger) than normal. [Particularly applying post-emergence herbicide with fertilizer may result in crop injury](#). Couple that with various environmental conditions, such as cool/wet, can result in slow growth of the corn plant and a limited ability to metabolize the chemical. To minimize impacts to the crop, it’s best to keep product tank-mix to a minimum. When using a tank mixture, follow the recommendations for the most restrictive label language of the products being used in the tank-mix.

**V12+:** Beginning at V12 through around a week prior to pollination, number of ovules per row is determined. Stress during this time impacts kernel row length and can cause shortened or arrested ears, depending on stress and timing.

On modern-day hybrids, the primary ear typically develops on node 13 or a node above or below (12 or 14). Stress impacting these nodes can impact primary ear development causing abnormality or abortion. Incorrect timing or use of drop nozzles where the drops hit the “sink”-the kernels on the developing ear-can create absent or various types of arrested ears (Figure 3). If the primary ear is aborted, depending on the situation, sometimes a secondary ear is produced on a lower node which can be normal or arrested.



**Figure 3.** Assorted examples of ear abnormalities.  
Photo by Jenny Rees.

The use of non-ionic surfactants with various pesticides or pesticide combinations can also create abnormal, absent, or arrested ears. Situations with the presence of only a pointed “primordial tip” extending past the kernels suggests application timing during the V12-V14 timing of ear elongation (Figure 4). Research from Purdue University looked at the impacts of non-ionic surfactants applied with fungicide, insecticide, and/or herbicides and tank-mixtures of these products. They found arrested ear development to occur primarily from V10 to pre-tassel when a non-ionic surfactant was included with a pesticide product. They also found glyphosate + AMS during this time-frame to cause jumbling of the kernels on the ear (Figure 5).



**Figure 4.** Arrested ears with a 'primordial tip' due to pesticide application + NIS prior to tassel.  
Photo by Jenny Rees.



**Figure 5.** Jumbled kernels on ears from glyphosate + ams at V12-V13.  
Photo by Jenny Rees.

### Recommendations:

1. Document the development stage of plants via picture or video in each field immediately prior to spraying. Go inside the field past the end rows. We would recommend documenting stage based on nodes and leaf collars by splitting open stalks. Documenting the development stage can aid in assuring correct timing of applications and prevent applications that may result in problems.
2. Avoid applying herbicides, fungicides, and/or insecticides with a non-ionic surfactant from V10 to VT to avoid arrested ear development. Be aware that several pesticide products already have surfactants included in the formulation.
3. Uneven crop emergence in the field can also result in crop injury. Especially as one considers VT fungicide applications, injury has the potential to occur on plants that are still in the vegetative stages in the field. Consider applications at brown silk instead to account for plant-to-plant variation in the field.

## Spring Miller Moth Invasion

The moths of army cutworms are being found in several University of Nebraska-Lincoln traps (Table 1). These “miller moths” are the adult stage of cutworms that were commonly found this spring in Nebraska wheat and alfalfa fields. The moths are generally gray or light brown (Figure 1), with a wingspan of 1 1/2 to 2 inches. Each forewing is marked with spots, wavy lines, and other dark and light markings.

**Table 1. Army cutworm counts from UNL light traps. Light trap data can be [accessed online](https://entomology.unl.edu/fldcrops/lighttrap). <https://entomology.unl.edu/fldcrops/lighttrap>)**

Location	Total moths collected each week		
	April 29-May 5	May 6-12	May 13-20
Clay Center, NE	4	1	78
North Platte, NE	5	0	18

Spring emerging army cutworm moths migrate from east to west to eventually spend the summer months in mountainous areas of Colorado and Wyoming. The migrating moths feed in the evening on nectar from flowering plants such as lilacs, viburnums, and linden trees. They do not cause any damage to the plants as they feed. During the daylight hours the moths

seek shelter in cracks and crevices including those found in houses and other buildings. The moths begin to emerge from these locations at dusk to resume their feeding and westward migration.

The moths are very attracted to light and may be noticed circling porch lights where they can easily move into living spaces. Moths inside structures can cause human anxiety from their persistent movement around lighting. While they do not cause other harm, they can leave droppings resulting in small stains on surfaces. The stains are readily removed with a mixture of water and most types of common cleaning solutions.

**Management** - The best management method is to keep the moths from entering structures. Keeping porch lights off or the use of yellow colored light bulbs will reduce the number of moths that might enter through a door. The moth’s attraction to light can be used as a method to remove those that have entered a building. A simple trap can be constructed with a goose neck lamp placed over a small bucket that contains soapy water. The moths that fly around the trap will soon be caught in the water where they will drown. The dead moths can then be dumped outside. Application of insecticides are not recommended to control adult moths.

**Migratory Behavior** - The great hordes of millers in the spring are a result of their migratory nature. Their numbers depend on spring cutworm populations and environmental conditions. Moths emerging in Nebraska tend to remain in the area for two to three weeks, but may stay for up to six weeks or as long as local plants are flowering. Cool, wet conditions during this time will extend their stay. Hot, dry conditions will encourage them to move westward.

The moths will migrate westward to higher elevations as they follow the progression in the initiation of spring flowering plants. During this time, with the aid of easterly winds, moth concentrations can increase dramatically. When the last trees finish flowering (e.g. locusts and lindens) and temperatures increase in the high plains, the moths move to the Rocky Mountains. There they escape severe summer temperatures and find alpine flowers, their primary food source. Interestingly, the moths can serve as a high-energy food for grizzly bears foraging in high alpine areas.

In September, the moths once again return to the plains. Army cutworm moths are noticed throughout Nebraska from mid-September through October. As they migrate eastward in the fall, they mate and lay eggs in barren or sparsely vegetated fields, especially winter wheat, alfalfa and grasslands. The eggs hatch within a few weeks and the larvae begin to feed. The cutworms enter a diapause state during the winter and resume feeding in the spring.

Source: Cropwatch.unl.edu



**Figure 1.** Army cutworm “miller” moths.

# HEALTHY EATING

## June is Beef Steak Month

Enjoy the ZIP of beef (zinc, iron and protein)

### Grilled T-Bone Steaks with BBQ Rub

#### **INGREDIENTS:**

2 beef T-Bone or Porterhouse Steaks, cut 1 inch thick (about 2 pounds)

#### **BBQ Rub:**

2 tablespoons chile powder  
2 tablespoons packed brown sugar  
1 tablespoon ground cumin  
2 teaspoons minced garlic  
2 teaspoons apple cider vinegar  
1 teaspoon Worcestershire sauce  
1/4 teaspoon ground red pepper

#### **COOKING:**

Combine BBQ Rub ingredients; press evenly onto beef T-Bone Steaks. Place steaks on grid over medium, ash-covered coals. Grill, covered, 11 to 16 minutes (over medium heat on preheated gas grill, 15 to 19 minutes) for medium rare (145°F) to medium (160°F) doneness, turning occasionally. Remove bones and carve steaks into slices, if desired. Season with salt, as desired.

*Cook's Tip: To broil, place steaks on rack in broiler pan so surface of beef is 3 to 4 inches from heat. Broil 15 to 20 minutes for medium rare to medium doneness, turning once. Source: beefitswhatsfordinner.com*



Men's  
**HEALTH**  
month  
- june -

June is Men's Health Month, and every year Men's Health Week is celebrated in the week leading up to and including Father's Day. The purpose of Men's Health

Month is to increase awareness of preventable health problems and encourage early detection and treatment of disease among men and boys.

### **Tips for men on how to take better care of themselves:**

#### **Get Regular Check-ups.**

- ✓ Did you know men are half as likely to visit a doctor for a check-up as women, and over 7 million men have not seen a doctor in over 10 years?
- ✓ If you cannot remember the last time you had a complete physical, call your doctor and make an appointment. (You would not let 10 years go between oil changes, would you?)

#### **Be More Physically Active.**

- ✓ June is a great time to start a healthier lifestyle by being more physically active.
- ✓ Research shows exercise helps prevent heart disease and obesity, and lowers blood pressure.
- ✓ Aim for 30 to 60 minutes on most days. You can even spread it out over the course of your day.

#### **Improve the Nutritional Quality of your Diet.**

- ✓ Some tips on how to improve the nutritional quality of your diet include eating a varied diet rich in fruits, vegetables, whole grains and low-fat foods.
- ✓ Especially limit cholesterol intake and avoid saturated fats.

#### **Pay Attention to Warning Signs.**

- ✓ When a warning light flashes on the car dashboard, most men take the car to the shop. But when warning lights flash on their body, most men do not (or will not) notice.
- ✓ Examples of flashing lights to look for are changes in bowel or bladder habits, persistent backaches, recurrent chest pains, and extreme fatigue.

Men's health issues significantly impact everyone around them, and far too many men never see a doctor unless there is something seriously wrong or a partner or spouse makes the appointment for them. Women and men should educate themselves about potential male health problems. Check out [www.menshealthnetwork.org](http://www.menshealthnetwork.org) for resources and health facts.

## Making Cool 4th of July Memories



The middle of the summer brings the 4th of July and lots of family fun! It's the time we celebrate our great nation with fantastic fireworks, family picnics and backyard barbecues! Make some cool new memories with this easy recipe for old fashioned homemade ice cream.

### The Inside Scoop on the Science of Ice Cream

- Make sure the bags are tightly closed before the tossing begins or you'll have a mess! It takes a lot of shaking and tossing before the mixture turns to ice cream! Another surprise is how cold the ice cream gets! You may even want to dig up those winter gloves for this summer fun as your hands can get COLD!
- Be careful when removing the small bag of ice cream from the larger bag. Rinse it off to prevent your ice cream from getting "salty".
- Try a variety of fruits in your ice cream! Ripe bananas, strawberries, blueberries and diced peaches all work well. Canned, diced, drained fruit can work as well. Remember to wash any fresh fruit you add before mixing in with ice cream mixture.
- Bring up for discussion how we make ice cream! Think back to the cold days of winter on this hot summer day. Salt lowers the temperature at which water freezes, so with salt, the ice will melt even when the temperature is below the normal freezing point of water. The ice-salt combination gets colder than pure water ice and can freeze ingredients to turn them into ice cream. Who knew science could be so delicious!



### Ice Cream in a Bag

Yield: 1 serving - Source: [food.unl.edu](http://food.unl.edu)

#### Ingredients:

- 1 Tablespoon sugar
- ¼ teaspoon vanilla extract
- 1 – 2 Tablespoons soft fruit
- ½ cup low-fat milk
- 1/3 cup rock salt (outside bag)
- Ice cubes

#### Directions:

1. Wash hands with soap and water. Put sugar in quart size freezer bag that has zip closure. Add vanilla and soft fruit. Seal the bag tightly. Mix well by squeezing with fingers until everything is combined.
2. Open bag and add milk. Reseal bag again and mix until everything is combined.
3. Open a gallon size freezer bag with zip closure and put in 1/3 cup rock salt. DO NOT PUT SALT IN SMALL BAG! Fill the gallon size bag halfway full of ice cubes.
4. Put the quart bag into the gallon bag and seal shut. Shake the bag for 5 minutes or until the liquid has changed to ice cream. You can toss the bag gently with a partner, too, to share the fun and the cold.
5. Take quart bag out of gallon bag. Eat with spoon and ENJOY!

Nutrition Information: Calories 100, Total Fat 0g, Sodium 50mg, Total Carbohydrates 20g, Fiber 0g

# TODAY'S FUTURE

## To Be A Grandparent

By: Leslie Crandall Extension Educator | The Learning Child

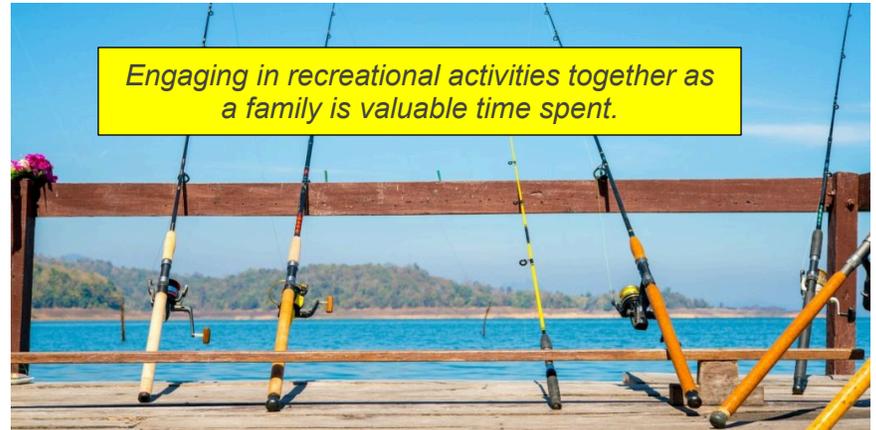
I am fairly new at this grandparenting thing. And it has completely taken me by surprise! I am delighted, thrilled, and absolutely love being a grandparent to my 6 grandchildren. I love watching them grow, learn, and develop! I also love observing that my adult children – the moms and dads – have grown and matured into the loving, capable, and understanding parents that they are.

In becoming a grandparent, it's important to understand that grandparenting isn't the same thing as parenting. It is true that, as grandparents, we get to interact with grandchildren on a level that doesn't require the daily routine and discipline that the parenting roles requires. This results in a close, loving, and playful bond with the 'grands' that can lead to continuity and stability in a child's life, opportunities to learn and play, and provide a feeling of connectedness. Grandparents are important in strengthening the family bonds that are so important to children, parents, and grandparents alike.

So, I have learned that, in order to be a 'good grandparent', I support the parent's role; be helpful when possible, totally enjoy being with my grandchildren, and revel in the pure love and joy that they bring to my life! It's a great time to be a grandparent! What do you enjoy most about being a grandparent?

## Go Fish!

### Planning a Safe Family Fishing Adventure



Fishing is a popular form of outdoor recreation this time of year. Fishing with your kids can offer benefits to both mental and physical health, while strengthening family connections and teaching life skills. It is important that water safety precautions are in place and children are supervised at all times to ensure everyone has a safe and good time.

**Why go fishing?** Research suggests that children benefit from the opportunity to play outdoors, where they can explore and enjoy natural environments. Access to green space is associated with improved mental well-being, overall health and cognitive development of children. It promotes attention restoration, memory, competence, supportive social groups, self-discipline, moderates stress, improves behaviors and symptoms of ADHD and was even associated with higher standardized test scores for children.

**Physical Activity:** According to the 2018 Physical Activity Guidelines for Americans Advisory Committee Scientific Report, "Opportunities to encourage the adoption of lifetime physical activities (e.g., leisure-time pursuits, noncompetitive sports) should be encouraged among all youth. This could help youth identify activities during childhood that they could enjoy and participate in across the lifespan, including outside of school."

Most think of fishing as a relaxing, leisurely activity, and while true that fishing is considered a light-intensity physical activity, research suggests that even bouts of less-intense movement are beneficial to health. Fishing can be made a more physically active pursuit by wading into the water or repeatedly casting a line, and many fishing spots require some walking, hiking or paddling to access.

**What do I need to go fishing?** According to the Nebraska Game and Parks Commission, the essentials for fishing are simple: "A stick and string or inexpensive rod and reel, a supply of small hooks and weights and a few bobbers are all that is needed. Even the bait can be simple by using cheap pantry items like corn, lunchmeat or bread. Keep it simple and as you gain experience, experiment with advanced techniques and equipment."

**Resources to help:** If you are new to fishing, know that it is usually not too difficult to find a friend or family member who would be happy to share their pastime with you. There are also great on-line resources available and here are a few websites to check out. If you are not a Nebraska resident, you may want to obtain additional information that is specific to your state.

- [Fishing Guide from Nebraska Game and Parks \(http://outdoornebraska.gov/aquaticeducation/\)](http://outdoornebraska.gov/aquaticeducation/)
- [Area Guides on Where to Fish, including Family-Friendly Lakes in Nebraska \(http://outdoornebraska.gov/wheretofish/\)](http://outdoornebraska.gov/wheretofish/)
- [Buying a Fishing License \(https://www.fws.gov/fishing/FishingLicense.html\)](https://www.fws.gov/fishing/FishingLicense.html)
- [Nebraska Fishing Rules and Regulations \(http://outdoornebraska.gov/fishing/\)](http://outdoornebraska.gov/fishing/)
- [Fishing in Nebraska Schools \(FiNS\) \(http://outdoornebraska.gov/fins/\)](http://outdoornebraska.gov/fins/)
- [Water Safety for Children \(https://kidshealth.org/en/parents/water-safety.html\)](https://kidshealth.org/en/parents/water-safety.html)

## [The Great Outdoors Holds Great Opportunity for Your Child](#)

LaDonna Werth, Extension Educator | The Learning Child

As a child, I remember running around barefoot with my siblings, exploring woods, climbing trees, and building forts. Oh, the memories. I had scrapes, bruises, and even stitches at times, but they were worth it. In addition to the great memories made, did you know there are endless benefits of simply letting your child run outside and play? The next time you're deciding whether to let your child play inside or outside, you might want to consider all the opportunities that come with the great outdoors.

**Increased Physical Activity** - Although it seems as if your child has endless energy, letting them play outside can help release some bottled up energy. Everything from walking, running, and jumping around, to climbing trees and carrying building supplies for forts, contributes to the development of strength, balance, and coordination. According to the [Stateofobesity.org](http://Stateofobesity.org), Nebraska ranks 5th with a 2-4-year-old obesity rate of 16.9%. Yikes! Just think how our rates might decrease if children spent more time outside.

**Development of Gross Motor Skills and Fine Motor Skills** - Developing these skills directly affects the creation of strong, healthy, capable children. Gross motor skills help your child run, walk, and climb. Fine motor skills are used when they pick up sticks or make a nature bracelet with all of their outdoor treasures. Development of these skills requires lots of practice, and outdoor adventures offer just that.

**Social Interaction** - No matter if your child is playing with siblings, friends, or you, they are gaining social interaction. Being outside with limited toys can push children to expand their imaginations. When combining different imaginations, new ideas and brainstorming skills are created. Teamwork is also strengthened. Whether they are 'playing house' or building something, your child will be working together with others, and learning teamwork young could benefit your child in their future endeavors.



Photo source: The Learning Child

**Use of Imagination** - I just mentioned that when your child is outside, it can force them to use their imaginations. Children need to experience boredom at times in order to create new levels of play. Once they do, they can see objects in new ways, such as using mud to make cake or pretending a stick is a mixing spoon. Also, when your child has free time, they have time to daydream, and that can lead to some of their most creative ideas.

It is the beginning of summer and that means it's the perfect time for your child to go enjoy all of the benefits that the great outdoors offers!

## Serving Up Salsa

For many families, one of the joys of summer is tending a garden. If you have a garden, consider planting basic salsa ingredients: tomatoes, peppers, onions, and cilantro. Even if you do not have the space for a garden, a container garden is a great option. You can start plants in pots inside and move them outside when the weather permits.



Salsa is simple to prepare and can include many different fruits and vegetables depending on what you have on hand or what you are craving. Gardening can teach children about where food comes from. Have them help prepare the foods from the garden and it will increase the chances that they will try different fruits and vegetables. Making salsa is also something that children of all ages can help with. Age appropriate kitchen tasks related to making salsa include:

### At 2 years:

- Pick produce out of the garden
- Rinse fruits and vegetables

### At 3 years (items mentioned above, plus):

- Add ingredients
- Name and count foods

### At 4 years (items mentioned above, plus):

- Help measure ingredients

### At 5 years (items mentioned above, plus):

- Cut soft fruits and vegetables with a dull knife

### At 6-8 years (items mentioned above, plus):

- Wash dishes
- Put away ingredients

### At 9-12 years (items mentioned above, plus):

- Follow a recipe
- Use small appliances like blenders and mini-choppers

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## Fresh Salsa

Yield: 14 servings

### Ingredients:

- 4 cups chopped fresh tomatoes, washed
- ¼ cup finely chopped onion, washed
- 1 jalapeno, seeded and chopped (optional), washed
- 1 Tablespoon vinegar or lime juice
- 1 teaspoon cumin
- 1 teaspoon minced garlic
- 1 teaspoon salt, optional

### Directions:

1. Wash your hands with soap and water.
2. In a medium bowl, combine all ingredients and mix well. For better flavor, let the ingredients stand in the refrigerator for at least one hour.
3. Refrigerate until ready to eat.
4. Serve with veggies, tortilla chips, quesadillas, or on a salad or baked potato.



Nutrition Information: Calories 13, Total Fat 0g, Saturated Fat 0g, Cholesterol 0mg, Sodium 3.3mg, Total Carbohydrates 3g, Fiber 0.7g

# WORLD OF WORK

Whether you live in a city or the country, whether you're an adult or youth, you can be an entrepreneur.

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<https://extension.unl.edu/entrepreneurship/>

## 5 Reasons to Support Your Farmers Market



With a couple months of social distancing under our belts, this farmers market season couldn't come at a better time. Whether you're looking for a change of scenery on your weekly shopping trip or you're wanting to support small businesses, local markets have you covered.

Due to the essential nature of their products and the ability to maintain proper social distancing, markets can continue to serve their communities under the governor's directed health measures. With the guidance of local health authorities, markets are taking steps to keep you safe. As you shop, you may notice tents spread further apart, vendors wearing protective gear, ground markers encouraging six feet of distance and no product samples on the tables.

As patrons, you're encouraged to shop with your eyes during this 2020 market season. You're also encouraged to wear a cloth mask, shop by yourself, keep your distance from others and leave your reusable bags at home. Done responsibly, shopping at your local market comes with some pretty great benefits—both now, and when life gets back to normal.

1. **Supporting your local farmers strengthens your community and local economy.** On average, only 10 cents of each food dollar returns to the farmer. The other 90 cents goes to corporations for packaging, marketing and transportation. Farmers who sell direct to consumers receive 80 cents of each food dollar—a needed economic boost during this time in our lives.
2. **Freshly picked, in season produce is at peak flavor and nutrition.** Not only is buying locally an economic win for your community, but you benefit by getting to know your neighbors and eating fresher, healthier food. Win, win!
3. **Farmers markets offer foods that align with a healthy eating pattern.** Guidelines for a healthy eating pattern recommend getting a variety of food from all five food groups. These food groups include fruits, vegetables, grains, protein and dairy (or dairy alternatives). Visit different booths for seasonal fruits and vegetables, as well as local grain, protein and dairy products so you can build a healthy plate. Don't forget, though, that a healthy relationship with food means enjoying treats. Whether they be sweet, salty or savory, these foods are especially delicious when you don't have to prepare them yourself.
4. **Farmers often have recommendations for preparing their products.** If you're grabbing something fresh that requires preparation on your part, don't be afraid to chat with the vendor. Ask questions and share ideas for best cooking methods and favorite recipes. These little inquiries can be extra helpful when buying a product with which you're less familiar.
5. **You can try a new fruit or vegetable!** Speaking of the more novel products one can find at a local market, be sure to approach each booth with a sense of adventure. They don't say variety is the spice of life for no reason.

# SPLASH INTO EXTENSION

I have recently had to boil my water, bacteria in my water system. Do I need to replace my water filter in my fridge?

Yes. Bacteria is not something you ever want to take a chance with so it is always a best practice to discard the water filter in a fridge and replace it with a new filter. Bacteria can cause serious illness if ingested and while the individual bacteria have a certain lifespan it is better to be safe than sick and sorry.

## Managing Lawn Diseases

Nicole Stoner - Extension Educator

Spring is a great time of year. We typically see much more enjoyable weather and we can get outdoors more. Spring is also when we usually see more rain, as they say 'April showers bring May flowers'. Those April showers can also lead to fungal diseases in our landscapes. This year, we haven't seen much rain, but we will still see fungal diseases in our lawns.

**Disease cycle** - Diseases are formed through the 'disease triangle'. This is how we get diseases to occur in our lawns and landscape plants. The disease needs a susceptible host, a disease pathogen, and a favorable environment to develop. Typically the host and pathogen are there and the disease shows up or begins to develop when we get wet weather.

**Dollar spot** is a disease that occurs in the spring or fall but can linger through the summer months as well. It is favored by warm, moist weather with heavy dew periods. If turf is lacking sufficient nitrogen levels, it can intensify the problem. The outlook from the Turf department is that dollar spot could become a problem in our lawns over the next couple of weeks due to an increase in high and low temperatures each day and increased chances of precipitation. Dollar spot can be managed with adequate fertilization and watering. Fungicides can be used if dollar spot is a repeat problem in your lawn or is spreading rapidly.

**Summer patch** is a disease we see in the summer months, but it is actually caused by infection to the turf roots in the spring. The pathogen infects the roots when the soil temperatures reach 65 degrees and warmer. This may be active all summer but shows up in our lawns during the hot, dry parts of the summer. Summer patch shows up as tan colored turf with no lesions, but when pulled up the roots are brown to black, slimy and wilted, which greatly limits its capacity to absorb water. It is the condition in the baseball field that is shown in the photo. It can be managed by a good fertilization plan and maintaining adequate watering throughout the season.

**Brown patch** is another disease we see in the summer months. It is favored by hot, wet weather in lawns with excess fertilization and excess irrigation, especially when hot, wet conditions occur overnight. Due to this, it can be managed by avoiding high nitrogen fertilization in the summer months. Choose a low nitrogen fertilizer or opt out of a summer fertilization to help manage this disease. Brown patch leaves tan lesions on the turf blades with a gray edge to the irregularly, circle-shaped spots.

**Fairy Ring** is caused by fungi that can sometimes show up as actual mushrooms in the lawn. Typically, the grass grows a very healthy looking circle randomly in the lawn. Sometimes, there is also a circle of dead grass, sometimes there is also a circle of mushrooms. Fairy rings are common in many different lawns, but shows up often in wet spring conditions. Make sure the turf is receiving uniform irrigation and fertilizer applications. There are fungicides for fairy ring, but they aren't very effective.



These turf diseases can be managed through the use of fungicides, but it isn't always necessary in a home lawn. Often in our home lawns, we may see the disease sporadically in our lawns and over different years. The foliar affected diseases such as dollar spot, brown patch and ascochyta blight diseases will usually go away on their own and the turf will recover because these are not harming the crown of the plant. Most of the time a management practice can be altered to reduce disease issues, such as watering more uniformly or fertilizing differently.

# IN THE DIRT

*Crabgrass Control  
Time for second  
preemergence application*

Preemergence herbicides (PREs) applied in April, especially early April or earlier, will be nearing the end of the products control window and a second application may be needed. With cooler soil temperatures this spring, some crabgrass seed germination was delayed and a late April into early May PRE application would have been close to ideal. Crabgrass will continue to germinate through June and into July. Look at when the first application of PRE was made and consider a second application if needed. General management of crabgrass includes correct lawn care practices to encourage a dense turf that shades out crabgrass seeds/seedlings. Use a mowing height of 3.5 inches.

## Timely Tips for New Vegetable Gardeners

By: Kelly Feehan, Extension Educator

The number of vegetable gardens planted this year increased. This was due to people looking for new ways to spend their time and because home food production is on the rise. Here are some timely tips for new gardeners or reminders for experienced gardeners.

One key to growing quality vegetables is uniform growth. To help achieve this, keep soil uniformly moist. Do not allow vegetable gardens to dry completely between irrigation or rainfall. This leads to start and stop growth resulting in odd-shaped and bitter tasting vegetables.

Most crops need about one inch of water per week between rainfall and irrigation. If using sprinklers or overhead irrigation, water early in the morning. This is the most efficient time to irrigate as temperatures are cooler and wind velocity is lower.

Morning irrigation also allows sunlight to dry leaves quicker to reduce disease. Vegetables are susceptible to a number of leaf diseases. Most are fungal and require moisture on leaves for a set time before infection occurs. Watering early and locating gardens where there is good air circulation limits disease.

Mulching soil also reduces disease and conserves moisture. Many diseases are soil borne and splashed onto lower leaves during rain or sprinkler irrigation. This is why foliar diseases often move from the

bottom of a plant upward. Mulch covers soil to prevent soil splash along with conserving moisture and reducing weeds.

Now that soils have warmed, it's time to apply mulch such as grass clippings, hay or wood chips. Know that hay or straw often contains weed or grain seed which become weeds in the garden. Wood chips work well but are slower to decompose. Grass clippings are abundant and often used as mulch but must be used correctly.

If herbicides have been applied to the lawn, read the label for directions. As a rule, avoid using clippings from lawns treated with herbicide on vegetable gardens. However, a label might state a recommended time to wait before using clippings as mulch.

Some herbicide labels will state clippings from a treated lawn should not be used as mulch at all. One example are products containing the active ingredient quinclorac. If nothing is stated on the label about grass clipping use, and you still want to use the clippings, a general rule is to wait four mowings.

When grass clippings are used as mulch, allow them to dry first. Fresh or wet grass clippings can mold and become matted so water and oxygen can't pass through. Apply grass clippings as a thin layer of about two inches to allow oxygen exchange. Soil oxygen is as important to uniform plant growth as soil moisture.

An often overlooked task by new gardeners is thinning of seedling plants. Check the plant tag or seed package. It will tell how far apart to thin seedlings after they are growing. If not thinned, plants will become overcrowded and will not grow or produce as well.

And of course weed control is needed or weeds will compete with vegetables for moisture and nutrients to reduce yield and quality. Mulching, hand pulling and hoeing once a week or more often is the best means of weed control in vegetable gardens. Don't hoe too deep so vegetable roots are injured.

As for fertilizer, a rule of thumb is to side dress plants about one month after planting. This means spreading fertilizer alongside a row or around hills and lightly scratching it into soil. Don't worry too much about the brand of fertilizer you buy; just read and follow the label rate. If too much nitrogen is applied, it will burn plant roots and slow growth.

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## Young Strawberry Care

By: Kelly Feehan, Extension Educator

With home gardening for food production on the rise, strawberries are one of the easiest fruits to grow. If you planted June-bearing strawberry plants this spring, be sure to pinch off all blossoms that develop this year.

Blooming and fruit production uses a lot of a plants energy in the form of carbohydrates and sugars produced during photosynthesis. New plants have a limited amount of stored energy and undeveloped roots.

If blossoms are not removed, energy that needs to go to root and runner development the first year is used to develop fruit instead. Young plants allowed to produce fruit will eventually produce runners, but these runners will not be strong enough to produce a good crop of berries next year.



For the plant population needed for a good crop next year, early runner development is needed. Early runners formed this year will produce far more strawberries than runners that form later this season.

Along with weed control and correct watering, be sure to pinch blossoms off of newly planted June-bearing strawberries.

I refer to June-bearing strawberries because this is one of three types of strawberries. The other two are everbearing and day neutral. While early blossoms should be picked off of these too, they could be allowed to produce berries later in the season.

Of the three types of strawberries, June-bearers are the best to grow in Nebraska as they produce the largest fruit and greatest overall yield. June-bearing strawberries produce a single crop during late May and June. Plants come into full production the year after planting and usually out yield everbearing types.

For Nebraska, some early fruiting June-bearing cultivars include Earliglow and Early Red; mid-season cultivars are Chandler, Honeoye, Jewel, Surecrop, Dunlap, Red

Chief, and Guardian; and later June-bearing cultivars include Robinson, Sparkle, and Bounty.

Ever-bearing strawberries do not bear fruit all summer as the name suggests. They produce two small crops. One in June and a second in late summer. High temperatures and moisture stress often reduce yield and quality of the second crop of everbearing cultivars such as Ogallala and Ft. Laramie.

Day neutral strawberries have the potential to produce fruit throughout the growing season; however, they stop flower bud initiation when temperatures are above 85 degrees Fahrenheit. As this occurs often in Nebraska, day neutral cultivars like Tristar and Tribute are not the best choice for our area.

You will have good success with strawberries if the location they are planted in is in full sun and the soil is well drained. If you are still preparing to plant, incorporate some compost into the soil prior to planting to increase organic matter and improve drainage.

Because strawberries are perennial broadleaf plants, there are few herbicides that will selectively control weeds without harming strawberries. For weed control, use a two inch layer of mulch and hand weed or carefully hoe as needed.

Strawberries need a uniformly moist soil but will not tolerate wet roots. This is why a well-drained soil is important. When watering, avoid keep the soil wet or saturated but don't allow the soil to dry out too much between irrigation.



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Nutrition Information: Serving Size (1/8 of recipe): Calories 90, Total Fat 0.5g, Saturated Fat 0g, Cholesterol 5mg; Sodium 30mg; Total Carbohydrates 19g; Fiber 0g; Total Sugars 19g; Protein 3g; Vitamin A 6%; Vitamin C 100%; Calcium 8%; Iron 0%

1. Wash hands with soap and water.
2. Place all ingredients in a blender and process on high until smooth. Serve right away.

Directions:

- 1 (12 ounce) can frozen orange juice
- 2 cups low-fat milk
- 8 ice cubes
- 1 cup water
- 1 teaspoon vanilla

Ingredients:

Adults should aim for 3 servings from the dairy group each day. Try to choose low-fat or fat-free dairy foods, such as 1% or skim milk and low-fat or fat free cheese and yogurt.

Yield: 8 servings

## Orange Slushie

