

# EXTENSION IS ON THE MOVE

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April, 2016

Volume 6, Number 2

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## 2016 PLANT FAIR & MARKET

Friday, April 29 6—8 PM AND Saturday, April 30 9 AM—3 PM

Northeast Community College, Chuck Pohlman Ag Complex  
 2301 E. Benjamin Ave, Norfolk NE

- ⇒ Free Admission
  - ⇒ Great Vendors
  - ⇒ Perennials and Annuals
  - ⇒ Door Prizes
  - ⇒ Delivery Assistance
  - ⇒ Plant Sitter Area
  - ⇒ Ask the Master Gardener
  - ⇒ Lunch Stand
  - ⇒ Youth Horticulture ID Contest
- Pre-register by April 22  
 Call 402-370-4040



### Educational Speakers and Contest

#### Friday

- 6:15 pm Youth Horticulture ID Contest
- 6:30 pm "Nebraska Natives for the Home Garden"  
 Amy Seger—J&H Greenhouse—Horticulturist  
 Herbalist and Educator
- 7:15 pm Awards for Hort Judging Contest & Master Gardener Awards

#### Saturday

- 9:30 am "Backyard Medicine Chest"  
 Rachel Liester—Red Road Herbs  
 Herbalist, Educator, Photographer, & Writer
- 11:00 am "Without Castings It's Just Dirt!"  
 Brent Broberg—Broberg Organics, LLC  
 Wiggle Worm Soil Builder

### CHILDREN'S CORNER—MAKE AND TAKE

11:30 AM AND 1:00 PM

#### Flower Friend Sponsors:

- Bonnie's Country Apron
- Diane's Greenhouse
- J & H Greenhouse
- Papio Valley Nursery
- Red Road Herbs
- Robin Jones, Realtor
- Sue Martin, Realtor



#### Talk-abouts Saturday by Master Gardeners

- 10:30 am Carolyn Lingenfelter—Beginning Thoughts for a Home Landscape
- 12:30 pm Kurt Schrant & Jim Laycock—Drip Irrigation
- 1:30 pm Corrine Weihe—Sedums

Sponsored by:



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# ON THE RANCH

## Nebraska Grazing Conference

August 9-10, 2016  
Kearney, NE

Many presenters from multiple states will be on the program for this 16<sup>th</sup> annual event.

<http://grassland.unl.edu/nebraskagrazingconference>

## Selecting Replacement Heifers

By Bruce Treffer, Nebraska Extension Educator

Replacement heifer selection can affect the profitability of your herd for years to come. Photo courtesy of Troy Walz.



When going into the heifer pen to decide which of the calves stay in the operation and which are sold, producers are making choices that affect the profitability of their herd for years to come. A crystal ball would sure come in handy as we never really know the outcome of alternate choices.

One strategy is to sensibly develop and breed the entire group of heifers and then select those that breed early, or wait to cull until after they wean their first calf. While this would give us a better projection, it isn't practical for most to add that many females to their operation for that long.

Here are some selection tips from retired UNL Professor Jim Gosey, UNL West Central Beef Reproductive Physiologist, Rick Funston, and UNL Beef Genetics Specialist, Matt Spangler.

1 – Cull daughters of problem cows. This includes cows that needed help calving, were late calving or that had bad dispositions.

2 – Cull lightweights, big birth weights and 6-frame heifers. Big doesn't always mean bad. If she's big because she is older, you want to keep her.

3 – Along with that, select heifers that were born during the first 45 or better yet, the first 21 days of the calving season. "Cull the youngest heifers."

4 – Select daughters out of the oldest cows. This goes back to information that is being learned about fetal programming and the fertility in those cow lines. Cows that offer longevity will most likely produce heifers that also offer optimum pregnancy rates.

5 – Identify and cull the nervous or "upheaded" heifers. You don't need to knowingly add disposition problems to your herd.

6 – Try not to keep any feet and leg problems. Too much set to their hocks isn't good but really straight-hocked or posty-legged heifers are a bigger problem.

7 – The value of genetic testing mainly lies with determining the heifers' sires, if they are not already known. Keep daughters from bulls that have favorable EPD's for things like stayability, lower input costs, sensible mature size, higher heifer pregnancy, moderate milk, calving ease, docility, etc.

8 – If you are in a commercial setting with baldies, select heifers that have pigmented eyes and udders.

It's not likely every heifer kept will be a great cow but at least the deck can be stacked in your favor.

## Make Pasture Fertilizing Pay

Spring is approaching and cool-season grass pastures are starting to green-up. We should begin thinking about fertilizing.

Grass growth is stimulated by nitrogen fertilizer just like other crops. Although nitrogen fertilizer can be expensive, favorable cattle prices greatly increase the potential to profit from the increased grass growth produced from nitrogen.

Our Nebraska research shows that you get about one pound of additional calf or yearling gain for every pound of nitrogen fertilizer applied. With grazing land becoming scarcer and expensive, boosting yield with fertilizer should be especially valuable this year.

However, this fertilization rule-of-thumb assumes that the amount applied is within our general recommendations, which are based on the potential amount of extra grass growth expected. This is affected mostly by moisture. More importantly, it also assumes that your grazing management will efficiently harvest this extra growth.

If your animals graze continuously on one pasture throughout the season, much of the extra growth is wasted. They trample, manure and foul, bed down on, and simply refuse to eat much of the stemmy grass. Less than one-third of the extra grass ends up inside your livestock.

To make fertilizer pay, cross-fence pastures to control when and where your animals graze. Give animals access to no more than one-fourth of your pasture at a time, letting the rest regrow. Graze off about one-half of this growth before moving to another subdivision. Maybe even save one subdivision for hay. If your pastures aren't subdivided, fertilizer dollars might be better spent on cross-fences and watering sites.

Follow these suggestions and more of your pasture growth will be eaten, and more profits will come from fertilizer and pastures.

Written by: Bruce Anderson, UNL Forage Specialist

## Early Graze To Control Weeds In Native Pastures

Have you noticed any green-up in your pastures? This usually is a good sign, except when the green is weeds in warm-season grasses.

Early weeds should be controlled in warm-season grass pastures. Weeds remove moisture that could be used for grass growth later on and they remove valuable nutrients from the soil. Early weeds also can develop so much growth that they can shade, smother, and reduce early growth of your summer pasture grasses.

Herbicides like glyphosate as well as prescribed burning can control many early weeds, but I think another method actually is better — grazing. Heavy, pre-season grazing costs you nothing. In fact, you get some feed from these weeds while herbicides or burning would only kill and remove growth. Plus, this early pasture might be especially valuable if it gets your cattle out of mud or saves you from feeding expensive hay this spring.



Pre-season grazing will not harm your summer grass — provided you stop grazing before new grass shoots get more than a couple inches tall. This usually doesn't occur until late April or early May in southern Nebraska and slightly later as we move farther north. Early, pre-season grazing of warm-season grass also removes some old growth from last year, which starts the recycling of nutrients trapped in dead plant tissue. In fact, about the only bad news about early, pre-season grazing is you have to get fences and water ready earlier, you need to move animals to the pasture, and you won't completely kill out these weeds in one year.

Funny thing, though. These so-called weeds might actually make pretty timely and valuable pasture. Give pre-season grazing a try, I think you'll like it.

Written by: Bruce Anderson, UNL Forage Specialist

# IN THE FIELD

## Clinics for Ag Finance, Ag Law

Openings are available for one-on-one, confidential Farm Finance Clinics being conducted across the state each month. An experienced ag law attorney and ag financial counselor will be available to address farm and ranch issues related to financial planning, estate and transition planning, farm loan programs, debtor/creditor law, water rights, and other relevant matters. They offer an opportunity to seek an experienced outside opinion on issues affecting your farm or ranch.

To sign up for a clinic or to get more information, call Michelle at the Nebraska Farm Hotline at 1-800-464-0258.

### **Clinic Sites and Dates**

April 7, Grand Island  
April 7, Norfolk  
April 14, North Platte  
April 21, Lexington  
April 22, Fairbury  
April 28, Valentine  
April 29, Norfolk

## Pros & Cons of Using Companion Crops When Planting Alfalfa

Bruce Anderson, Extension Forage Specialist

Alfalfa often may be seeded with a companion crop like oats to control weeds and erosion and provide a crop of grain or hay. Clear seeding alfalfa alone, without a companion crop, also works well. A preplant herbicide like trifluralin, Balan or Eptam often is sprayed and incorporated first to control weeds in a clear seeding, but a herbicide isn't always necessary. So, which practice should you use?

Your needs and objectives determine whether a companion crop or a clear seeding is better for you. I tend to prefer clear seeding where erosion is unlikely because alfalfa production begins sooner, with 2 to 4 tons possible the seeding year. Companion crops reduce alfalfa yield the first year and often they cause thinner stands. Also, yields and stands in following years almost always are better with a successful clear seeding than when using a companion crop.

In describing oats planted with alfalfa I use the term "companion crop" rather than "nurse crop" because oats don't act like a nurse crop with seedling alfalfa. They act like weeds, robbing alfalfa seedlings of moisture, sunlight, and nutrients during the seeding year. However, on erosive ground a companion crop can be necessary or alfalfa may not start at all.

If you want alfalfa, plant only alfalfa. If erosion is a problem, include about half a bushel of oats with your

alfalfa. Then kill oats early using Poast Plus or Select herbicide, or Roundup if your alfalfa is Roundup Ready. The next best option is to hay the oats early rather than taking grain. Likewise, if you want oats, plant only oats. Then seed alfalfa into oat stubble next August if soil moisture is good. Your alfalfa will be better because of it.



## Control Early Stages of Marestalk and Kochia

Glyphosate-resistant weeds pose a major threat to no-till production in Nebraska. Glyphosate-resistant marestalk is widespread throughout the state and glyphosate-resistant kochia has become a major problem in western Nebraska. Both species have an early-emergence pattern; thus, early season control becomes imperative for successful management. In Nebraska, marestalk (*Figure 1*) emerges primarily in the fall, overwinters as a small rosette, and resumes development in the spring. Kochia (*Figure 2*) emerges in late winter and early spring.

This has been a mild winter and weeds will continue to take advantage of above normal temperatures. Marestalk rosettes and kochia seedlings were detected this week in fields at the West Central Research and Extension Center in North Platte. Be sure to scout your fields and if these weeds are present and weather conditions remain favorable (temperatures above 50°F), apply herbicides now to maximize control.

Consider using a burndown product along with residual herbicides to control established marestalk rosettes and kochia seedlings and to suppress those that are yet to emerge. Keep in mind that weeds are most susceptible to herbicides at early stages and that multiple effective modes-of-action must be considered at each application to reduce the selection pressure for resistant weeds. For herbicide options to control marestalk and kochia see specific crop sections in the UNL Guide for Weed, Disease, and Insect Management in Nebraska.

A clean start is important for a successful growing season. The popular slogan “Start Clean – Stay Clean” is particularly imperative for the management of these two species.

Source: Rodrigo Werle, Cropping Systems Specialist; Greg Kruger, Weed Science and Application Technology Specialist; Both at the West Central Research and Extension Center



Figure 1. Marestalk seedlings (above)  
Figure 2. Kochia seedling (below) (Phots by Rodrigo Werle)



## Managing and Preparing for Nitrogen Loss

Spring is officially here, and with it the uncertainty of spring rains or late snow showers. For many Nebraska farmers, finishing preparation for planting or waiting on the starting line to plant is the number one priority. Nitrogen (N) management may not be the most important thought crossing their minds. But, now is a great time to think about N management for this upcoming season. The uncertainty of spring weather is a constant reminder that there are things we can and cannot control. We certainly cannot control the weather, or how much rain we get, but we can control how much N we apply and when. The best way to think about N management is managing risk.

Nitrogen is a mobile nutrient in the soil that can be lost through:

- leaching below the root zone with excess moisture,
- denitrification to the air in waterlogged soils (ponded water situations), and
- volatilization of urea-containing fertilizers that are not incorporated by moisture within several days of application.

Corn needs N to grow and yield well, so ensuring N stays in the root zone and available to the growing crop is essential. So, what is the best way to manage the risk of losing N? Ideally, small amounts of N would be applied many times throughout the season. This essentially mimics fertigation; however, if fertigation is not available, there are many other options.

The best option will, of course, depend on your operation, but minimizing exposure risk of your applied N is essential to reducing the amount of N needed to reach an economic optimum rate. In other words, sidedress most of your N in season if at all possible when the crop is actively taking up N (V8-VT growth stages) (*Figure 1*).

Nitrogen will still need to be applied early in the season. In that case, consider using inhibitors. Our colleagues at North Dakota State University have an excellent resource that goes through the various inhibitors and their efficacy: [Nitrogen Extenders and Additives](#) (SF 1581) by soil scientist D.W. Franzen.

But, how do we choose a rate of N to apply? [Fertilizer Suggestions for Corn](#) (Nebraska Extension EC117) is an excellent resource that walks a user through calculating an N rate for the upcoming season using the UNL algorithm. We also have an Excel® calculator, the **UNL Corn Nitrogen Calculator for Nebraska**, which helps step through this same algorithm. It and other soil management resources are available in the Soil Management section of CropWatch.

But, with all methods, there are fail points. The UNL algorithm is an effective guide to determining N rate, but it is only a starting point. Conditions change during the season and if they become conducive to N loss, appropriate management will be needed to react and adjust.

Source: Cropwatch (<http://cropwatch.unl.edu/2016/managing-and-preparing-nitrogen-loss>) - Brian Krienke, Soils Extension Educator

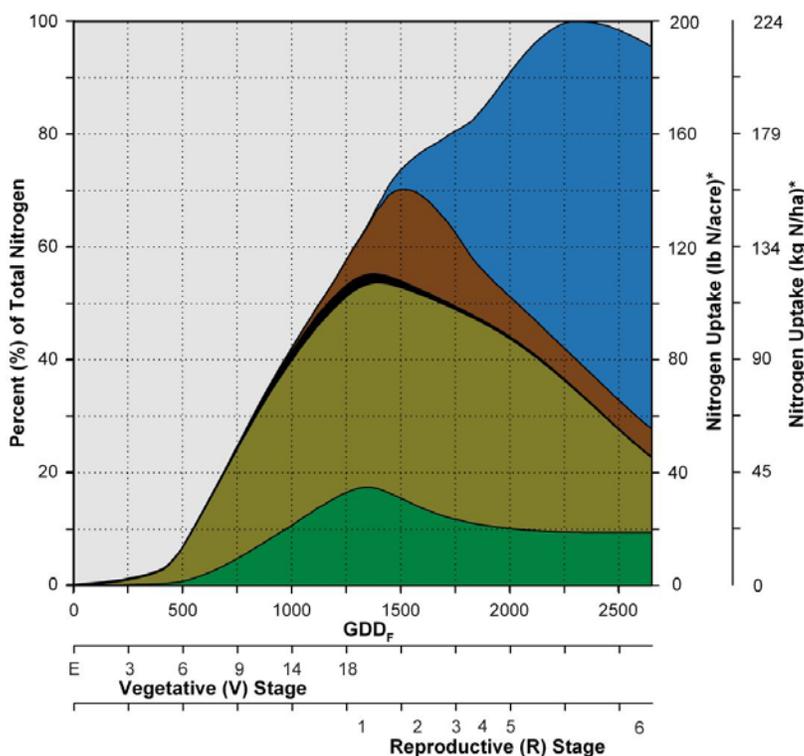


Figure 1. Cumulative nitrogen (N) accumulation on a percentage and pound-per-acre basis from VE to R6. Grain yield average 225 bu/ac. (Source: Corn Growth and Development, PMR 1009,

# HEALTHY EATING

Empanada Day (April 8)



An empanada is a stuffed bread or pastry that is fried or baked and served in many Latin American countries. The filling can consist of a variety of meats, vegetables and even fruits.

## Coffee Drinkers Have Clearer Arteries

Scientists may now better understand at least one way in which coffee could help to protect against cardiovascular disease. A large new Korean study reports that people drinking three to five cups of coffee daily were 41% less likely to show signs of coronary artery calcium than non-coffee drinkers. This calcification is an early indicator of the artery-clogging plaques (atherosclerosis) that cause coronary artery disease, which afflicts nearly 16 million Americans.

"I found this report to be quite interesting because coronary artery calcium is a subclinical marker of atherosclerosis, evident even in asymptomatic young adults," comments Jeffrey Blumberg, PhD, director of Tufts' HNRCA Antioxidants Research Laboratory, who has studied the health effects of the phytochemical compounds in coffee. "This study is also useful because there has been little previous information on coronary artery calcium and coffee, and the study has strength because of its large sample size.

"On the other hand," Blumberg cautions, "this is a cross-sectional study and so has marked limitations with regard to inferring causality. It is also worth noting that this study was conducted in Korea, which has a different dietary pattern than Western countries."

The findings should in any case perk up coffee drinkers, many of whom grew up hearing that their favorite beverage was bad for you. The recent report of the 2015 Dietary Guidelines Committee for the first time addressed safety concerns about coffee, concluding that drinking three to five cups a day (up to about 400 milligrams of caffeine) was associated with minimal health risks. The experts also noted observational studies indicating that coffee intake is associated with lower risk of type 2 diabetes and cardiovascular disease.



**ENOUGH, NOT TOO MUCH:** The new Korean study, published in *Heart*, may help explain one mechanism by which coffee benefits the cardiovascular system. Previous studies, the researchers noted, have linked coffee consumption to improved insulin sensitivity and reduced oxidation of LDL cholesterol (oxidation makes these particles more dangerous). Findings on coffee and coronary artery calcium, however, have been mixed, possibly because prior studies had a lag time of seven to eight years between measures of coffee intake and subsequent calcification.

Yuni Choi, MD, of Sungkyunkwan University, and colleagues assessed coffee intake among 25,138 participants, average age 41.3, with no symptoms of heart disease. The study group, a majority of whom were male, averaged 1.8 cups of coffee a day. At the same time, participants underwent CT scans to measure coronary artery calcium. Overall, even though the study group was relatively young, 13.4% showed signs of at least some calcification.

People who reported drinking an average of three to five cups of coffee a day were least likely to have calcification. Risk fell with increasing consumption from less one cup a day to one to three cups, to three to five cups - a "dose-response" pattern that lends credence to the findings. But people drinking more than five cups of coffee daily actually saw greater risk than moderate coffee drinkers, a trend researchers could not explain.

The associations between moderate coffee consumption and reduced coronary artery calcium risk

persisted even after adjusting for a variety of other variables. Coffee drinkers at all levels of consumption were at lower risk than non-coffee drinkers. The study did not differentiate between regular and decaf coffee.

**POUR CHOICES:** Should these and other findings about coffee's health benefits lead non-coffee consumers to take up the habit? Tufts' Blumberg says, "There are many healthy beverages from which to choose, including water, tea and fruit juices. While it now appears that coffee can fit into this group, if you do choose to drink coffee, go easy on the cream and sugar, whose saturated fat and calories can outweigh any possible benefits." Coffeehouse concoctions, too, can be more like drinking a milkshake than sipping plain coffee.

Source: Tufts University Health & Nutrition Letter

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## ASPARAGUS WITH TOASTED ALMONDS & GARLIC

Makes 4 Servings



### Ingredients:

- 3 /4 pound asparagus
- 2 Tablespoons olive oil
- 1 /4 cup slivered almonds
- 2 garlic cloves, thinly sliced
- 1 Tablespoon red wine vinegar
- 1 teaspoon unsalted butter
- Salt and pepper to taste

### Directions:

1. Boil 1 inch of water in a large skillet.
2. Add asparagus and cook until tender and bright green, about 3 minutes.
3. Drain and pat dry.
4. On high heat, add oil to skillet.
5. Add almonds and stir for 30 seconds.
6. Add asparagus, garlic, salt, and pepper.
7. Cook until garlic and almonds are golden and asparagus begins to brown, about 4 minutes.
8. Stir in vinegar and butter.
9. Season with salt and pepper as desired.

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## Yummy Roasted Broccoli and Red Peppers

- 5 cups fresh broccoli florets (about 1 large bunch)
- 1 red bell pepper, cut into bite-sized pieces
- 2 teaspoons olive or vegetable oil
- 1/2 teaspoon lemon pepper
- 1 clove garlic, minced

1. Preheat the oven to 400°F.
2. Add broccoli, pepper, oil, lemon pepper and garlic to a self-sealing plastic bag; shake until ingredients are combined (or mix together in a bowl).
3. Spread the mixture out in an even layer on a baking sheet.
4. Bake in the preheated oven until vegetables are tender enough to pierce with a fork, 15 to 20 minutes. Makes 6 servings. Each serving contains 38 calories, 2 grams fat, 54 mg sodium, 5 grams carbohydrate & 2 grams fiber.



Cook's notes: Feel free to use a combination of other vegetables such as cauliflower, carrots, Brussels sprouts, etc. Encourage young children to help by shaking the bag of veggies and placing on a baking sheet.

# TODAY'S FUTURE

## Expand Your Sense of Humor!

Often we need a sense of humor. This sense is developed by putting time, focus and energy into experiences that make us laugh and feel good. Some tips to add to your capacity for humor and laughter:

▶ Look for the everyday humor. Start looking for the absurd, silly, or incongruous activities that go on around you each day.

▶ Hang around funny friends.

▶ If you hear a joke you really like, write it down, or tell it to someone else to help you remember it. The doctor says "You'll live to be 60!" "I AM 60!" "See, what did I tell you?" – Henny Youngman.

▶ Remind yourself to have fun.

▶ Spend time with those who help you see the bright side and, whenever possible, avoid people who are negative.

By the time a child reaches nursery school, he or she will laugh about 300 times a day. Adults laugh an average of 17 times a day.

## Be a Healthy Role Model

Young children love to follow what their parents do. They are likely to copy your table manners, your likes and dislikes and your willingness to try new foods. Here are a few tips on how to be a healthy role model:

1. Go shopping together. Grocery shopping is a perfect time to teach your child about food and nutrition. Discuss where vegetables, fruits, grains, dairy, and protein foods come from. Encourage your children to help select healthy foods from the store.

2. Cook together. Provide opportunities for young children to help prepare meals and snacks. Not only is cooking a great way to spend time together but a wonderful time for teaching valuable skills in the kitchen.

3. Keep things positive. Let your child see you enjoying new and healthy foods. Discourage your family members from making faces or negative comments about unfamiliar foods.



4. Offer the same foods for everyone. Avoid being a "short-order cook" by making different dishes to please children. Shortorder cooking teaches children they don't have to be willing to try unfamiliar foods. It's easier and less stressful to plan family meals when everyone eats the same thing.

5. Set a good example for physical activity. Let them see you be active. Make play time, family time. Walk, run, and play with your child rather than sitting on the sidelines.

## Banking for Teens

Checking and savings accounts are great ways to help young people learn to manage money. By teaching your children to manage a checking account, you can also pave the way to good financial habits such as careful money management, paying bills on time and handling credit cards well.

- A bank account (savings or checking) is handy for cashing paychecks.
- Writing checks is a safe alternative to carrying cash.
- An ATM or debit card, which comes with many checking accounts, can serve as training wheels for using credit cards. ATMs are convenient, but teach your child to stick to your bank's ATMs. Using other banks' ATMs may expose them to hefty fees.

# WORLD OF WORK

**There Is No Elevator To Success. You Have To Take The Stairs.**

## **Treating Your Body Like a Computer Trouble-Shooting Tips**

*Author, Alice Henneman, MS, RDN*



If your body was a computer, would it be receiving lots of “error” messages? Is it beginning to run slower and take longer to “start?” Here’s a checklist to help optimize your performance and prevent crashing.

**Are you trying to run too many programs at the same time?** If you’re operating less efficiently because there are too many activities making demands on your system, shut down some programs. Some examples include:

- If time is tight, rather than make a special company dinner from “scratch,” invite people for a potluck meal.
- No time to work out AND fix your hair afterwards ... get a new hairstyle or cover your hair with some type of interesting headgear. Who knows ... you might start a whole new product line!

You may actually accomplish more if you don’t try to accomplish several things at the same time.

Researchers, such as Dr. Earl Miller, Massachusetts Institute of Technology Picower professor of neuroscience, are finding that multi-tasking can be less efficient than doing one task at a time, especially if the tasks are more complex.

Consider scheduling tasks for separate times, for example:

- Alternate cooking days with workout days. Cook ahead on cooking days, freeing up time on your workout days.
- Plan a casserole or stew that can cook while you do yoga or take a walk.

If you do multi-task, combine a task that doesn’t demand as much input from your system as the other task. Here are two possible examples:

- Work out on a treadmill while watching TV.
- Listen to music while cooking.

**Is your anti-virus software up-to-date and running?** If you’re susceptible to every bug that comes around, it’s time to check if you’re eating right, getting enough sleep, being physically active and reducing stress. The cost and time for “repairs” may be greater than the amount needed for prevention.

**Is your battery dangerously low?** Recharge your battery before it loses power completely. Habit #7 in Stephen Covey’s *The 7 Habits of Highly Effective People* is “Sharpen the Saw.” Covey tells the story of a woodcutter whose productivity decreased after sawing for several days straight. Each day his saw became duller and duller.

Covey advocates a balanced program for self-renewal in these four areas of your life: physical, social/emotional, mental and spiritual.

Recharge by eating healthy, getting some physical activity, making meaningful connections with others, stimulating your mind and devoting time to your spiritual renewal through such means as time spent in nature, music, prayer or service.

**Are you bogged down by unneeded files and programs?** Remove anything from your life that isn't needed and slows your overall performance. For example:

- Do you still belong to a club or organization that no longer meets your needs or interests? The time you're giving this activity is taking time from something else. Move on!
- Are you ironing (what's an iron, some of you may say!) the whole shirt when only the collar will show under your sweater?

Do you need to hit "escape," "undo" or "delete?" Your computer offers several options if you change your mind about a decision. Offer yourself that same choice with your life.

You may have a reputation for always saying "yes" to a request for help, regardless of how busy you are. The next time, say something such as one of the following examples. It's not necessary to elaborate and give an explanation.

- "I'm sorry but I'm not available that night" or "I have another commitment for that time."
- "I can't help you right now, but I could (in a half hour, next week, next month ...)."
- "I can only help you for an hour, and then I have to leave." Leave after an hour ... even if it's just to go to the bathroom if you're at your office!
- "I can't do that right now, but I could ... (name a less time-consuming task)."

**Time to reboot.** Now, that you've finished trouble-shooting your personal system, consider making some changes. Then, reboot your body and enjoy the benefits!

Source: <http://food.unl.edu/treating-your-body-computer-trouble-shooting-tips>

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## Visit "Raising Nebraska"

Located in the new Nebraska Building on the State Fairgrounds in Grand Island

COME TO THE EXHIBIT  
THAT TAKES BELIEVING  
WAY BEYOND SEEING.



There's a lot more to producing food than fields and farm animals. Raising Nebraska is designed to let people see agriculture from virtually every angle – from water conservation to soil health, from

animal wellbeing to food safety, from invention to innovation, from economic impact to global hunger.

Creating the Raising Nebraska exhibit was also a collaborative effort, bringing together the Institute of Agriculture and Natural Resources (IANR) at the University of Nebraska-Lincoln, the Nebraska Department of Agriculture and the Nebraska State Fair.

The result --- one of the nation's leading agriculture literacy experiences. This interactive experience spans every inch of its 25,000 square feet, focusing on where Nebraska agriculture is today – and how the state is positioned for global leadership in feeding the world.

# SPLASH INTO EXTENSION

## Did You Know?

Downspout redirection helps make the most of rainwater when we do receive it. Many downspouts direct rainwater onto pavement where it quickly flows into the street and then down a storm drain, often carrying pollutants with it to surface water. By directing downspouts onto a planted area, more rainwater soaks in and less runs off.

## Wetlands

The word means different things to different people. In general, wetlands describe a variety of areas where plants and animals suited to wet environments can be found. They are among the richest and biologically most productive habitats on the planet.

In the United States alone they support about 5,000 plant species and about one third of all bird species. About half to two thirds of America's wild ducks are hatched in the prairie pothole marshes of North Dakota, South Dakota, Minnesota and Iowa.

They provide critical habitat for about half the fish, one third of the birds, one fourth of the plants and one sixth of the mammals on threatened and endangered species lists.

Most organizations and government agencies define them, in part, by the presence of "Hydric" soils. Such soils lack air pockets, which have been replaced by water.

This is part of a definition of wetlands most agencies accept, along with the presence of water at or near the surface (since not all wetlands are wet) and the presence or evidence of hydrophilic (or water-loving) vegetation, said Michael Whited of the USDA's Natural Resources Conservation

Service (NRCS).

"If you think of hydric soils as a jar full of marbles, the space the air normally occupies around the marbles would be filled by water," said soil and wetlands scientist Whited.

"Hydric soils tend to be very grey in color and will often contain layers of organic material, such as peat. They are very fertile soils," he added.

The wording of government definitions of wetlands often varies, but most agencies are in general agreement on what they are.

Here are some official definitions:

### **U.S. Environmental Protection Agency and Army Corps of Engineers**

*Those areas that are inundated or saturated by surface water or groundwater at frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.*

### **U.S. Department of Agriculture, Natural Resources Conservation Service**

*Areas that have a predominance of hydric soils and that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.*

### **U.S. Fish and Wildlife Service**

*Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following attributes:*

*At least periodically, the land supports predominantly hydrophytes; Substrate is predominantly undrained hydric soil; and Substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.*



# IN THE DIRT

**Backyard Farmer**  
**Thursday, April 7**  
**7:00 p.m.**  
**Channel: NET-1**

Backyard Farmer is Nebraska's place to go for all of your gardening information. **It's been on the air for over 60 seasons and runs from the first Thursday in April to usually the second week in September.**

## Signs of Spring

*"One of the things I learned to do as a young gardener was look at plants bit by bit, to see if there was anything that delighted me. Never mind what the plant is famous or infamous for. Look, and see for yourself.... It is the spectrum, not the color, that makes color worth having, and it is the cycle, not the instant, that makes the day worth living." Henry Mitchell*

Where winters are long and cold and colors are faded by sun, wind and snow, the first glimpse of green growth is long awaited. The emerging tips of perennials aren't very noticeable from a distance, and even on close inspection may be just barely evident. But they're a promise of green to come.

Rather than being impatient for what's ahead, it's a good time to push away some leaves or snow and look for signs of spring. What might you find?

Plants like coralbells, lambs' ear, Lenten rose, columbine, bergenia and many of the penstemons stay somewhat green all winter, particularly in protected spots. Groundcovers like periwinkle never fade and even bloom early in spring, along with other low-lying plants like lungwort and candytuft.

Perennials that have died back may start pushing through the soil in late February or early March. Have you ever noticed the deep red tips of peonies in late winter? By early or mid-March, garden phlox, Oriental poppy, lady's mantle, daylily, evening primrose and many spring bulbs are visible. The emerging spears of Solomon's seal are edible and look and taste very much like asparagus; and they can be eaten in the same ways—fresh, steamed or roasted. New shoots should emerge from the base, but don't cut too many from any given patch.

Some perennials, including bergenia, prairie smoke and columbine, turn dark red or purple in fall and emerge in these dark colors again in spring; colors that may not stand out against soil or mulch, but surrounded by snow they're a welcome sight in the winter garden.

Early-blooming prairie wildflowers include pasque flower and prairie smoke, and both are far more than one-season plants. Pasque has beautiful, feathery seedheads and prairie smoke has purplish foliage fall through winter. Pussytoes remain silvery green all winter and flax (*Linum*) puts on fragile-looking new growth in fall that stands tough through snow, wind and ice. Contrary to the delicate appearance of these prairie plants, they'll outlast any harsh weather winter throws at them.

Blooms will come soon enough and early-to-rise usually means early to bloom as well, so these plants and others—columbine, bleeding heart, celandine poppy, bluebells, Jacob's ladder—will soon offer bright blossoms. But for now, if we look closely, there is promise enough of the green to come.

**Source:** By Karma Larsen, Nebraska Statewide Arboretum



***Emerging tips of perennials are a promise of green to come.***

## American Hornbeam

*Nicole Stoner, Nebraska Extension Educator, provides a monthly feature on plants to consider for your acreage. This month, she has another selection from the Great Plants of the Great Plains, American Hornbeam.*

It is April, we are finally getting into spring where more plants will start coming out of their dormancy and more color will show up in our landscapes. Last month I showcased Ponderosa Pine as the plant of the month because it is the Great Plants for the Great Plains selection for the 2016 evergreen of the year. I am going to continue through these plant selections from the Great Plains group and feature American Hornbeam for the April plant of the month as this is the 2016 selection for the tree of the year.



The photo of the leaves of American Hornbeam are from Paul Wray, Iowa State University, Bugwood.org

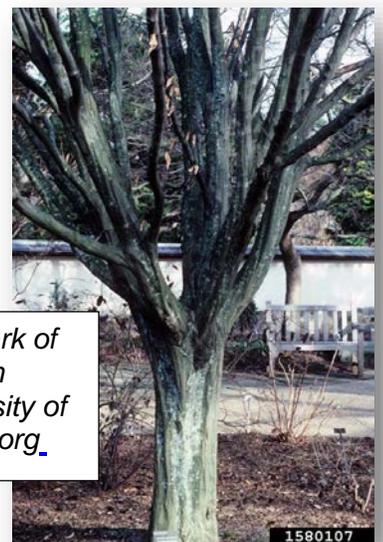
American Hornbeam, *Carpinus caroliniana*, is also called Blue Beech, Ironwood, Musclemwood, and Water Beech. This medium-sized tree grows up to 20-25 feet in height and width and is often grown as an understory tree. It is called blue beech due to the smooth, gray-blue bark and it is called musclemwood due to the muscle-like branches, which have irregular grooves throughout. According to Michael Dirr, University of Georgia Professor, the overall appearance is comparable to flexed

biceps and the forearm muscles, hence the name musclemwood. This tree has alternate leaves that are

ovate-oblong and toothed along the margins. American Hornbeam flowers in April to May with multiple small, non-showy, flowers that appear in catkins before the leaves do. The fruit is a triangular, seed-like nutlet, enclosed in a hard, woody, four-lobed husk covered with bristles. There are many different cultivars of American Hornbeam. Many of the cultivars are selected for improved fall color or form. Ball O'Fire is a more globular form of the straight species with an outstanding red fall color. Another good choice would be Firespire Musclemwood, which is narrow and upright in growth with a nice orange-red fall color. There is also a unique, weeping variety called 'Stowe Cascade' American Hornbeam that grows up to 6-8 feet tall and then has arching branches for an interesting focal point to any landscape.

American Hornbeam is best grown as a specimen tree or in naturalized settings as an understory tree because it tolerates sun or shade. It tolerates wet soil and is adaptable to dry locations as well, making it easy to put into many landscaping situations. Canker is a common problem with this tree, which can cause dieback, but according to Michael Dirr, this is not a significantly serious problem. Musclemwood is a good choice for wildlife enthusiasts because the seeds, buds, and catkins are eaten by songbirds, pheasants, turkey, fox, and some squirrels. Deer and rabbits will eat the leaves and twigs, according to the USDA NRCS. The USDA NRCS also states that the wood has been used for making small, hard, wooden object such as tool handles, levers, and bowls and dishes for the Pioneers.

American Hornbeam is a great tree for Nebraska because it was selected as the 2016 Great Plants for the Great Plains Tree of the Year. It is a tree that should be planted more in Nebraska and utilized as an understory tree or a specimen tree as it grows well in both sun and shade. It is also a great food choice for wildlife found in the area. So the next time you need a new understory tree or medium sized specimen tree, look to Musclemwood.



The photo of the bark of Musclemwood is from John Ruter, University of Georgia, Bugwood.org.

## Lawn care practices – how soon to begin?

When record high temperatures occur in early March, it is difficult to assess when to begin lawn care practices. As a rule, cleaning debris from lawns, raking leaves, and watering to maintain moist crowns if soils become very dry can be done. Bill Kreuser, UNL Turfgrass Specialist, recommends avoiding foot traffic on wet lawns to avoid soil compaction. Avoid mowing too early as this may further stimulate growth. Service mowers so they are ready for the spring growth surge. Seeding should take place as early as possible in April. Core aeration and power raking are good practices for April. It is too early to apply preemergence herbicides and mid-April into early May remains the recommended target date to begin fertilization.

For more information: [Early Spring Turf Care - March 2016](http://turf.unl.edu/turfinfo/3-7_EarlySpringTurfCare.pdf), ([http://turf.unl.edu/turfinfo/3-7\\_EarlySpringTurfCare.pdf](http://turf.unl.edu/turfinfo/3-7_EarlySpringTurfCare.pdf)) - Nebraska Extension

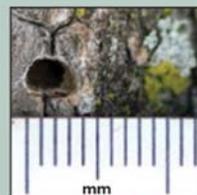
**Avoid pruning fire blight infected ornamental trees too close to growth beginning**, which has already started due to above normal temperatures. Fire blight is a bacterial disease affecting apple, crabapple, pear, hawthorn, and related species. The bacteria commonly overwinter in cankers (sunken diseased areas) on the tree, which produce a sticky exudate in spring. The bacteria are spread from cankers by insects, wind-blown rain, careless pruning or pruning at the wrong time.

While pruning to remove infected branches is an important control method, it needs to be done while trees are dormant and before cankers begin to exude. If pruning is done too late, late winter or during spring growth, this increases the spread of bacteria. Along with pruning at the correct time, cut infected branch at least 8 to 12 inches below the canker. Ideally, infected branches should be removed at the point of attachment with another branch or the trunk, without damaging the branch collar. Remove pruned material from the area. To help avoid spreading bacteria during pruning, dip or spray the pruning tool before each cut with a 10 percent solution of bleach (one part bleach to nine parts water). Dry and oil tools after use to prevent rust.

For more information: *Prune Out Fire Blight in Winter*, Michigan State University ([http://msue.anr.msu.edu/news/prune\\_out\\_fire\\_blight\\_in\\_the\\_winter](http://msue.anr.msu.edu/news/prune_out_fire_blight_in_the_winter))

## Ash tree borer holes – which borer is it?

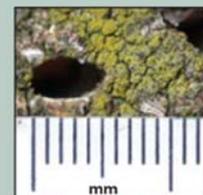
With growing concern about when Emerald Ash Borer (EAB) will be found in Nebraska, ash trees are being closely monitored as they should be. When borer holes are found, the assumption may be that EAB is the culprit. However, our native ash borers (lilac-ash borer, banded and red-headed ash borers) are more likely the culprit. It is helpful to be familiar with the appearance of the different emergence holes to reduce misidentification. EAB adults create a D-shaped hole when they emerge from trees; while the other three adults create more of a round hole. See the graphic for identification. When monitoring trees, try to look at a majority of the emergence holes. It is possible for a tree to be infested with more than one type of borer.



**Emerald ash borer**  
Shape: D-shaped  
Width: 3 mm (1/8")



**Banded ash clearwing borer**  
Shape: Round  
Width: 6 mm (1/4")



**Redheaded ash borer**  
Shape: oval-round  
Width: 6 mm (1/4")

**EXTENSION**  
INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES  
Knox County

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Staples dishes and cuisines from across the world feature pulses, from hummus in the Mediterranean (chick peas), to a traditional full English breakfast (baked navy beans) to Indian dal (peas or lentils).

**What are some examples of pulses?** You probably already eat more pulses than you realize! Popular pulses include all varieties of dried beans, such as kidney beans, lima beans, butter beans and broad beans. Chick peas, cowpeas, black-eyed peas and pigeon peas are also pulses, as are all varieties of lentils.

**What are pulses?** Pulses are a type of leguminous crop that are harvested solely for the dry seed. Dried beans, lentils and peas are the most commonly known and consumed types of pulses.

In 2013 the United Nations declared that 2016 will be the International Year of Pulses. The hope of the 2016 International Year of Pulses (IYP 2016) is to position pulses as a primary source of protein and other essential nutrients.

## 2016 International Year of Pulses