

EXTENSION IS ON THE MOVE

What's Inside:

On the Ranch

- How Hot Hay Changes Forage Quality
- Women in Ag Conference
- Nebraska Poultry Conference

In the Field

- Private Applicator Certification/Recertification Program
- 2020 FAQ for RUP Dicamba Herbicides
- LENRD- Bazile Groundwater Management Area No-till, Cover Crops, & Planned Grazing Systems Workshop

Healthy Eating

- Oatmeal Month
- Fiber Focus Month

Today's Future

- Homemade Granola to Go
- Keep Your Family Active During the Winter Months

World of Work

- 4-H Enrollment is Open
- Youth Mentoring

Splash into Extension

- Nebraska Chemigation

In the Dirt

- Care for Holiday Plants
- Plants for Pollinators
- All That Glitters
- Prune Evergreen Shrubs in Winter?

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January, 2020

Volume 10, Number 1

New Year, New You: 4 Tips to a Healthier You

Happy New Year! Did you make a New Year's resolution? Millions of Americans make resolutions every January hoping to improve their health by losing weight, getting fit, or eating healthy. Make this the year you and your family lead a healthier lifestyle by following these 4 tips:

TIP 1-Eat the Right Amount of Calories for You:

Everybody requires a different amount of calories depending on their age, gender, height, weight, and physical activity level. To determine the appropriate amount of calories for you, enter your information into the Daily Food Plan at <https://www.choosemyplate.gov/resources/MyPlatePlan> by USDA's MyPlate to receive a personalized plan.

TIP 2-Build a Healthy Plate by Following the MyPlate Guidelines:

- Find your healthy eating style and maintain it for a lifetime.
- Make half of your plate fruits and vegetables.
- Move to low-fat or fat-free milk or yogurt.
- Make at least half your grains whole grains.
- Vary your protein routine.
- Make small changes.

TIP 3-Choose an Eating Style Low in Saturated Fat, Sodium, & Added Sugars:

Consuming foods high in solid fats, added sugars, and salt may increase the risk of certain chronic diseases. Drink water instead of sugary drinks and select fruit for dessert. Add spices or herbs to season food instead of adding salt and compare sodium in foods like soup, bread, and frozen meals. Eat cakes, cookies, ice cream, pizza, cheese, sausages, and hot dogs in moderation.

TIP 4 - Be Physically Active Your Way:

It is important to be physically active your way. Start by doing what you can and picking activities you like. To gain the most health benefits, adults should aim for at least 150 minutes (2 hours and 30 minutes) of moderate-intensity aerobic activity each week and youth should do 60 minutes (1 hour) or more of physical activity daily.

Source: food.unl.edu

ON THE RANCH

Women in Agriculture Conference

February 20-21-2020
Holiday Inn Convention
Center in Kearney, NE

The Nebraska Women in Agriculture Conference is an annual two-day event designed to educate and uplift women involved in any aspect of Nebraska's agricultural industry. Through workshops and presentations, attendees will learn how to better manage risk, improve their farms and ranches and become more successful operators and business partners.

For event details visit:
<https://wia.unl.edu/conference>

“Burning Your Bottom Line: How Hot Hay Changes Forage Quality”

Ben Beckman, Nebraska Extension Educator-Beef Systems

Hay put up too wet can lead to a number of issues, most notably mold and heat. Moisture keep otherwise dormant microbes and fungi active, decreasing forage quality and creating heat. Too much heat can actually create a risk of combustion.

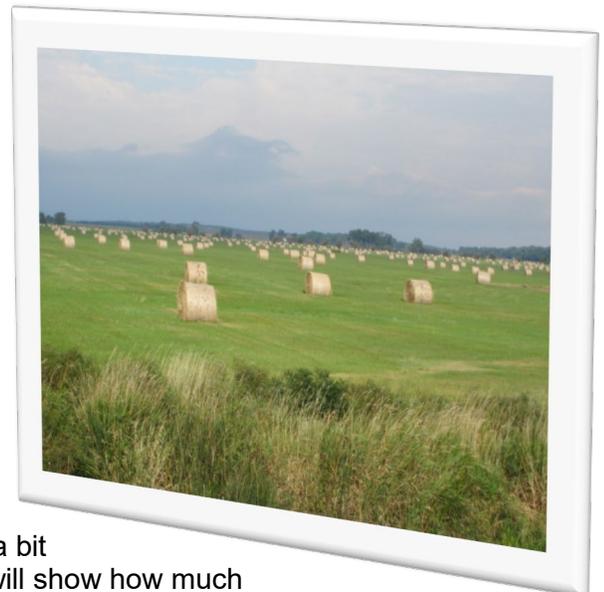
However, even heat that doesn't get to the level of combustion can start to cause issues with our hay. Since hay is not protected from oxygen like most of our anaerobic fermented feed stuffs (silage, haylage, etc.) high temperatures, moisture, and oxygen allow aerobic bacteria to grow, using plant protein and sugars for growth and producing carbon dioxide, water, and heat. Too much of this and temperatures can rise high enough to kick off a process called the Maillard reaction.

Even if you've never heard of the Maillard reaction before, you are probably familiar with it. First described in 1912 by the French chemist Louis-Camille Maillard, the Maillard reaction is the browning process that happens between amino acids (proteins) and sugars under heat. We use it all the time when cooking. From searing a steak to baking bread, the Maillard reaction is what produces that flavorful browned or golden outer portion of most cooked foods.

So what does this have to do with hay? While it's typical to have bales generate heat after harvest due to the curing process. Too much moisture has the dual issue of 1) helping trap heat already created instead of letting it dissipate quickly, and 2) acting as a catalyst for the Maillard reaction once it kicks off at around 170°F. The Maillard reaction takes normal proteins and sugars and changes them through a series of chemical reactions into something called the Maillard polymer. The resulting hay is sweet/tobacco smelling and golden/caramel in color. And cows love it! Just like I can't turn down a perfectly seared steak, the result of the Maillard reaction in hay is a treat for cows.

Why is this an issue? The problem is that the resulting Maillard polymer, while tasty to our animals, isn't great nutritionally. The chemical reactions actually have tied up proteins and lowered the forage's true crude protein content. A standard crude protein feed analysis won't be able to pick up this difference though and will report the number like nothing is wrong, causing us to overestimate the available protein in our forage and under feed our animals.

Luckily, the solution is fairly simple. If you suspect you have bales that have had some caramelization occur, add on a test for Heat Damaged Proteins (HDP) or Acid Detergent Insoluble Crude Protein (ADICP). While adding a bit more to the cost of the forage analysis, this additional test will show how much



unavailable protein content there is due to the Maillard reaction and rations can be adjusted accordingly. At some labs, this test will also be shown with the adjusted Crude Protein content after damage has been factored in.

While we are on the look-out for hay that could be heat damaged, it's also a great time to look bales over for excessive mold growth. The same wet conditions that allow the Maillard reaction to occur can also be great for mold. While not always toxic, mold can reduce hay quality and palatability, so allowing animals the freedom to pick through heavily molded bales is a great option. If you want more information on considerations to take when working with moldy hay, check out the Nov. 1 Beef Watch article "[What to Do with Wet Hay](https://beef.unl.edu/beefwatch/what-do-wet-hay)" (<https://beef.unl.edu/beefwatch/what-do-wet-hay>) by extension educator Hannah Greenwell and myself.

After last winter's cold and a wet summer, using every last bit of hay available to its fullest potential is going to be important. Testing forage quality of your hay, whether your own or purchased is a critical first step to optimizing hay use, but make sure to take a bit more critical look when taking those samples. Keep an eye out for signs a Maillard reaction could have occurred and if significant, running the additional HDP test is essential. With a true idea of available Crude Protein, making the right decisions on how much hay to feed this winter and when to start supplementing will be that much easier.

- High temperatures in bales (>170°F) can result in reactions between proteins and sugars called the Maillard reaction.
- Hay impacted by Maillard reactions will be sweet/tobacco smelling and brown/caramel colored
- While highly palatable, the reaction creating this hay ties up protein, making it unusable for animal digestion.
- If significant signs of Maillard reactions are seen in your hay, add a Head Damaged Protein (HDP) test to your forage analysis to get accurate Crude Protein contents for feeding decisions.
- Caramelized hay also has a high likelihood of containing larger than normal amounts of mold growth. Feeding free choice is a good option to minimize risk when feeding moldy hay. More information can be found in the Nov. 1 article "What to Do with Wet Hay".

50th Annual Nebraska Poultry Conference
February 19-20, 2020
River's Edge Conference Center
Columbus, Nebraska

Take advantage of cutting-edge educational programming, enjoy banquets and entertainment, and network with Nebraska Poultry Industry members.

Visit <http://www.nepoultry.org/news/npiconvention.cfm> for information and to register.



IN THE FIELD

Land Application Training

January 31, 2020

First time training –
9:00 a.m.

Recertification training –
1:00p.m.

Plainview Public Library
209 N Pine Street
There is a cost to attend.

Join us for an interactive workshop where you will learn basic manure management techniques and tips to keep the environment safe and you in compliance with your NPDES permit.

Seating is limited at all locations, so please pre-register at least eight business days in advance of the workshop you're planning to attend by using the [online form](https://water.unl.edu/lat) (<https://water.unl.edu/lat>).

Private Applicator Certification/Recertification Program

Private pesticide applicator license is necessary to purchase and apply restricted use chemicals on agricultural lands in the state of Nebraska. If your private pesticide applicator license is expiring April 15, 2020, or would like to become certified, there are 3 methods available to you to renew your license. They include:

- 1. Attend a Nebraska Extension Private Applicator Certification/Recertification program.** This option requires your attendance at a 3-hour workshop presentation at any location across Nebraska that is convenient for you. After the presentation, you will submit your original NDA recertification form to the program educator, and he/she will submit your paperwork to the NDA. Upon receiving your form, the NDA will provide you by mail, additional paperwork to complete. **The cost of this program is \$40 for program attendance,** and an additional \$25 for the NDA license to be paid at a later date. A list of local dates is on the next page or visit <https://go.unl.edu/2020pat> for the full list of available trainings across the state. Below are the Private Pesticide Applicator Certification/Recertification sessions in Knox County:
 - February 18, 1:30 pm at the Walter Larsen Senior Center in Creighton
 - February 27, 1:30 pm at the Community Center in Bloomfield
 - March 12, 1:30 pm Walter Larsen Senior Center in Creighton
- 2. Complete your pesticide training online** available at <https://psep.education/applicator/>. This online training contains multiple modules consisting of videos, activities, reading and quizzes. A score of 100% must be achieved at the end of each module before moving to the next module. Once all the modules are completed, a certificate will be emailed to the Nebraska Department of Agriculture, with your NDA recertification form. Additional materials on licensing will then be sent. **The cost of this option is \$75,** and an additional \$25 for the NDA license to be paid at a later date.
- 3. Call the Nebraska Department of Agriculture and request to complete the Private Applicators test.** This will require a trip to Lincoln to the Nebraska Department of Ag, where you will sit for a proctored exam. If you pass with a score of 70% or better, your NDA recertification form will be processed and a license mailed to you. **The cost of this option is mileage,** plus \$25 for the NDA license. To schedule an exam, please call the NDA at (toll-free) 877-800-4080 or 402-471-2351.

Failure to complete your recertification by any method described above, will cause your license to expire. The Nebraska Extension is your partner in providing private applicator recertification education and training. If you have any questions, please feel free to contact the extension office at 402-288-5611 or the Nebraska Extension Pesticide Education Office at 402-472-1632.

2020 Pesticide Safety Education Program (PSEP) Private Training Dates

Each training will last about 3 hours

More training dates available at <https://go.unl.edu/2020pat>

Date	Time	Location
Tuesday, January 28	1:00 PM	Neligh, Courthouse Basement Meeting Room
Tuesday, January 28	6:00 PM	Neligh, Courthouse Basement Meeting Room
Friday, January 31	1:30 PM	O'Neill, Holt County Courthouse Annex
Thursday, February 6	9:00 AM	Norfolk, Madison County Fairgrounds McLeb Building
Monday, February 10	1:30 PM	Hartington, City Auditorium Basement
Monday, February 10	6:00 PM	Hartington, City Auditorium Basement
Thursday, February 13	1:30 PM	Wayne, Fire Hall
Thursday, February 13	6:30 PM	Wayne, Fire Hall
Tuesday, February 18	1:30 PM	Creighton, Walter Larsen Senior Center
Tuesday, February 25	1:00 PM	Butte, Boyd County Courthouse (Range & Pasture Focus)
Tuesday, February 25	6:30 PM	O'Neill, Holt County Courthouse Annex
Thursday, February 27	1:30 PM	Bloomfield, Community Center
Thursday, February 27	1:00 PM	Norfolk, Madison County Extension Office (1305 S 13 th St)
Thursday, March 5	1:00 PM	Neligh, Courthouse Basement Meeting Room
Thursday, March 12	9:30 AM	O'Neill, Holt County Courthouse Annex
Thursday, March 12	1:30 PM	Creighton, Walter Larsen Senior Center
Thursday, March 12	1:00 PM	Pierce, Courthouse Extension Meeting Room
Thursday, March 12	6:00 PM	Pierce, Courthouse Extension Meeting Room
Monday, March 16	1:00 PM	Spencer, Our Savior's Lutheran Church
Thursday, March 19	1:00 PM	Norfolk, Madison County Extension Office (1305 S 13 th St)
Wednesday, April 1	1:30 PM	Butte, Boyd County Courthouse
Tuesday, April 7	1:00 PM	Norfolk, Madison County Extension Office (1305 S 13 th St)
Tuesday, April 14	1:30 PM	O'Neill, Holt County Courthouse Annex

2020 FAQ for RUP Dicamba Herbicides (FeXapan™, Engenia®, XtendiMax® and Tavium®)

If I was trained for RUP dicamba applications in 2019, do I need training in 2020? Yes. Annual training is required for applying RUP dicamba products.

Must I be licensed as a pesticide applicator to buy and use these RUP dicamba products? Yes. This is because they are Restricted Use Pesticides (RUP). Anyone buying or applying one of these three RUP products in Nebraska must be licensed as either a private applicator (for personal applications for crop production) or a commercial/noncommercial applicator (with the Ag Plant or Right-of-Way Category).

Do purchase and use of the RUP dicamba labels require extra training? No to purchase. Yes to use. These are your training options:

- Nebraska Extension online training course hosted by eXtension. See the link and instructions at <https://pested.unl.edu/dicamba-training-instructions>. Note: To receive proper credit for this training, the applicator's name and corresponding pesticide license number must be used when

registering for this site. This training is designed for one applicator at a time to receive dicamba training.

- County-hosted training sessions at the option of local educators presenting curriculum from the online course. A list of these sessions can be found at <http://www.nda.nebraska.gov/pesticide/dicamba.html>.
- Individual chemical company (registrant) training programs: <http://www.nda.nebraska.gov/pesticide/dicamba.html>.

Do all dicamba product labels require the additional training? You are required to have additional label-required dicamba training when applying the RUP dicamba products: FeXapan™, Engenia®, XtendiMax® or Tavium®. The annual additional dicamba training is required for applying any of these RUP dicamba formulations, whether to dicamba-tolerant soybeans or other crop sites listed on the labels.

How do I know I am approved for use (application) of these RUP dicamba herbicides after completing the additional label-required dicamba training? The Nebraska Department of Agriculture will list all applicators who complete dicamba training in Nebraska on the following website: <http://www.nda.nebraska.gov/pesticide/dicamba.html>

My hired hand and I both hold private applicators licenses. He will be doing all my spraying. I am taking the dicamba training, but does he also have to take the dicamba training? Yes, anyone who applies one of the RUP dicamba products must complete an approved dicamba training and hold either a private or commercial/noncommercial (Ag Plant or Right-of-Way Category) applicator license.

Must I have a copy of the RUP dicamba label with me during all applications? No, but you do need to have a copy of the label in your possession. It can either be a printed label on file or a digital link that can be shown when requested.

More Information - If you have questions concerning something stated in this FAQ or about RUP dicamba use in Nebraska and/or how a specific clause on the RUP dicamba label will be interpreted, please call the Pesticide Division of the Nebraska Department of Agriculture (NDA) at (402) 471-2351. The NDA website for dicamba information is <http://www.nda.nebraska.gov/pesticide/dicamba.html>.

LENRD-Bazile Groundwater Management Area No-Till, Cover Crops, and Planned Grazing Systems Workshop

Lifelong Learning Center – Norfolk, Nebraska
Wednesday, February 12, 2020 from 9:00 a.m. – 3:30 p.m.

9:00 – 9:30 a.m. - Registration (coffee and rolls provided by LENRD)

**“What does the PLFA test tell us?” “Understanding the Haney Test:
A Glimpse Beyond the Numbers!”**

Lance Gunderson MS: President & Owner Regen Ag Lab

“Integrating Cover Crops into IPM Plans”

Justin McMechan: Crop Protection and Cropping Systems Specialist, ENREC

Lunch - 12:00 – 12:45 p.m. (Provided by NRD’s)

**“Getting Out of the Spinning Hamster Cage”
“Tying it All Together—Soil Health, Nitrogen Use Efficiency and Improving
Groundwater Quality”**

Dale Strickler: Soil Health Rancher, Agronomist at Green Cover Seed



Educator Panel: Q & A at the End of the Day

Please RSVP by **February 4, 2020**, for meal count to your local NRCS or call LENRD, 402-371-7313

HEALTHY EATING

Fiber Focus Month

Fiber has many health benefits, so focus on adding fiber to your diet during January. Make sure to follow these tips when adding more fiber to your diet:

1. Start slowly by adding one fiber-rich food daily for one week, then increase by one serving until recommended levels are reached.
2. Add high-fiber foods gradually, since too much fiber at once produces discomfort.
3. Eat a variety of fiber-rich foods such as whole grain bread, oatmeal, fruits, and vegetables.



Oatmeal Month

Oatmeal Month occurs during January as more oatmeal is sold during January than any other month. It was originally established by Quaker's food service.



Oatmeal is a whole grain that can be a delicious, warm way to add whole grains to your eating patterns during the cold winter season. Oats are full of important nutrients like vitamins B and E, calcium, magnesium, and zinc. This grain contains beta-glucan, a special kind of fiber, found to be especially effective in lowering cholesterol and insoluble dietary fiber, which has anticancer properties. Best of all, oats, like most other whole grains, can help us maintain a healthy weight.

There are several types of oatmeal such as rolled oats, quick cooking oats, instant oats, oat flour, and steel-cut oats. All these types have similar nutritional values, but

many times instant oatmeal has other ingredients added such as sugar. The only way to know if there are 'extra' ingredients is to read the ingredient label of the product.

Ideas to boost nutrition and flavor include:

- Make oatmeal with calcium-rich milk instead of water.
- Toss in raisins or dried cranberries and chopped nuts like walnuts or pecans.
- Add fresh or frozen berries or other fruits like apples or bananas.
- Mix in $\frac{1}{4}$ cup unsweetened applesauce.
- Sprinkle with cinnamon for sweetness, it adds flavor without calories. With a dusting of cinnamon, a smaller amount sweetener, or perhaps none at all, may be needed.

If eating a bowl of oatmeal isn't something you even want to consider, try using rolled oats in baked products like cookies, muffins or breads. Oatmeal can be used in place of bread crumbs in meat loaf or patties. Couple a goal of eating more servings of whole grains with a regular exercise program for a healthier you.

Source: <https://food.unl.edu/free-resources/newsletters/family-fun-run/oatmeal-whole-grain-goodness>

TODAY'S FUTURE

Want to learn when Early Childhood online classes are available?



Sign up today at go.unl.edu/jointic

Homemade Granola to Go

When you are on the go, eating healthy can be challenging. To help your family make healthier choices, offer a selection of healthy options and let children choose their favorites. By making their own wrap, sandwich, taco, pizza, trail mix or parfait, children are more likely to eat the healthy food.



Make whole grain granola recipe below to take on the go. It can be used as a trail mix, eaten with milk, or used to make a yogurt parfait. Yogurt parfaits are great for kids to make on their own for a snack, meal or as a dessert. They do not

require an oven or microwave, and can be tailored to individual preferences by layering their favorite yogurt, fruits and crunchy toppings. Here are a few tips for making a yogurt parfait:

- Vary the yogurt types and flavors based on your family's preference. Choose plain or flavored, low-fat or non-fat yogurt with the goal of aligning with the Dietary Guidelines for Americans which recommends less than 10% of daily calories coming from added sugar.
- Offer 3-4 types of fruit, and let your children choose at least two. Fruit can be fresh, frozen, canned or dried.
- If you do not have granola, top the parfait with whole grain cereal or nuts instead.
- Granola may be hard for young children to chew. If serving a parfait to young children, consider laying only fruit and yogurt in a parfait, and/or choosing a whole grain cereal instead to avoid a choking hazard.

Crunchy Whole Grain Granola

Yield: 12 servings

Ingredients:

- 2/3 cup brown sugar, packed
- 1/4 cup 100 apple juice
- 2 1/2 cups old fashioned oatmeal
- 1 cup cereal, crunchy nugget
- 3/4 cup dried fruit
- 1 cup almonds or sunflower seeds
- 1/4 teaspoon cinnamon
- 1/4 teaspoon salt

Directions:

1. Wash hands with soap and water.
2. Combine brown sugar and apple juice in a large nonstick skillet. Cook over medium high heat three minutes, stirring frequently, until sugar dissolves.
3. Add the remaining ingredients to the sugar mixture. Cook five minutes or until granola is lightly browned, stirring frequently. Cool completely.
4. Store in an airtight container up to two weeks.



Nutrition Information: Calories 192; Total Fat 5g; Saturated Fat 1g; Cholesterol 0mg; Sodium 126mg; Total Carbohydrates 36g; Fiber 3g; Total Sugars 20g; Protein 4g

Source: <https://food.unl.edu/free-resources/newsletters/food-fun-young-children/homemade-granola-go>

Keep Your Family Active During the Winter Months



Staying physically active year-round is important. During the winter months, the weather can present challenges when trying to be active. Here are some tips to help continue your family's active lifestyle, even when the weather is less than ideal.

The first step to being active is knowing how much physical activity is recommended each day. According to the *Physical Activity Guidelines for Americans*, adults need 2 ½ hours a week of physical activity and children ages 6-17 need 60 minutes a day. The three types of physical activity are aerobic, muscle-strengthening and bone-strengthening. Here are some tips to help your family reach these recommendations:

- Make a plan and stick to it! The most effective way to make this happen is to include your family in the planning process. Set specific times during the week when you can be active together.
- Be realistic with your goals. Most families are busy, and leaving the house may not be the best option. Make a plan for physical activity to happen at home.
- Brainstorm a list of activities your family enjoys during the months when the weather is nice and determine how these can be adapted to the winter months.
- Turn off the TV and other electronic devices. Your family should have no more than two hours per day of screen time.

Aerobic exercise is any activity that raises your heart rate. This may be the toughest to get into the habit of doing. It involves movement that makes you sweat! During the winter, the biggest barrier may be that it is too cold to do this outside. Listed below are few ideas for using items at home to create active games inside:

- **Enjoy a dance party!** Turn on your favorite music and show off your dance moves.
- **Play an activity called "All Stop & Go to Music".** Everybody moves while music is playing. Everybody freezes when the music is stopped.
- **Try a game of modified musical chairs.** Set up stations around the room using objects like blocks or small towels. When the music stops, everyone needs to be standing near one of the objects. If you are not standing near an object, you are then out of the game. Have other activities set up around the room, such as a yoga mat to do sit-ups and push-ups while those who are waiting for the game to end. The key is for everyone to stay active.
- **Create activity sticks to use throughout the day.** Write an activity (i.e. squats, arm circles, skipping, etc.) on each craft stick. Take turns drawing a stick and have all family members participate in the activity.
- **Make story time active time.** Select a book that has a word that's often repeated. Every time that word comes up in the story, everyone does a jumping jack or hops on one foot. Change up the story and movements. This activity is geared toward younger children but the entire family can be included.
- **Check out additional resources** on physical activity from your local library or search on-line for family physical activity websites and apps.

Source: <https://food.unl.edu/free-resources/newsletters/family-fun-run/keep-your-family-active-during-winter-months>

WORLD OF WORK

4-H Enrollment is Open

Enrollment is now open for the 2020 4-H program year. Go to <https://ne.4honline.com>.

Please use Google Chrome web browser to enroll in 4-H On-line.

Passwords – If you have forgotten your password, use the “I forgot my password” option or contact the extension office. **DO NOT** set up a new profile.

Clubs and projects will need to be added back into profiles as they were cleared out at the state level.

New/Revised Projects for 2020:

Photography

Photography Basics–Level 1;
Next Level Photography–Level 2;
Mastering Photography–Level 3

Conservation

Outdoor 1; Outdoor 2; Outdoor 3;
4-H Geology; Outdoor Skills

Youth Mentoring

Megan Hanefeldt, Nebraska Extension Educator in Knox County

You might have heard of youth mentoring, but what exactly is it and what is the importance of it? According to the National Mentoring Partnership youth mentoring is ‘a development strategy for a youth’s successful path to adulthood’. In many of our communities youth mentoring takes place in both formal and informal settings.

An informal mentoring setting is a naturally occurring adult/youth relationship. These types of mentoring settings can be found in our communities in the form of church or civic associations. This can also be a trusted adult in a young person’s life. These trusted individuals can make a huge impact on a young person’s life by instilling a positive future for the child.

A formal youth mentoring program is a structured adult/youth relationship where a mentor is matched to a mentee. The TeamMates mentoring program in Nebraska has been providing an avenue for youth mentoring since 1991 when Tom Osborne felt the athletes in his program could make an impact on middle school students in Lincoln. The TeamMates program today has nearly 170 chapters serving over 10,000 matches. The program is based on three fundamental pieces: Hope, Engagement and Wellbeing. Hope allows students to have hope for the future and make the future better than the present. Engagement allows for students to do their best every day by engaging them. Wellbeing allows students to examine how they currently feel

and how they feel their life will be in the future.

We know the different types of mentoring avenues, but why is it important? “Research through the National Mentoring Partnership confirms that quality mentoring relationships have powerful positive effects on young people in a variety of personal, academic, and professional situations. Ultimately, mentoring connects a young person to personal growth and development and social and economic opportunity.”

I would encourage you to seek local youth mentoring programs already in place in your community. Turn an hour here and there into a time to make a positive impact in the life of a young person. 90% of those mentored want to become a mentor for others, so the ripple effect goes on and on.



SPLASH INTO EXTENSION

Save Water, Save Energy

Save water and save the energy required to pump, process, heat, transport, and treat it. January 10 was National Cut Your Energy Costs Day designed to help reduce the impact of energy expenditures, both financially and environmentally.

– Lower the temperature on your water heater to 120 degrees Fahrenheit to reduce the energy required to heat water.

– Turn the ice maker in your freezer off to reduce freezer energy usage by about 20%.

– Check and fix leaks in toilets, faucets, and other appliances that use water.

– Upgrade to Water Sense and Energy Star appliances that use water and energy more efficiently.

Nebraska Chemigation

Chemigation is the practice of applying agrichemicals to cropland using an irrigation system to distribute both the water and chemical.

Nebraska Chemigation Act - The goal of the Nebraska Chemigation Act is to protect the groundwater and surface waters of Nebraska from contamination by fertilizers or pesticides. To accomplish this goal, the Act provided the legal requirements for the future use of chemigation as a means of nutrient or pesticide application.

The Nebraska Department of Environment Energy (NDEE) developed and implemented the rules and regulations necessary for irrigators to utilize the practice. Under the NDEE rules, Nebraska's Natural Resources Districts were given the responsibility to manage the chemigation permit component that ensures that proper safety equipment is present and functioning properly.

The chemigation certification program is responsible for training Nebraska producers about the Nebraska Chemigation Act and the Rules and Regulations as developed by the NDEE. Certification applicants are required to attend a training program and pass an exam. The Act allowed the NDEE to contract with the University of Nebraska to deliver the training program.

A chemigation applicator certification card will be issued to successful applicants by the NDEE. The certification expires on January 1, 4 years after it is issued.

2020 Chemigation Training

more dates at <https://edmedia.wufoo.com/reports/2020-chemigation-training-dates/>

Madison	Thursday, February 27, 2020	9:00 AM	Norfolk, Madison County Extension Office
Madison	Thursday, January 30, 2020	1:00 PM	Norfolk, Madison County Extension Office
Holt	Tuesday, March 3, 2020	1:30 PM	O'Neill, Holt County Courthouse Annex
Antelope	Thursday, March 5, 2020	9:00 AM	Neligh, Courthouse Basement Meeting Room
Holt	Thursday, March 12, 2020	1:30 PM	O'Neill, Holt County Courthouse Annex
Madison	Thursday, March 19, 2020	9:00 AM	Norfolk, Madison County Extension Office
Holt	Tuesday, April 14, 2020	9:30 AM	O'Neill, Holt County Courthouse Annex

IN THE DIRT

Plants for Pollinators

Consider adding plants to your landscape that will benefit pollinators. It is necessary to have a variety of plants blooming the whole growing season, April through October. Native plants are important to include because they have pollen and nectar sources for our native pollinators. Many of our favorite garden perennials are great for pollinators. It is fine to include them too, even if they are not native. Do not forget food plants for butterfly caterpillars. Herbs are perfect for pollinator gardens. And remember, no pesticides.

For a list of plants visit [:https://lancaster.unl.edu/hort/landscape/pollinatorplants.shtml](https://lancaster.unl.edu/hort/landscape/pollinatorplants.shtml)

Care for Holiday Plants

Christmas cactus, amaryllis and poinsettias are popular gift plants during the holidays. They are beautiful, and fortunately, are not difficult to grow. Here are a few tips for each, to keep plants healthy until next Christmas, if you gave or received one this year.

Poinsettias

Many poinsettias hold their leaves and remain attractive after the holidays. At home place the poinsettia where it will receive maximum sunlight and cool night temperatures (60-65 degrees). Keep the plant away from very cold drafts and furnace vents that will dry the plant out quickly and possibly even scorch the leaves. The soil should remain evenly moist, but not soggy. About 2 weeks after receiving the plant, fertilize it with a complete fertilizer.

Depending on several cultural factors, your poinsettia will do one of two things after the holidays- hold onto its leaves or drop its leaves. If the plant holds its leaves, treat it like any houseplant. Leave it in a sunny location



and apply a complete, water soluble, blooming-plant fertilizer once every two weeks.

If the plant loses its leaves, place it in a bright, cool location (50-55 degrees), such as on a basement window ledge, but avoid locations with temperatures above 60° F degrees. Let the soil dry out, but never let it get so dry that the stems start to shrivel. Allow the plant to rest in this condition until spring. In late April or early May cut back the stems to 3-5 inches from the soil and place it in a bright, warm location, watering whenever the soil dries out. New growth will begin to emerge. Pinch the new shoots back when they reach 4-6 inches in length to encourage bushiness. Plants can be grown on as a houseplant during summer or set outside when night temperatures stay above 60 degrees.

When outdoor night temperatures become cool, 55°F-60°F, bring the plant indoors to a sunny location. Before bringing it indoors, inspect the undersides of the leaves carefully for signs of insect pests, particularly whiteflies. If you do see signs of insects, get help from your local garden center on control before you bring the plant inside.

Poinsettias are influenced by day length to initiate blooming, specifically they need short days and long nights. Starting in late September poinsettias need complete darkness from 5 p.m. to 8 a.m. daily. Put a cardboard box, heavy paper bag or other device over the plant each day at 5 p.m. to provide the “long night” that is needed. Lights from any lamps will prevent normal flowering of an uncovered plant. Be sure the plant still gets plenty of light during the daytime hours.

Continue this “long night” treatment until the plant bracts show color in late November. Short days and 60-65°F night temperatures are essential for good bract development.

Christmas Cactus

If you received a Christmas cactus after the holidays, find a bright window without direct sun and apply a complete, water soluble, blooming-plant fertilizer once every two weeks. Water thoroughly when needed, but allow the top inch of soil to dry out between waterings. Leaf pad color is a good indicator of water needs; they will change from bright medium green to lighter color when plants get dry. Check the soil for moisture to be sure. Christmas cactus do better indoors than outside in summer, so once you find a window where it's growing well, leave it there.



In fall, Christmas cactus often begin to initiate flower buds without much effort from the grower. Once days get shorter in fall, especially if night temperatures in your house are also cooler, flower buds will soon begin to form. Plants will be in full bloom in approximately 2 1/2 months.

Amaryllis



Often amaryllis sold as gift plants come already potted in a container, but if yours didn't then choose a container that is only 1-2 inches wider than the bulb. The preferred soil mix for amaryllis is high in organic matter; a peat, perlite/vermiculite mixture would work well. Place the bulb in the container so that it is only halfway below the soil. Water it thoroughly, until water drips from the drainage holes. Allow the soil to dry, and rewater sparingly until the plant's roots are well developed, and growth has begun. Overwatering can lead to bulb rots.

Place the plant in bright light, but not direct sun to lengthen flower life. Once growth begins, apply a complete fertilizer, either slow release or liquid. Water soluble fertilizer can be applied about twice a month. Consult the label on slow release products for the right amount and application timing.

Temperatures of 70 to 75° F are fine until the bulb begins to root, and leaves or flower stalks(s) begin to appear. Then move the plant to the coolest location possible in the house, where it

will still have good light. Foliage is weakened by being forced too rapidly under higher temperatures. During bloom, cooler conditions will prolong the flowers.

Usually leaves appear first, followed by one or two flower stalks. Each stalk can have anywhere from 2 to 6 flowers each. Once the flower start to fade, pinch or cut them off. Remove the flower stalk by cutting it down to just above the bulb nose, once all the flowers are gone.

In August, begin withholding water and allow the foliage to die. Once the leaves are dried and brown, cut them off a couple inches above the top of the bulb. Place the plant, pot and all, in a cool (50-60°F degrees) dark place for 6 to 8 weeks. Bulbs can be kept in dormancy as needed to time their bloom for the holiday season.

After at least 6 to 8 weeks have passed, bring the plant out into a sunny location and begin watering it as normal. Amaryllis like to be a little pot bound, so they only need repotting every 2-3 years. A flower bud should appear in a few weeks.

Bulbs that had four or more healthy leaves throughout the summer should be large enough to flower; those with less foliage may not flower. However, with proper care non-flowering bulbs can be redeveloped for blooming in future years.

Source: <https://acreagenebraska.org/> Images from Pixabay.



All That Glitters

Trendy or not painting plants is a surefire way to kill them. Plants have pores (stomatal pore) that are located mostly on the surface of leaves. These pores are how plants gain access to carbon dioxide to carry out the process of photosynthesis. They are tiny and typically not visible with the use of a microscope.

When we paint the surface of the plant we block the ability for the plant to exchange gasses with the atmosphere. When this happens the plant is no longer able to gain access to convert carbon dioxide into sugars.

Something else happens when we paint plants is the blocking of sunlight. Plants unlike animals make their own food. Now some marketing campaigns have lead us to believe that by adding fertilizers to water we are feeding plants. Which is a flat out lie. Plants make their own food through the process of photosynthesis. But in order for this pathway to happen plants need access to light.

Instead of painting plants for the holidays consider painting the pots. It is a fun interactive and safe for the plants.

Source: <https://grobigrad.com/2019/12/02/all-that-glitters/>

Prune Evergreen Shrubs in Winter?

As acreage owners ponder the winter landscape, trying to answer the question – “Is now a good time to prune my shrubs?” – It is wise to consider a few basic guidelines.



First, the easy one; forget about pruning evergreens. As Julie Janoski, Plant Clinic manager at The Morton Arboretum in Lisle, IL indicates: “Evergreens aren’t entirely dormant in winter, so they will respond to pruning,” she said. In a warm spell, “it might trigger them to try and start growing.” The tender new growth would be vulnerable to freezing in the next cold snap.

With this in mind, it’s best to put off pruning boxwood, yews, arborvitae and holly until they’ve finished pushing out a flush of growth in the spring. This timing will avoid damaging these plants.

Speaking of easy, a good rule of thumb for spring blooming deciduous shrubs such as viburnum, quince, dogwood and lilac is to prune them soon after they finish blooming. Summer blooming

deciduous shrubs such as mockorange and rose of Sharon should be pruned just before growth begins in late winter.

With either spring or summer blooming deciduous shrubs, it’s best to use a thinning technique rather than a shearing approach. This is done by simply removing a third of the oldest stems at the ground level each year. This technique removes the plant parts that are most susceptible to borers and cankers and keeps the stems in the plant that will be most vigorous and produce the best blooms.

For the evergreens, each species should be treated differently. The thinning technique works well, but only for yews, holly and boxwood. Small pines and spruce can be kept in check by cutting the new growth in half each year, much like Christmas tree growers do in June. Not much can be done to reduce the size of arborvitae, other than to shear them. Unfortunately, shearing is tricky for many reasons.



When hedge trimmers are used to shear a plant, many indiscriminate cuts are made, without attention to the best location...similar to topping a tree under power lines. The result is a rebound of unwieldy growth in some cases, and in others, a lack of growth altogether. The tricky part of shearing is being aware that if the dead zone of bare wood (that all evergreens have) is cut into, there will be no regrowth, leaving bare branches for the rest of the life of the shrub.

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