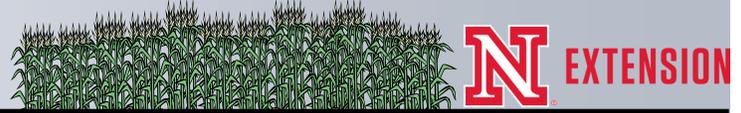




# Nemaha County

## Ag Line

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By: Gary Lesoing, Nemaha County Extension Educator

### REMEMBER FARM SAFETY THIS HARVEST SEASON!

Each year in Nebraska and other states there have been tragic farm accidents. This reminds us of the importance of farm safety and how dangerous farming can be. Statistics indicate that in 2014 there were 568 fatalities in the agriculture, forestry, fishing and hunting category, compared to 500 in 2013, a 13.6% increase. With fall harvest just beginning, safety needs to be an important focus for farmers and others in our rural community. Agriculture is one of the most dangerous industries in the United States. Approximately 100 children and youth die in farm work accidents annually in the United States. In the spring of 2010 there were five farm fatalities in Nebraska in a matter of a few weeks. In 2017 there were four farm fatalities in Nebraska, with 3 men fatally injured in different farm accidents. A young adult was killed in a loader accident, another man became tangled up in equipment while feeding livestock, and another died when he was working on equipment and it fell on him and crushed him. It is extremely important to be aware of farm hazards to prevent potential farm accidents and even fatalities on the farm. In 2019, there were at least 5 farm related fatalities, with three in southeast Nebraska. These accidents involved working with grain, being pinned between a tractor and equipment and a tractor being hit by a semi-truck. Corn grain harvest is starting in earnest, with soybean harvest following soon here in southeast Nebraska. It is very important for all of us to remember safety during this busy time of the year. It is important for farmers and travelers alike to be aware of the dangers of harvest equipment being transported on the highways and country roads.

The days are getting shorter, so sometimes it is very difficult to see, especially around dusk or dawn when the sun sometimes blinds you as you drive toward it. Country roads can be dusty, making driving particularly hazardous when harvest equipment is moving from field to field. With the potential for wet conditions this fall, some country roads may become soft and very challenging to transport loads of heavy grain and move farm equipment from field to field. Be prepared for both kinds of road conditions this fall. Last spring a driver was killed on I-80 near York, NE in a multicar pile up due to the blowing dust off of a field. A semi-truck driver was also killed last spring near Schuyler when he tried to pass a tractor pulling a feed wagon and he ran off the road into a creek. These situations call for cautious driving for the traveler, but it is important for farmers to have

the proper SMV (Slow Moving Vehicle) signs on their equipment as well. It is also important that farm tractors and combines have functioning hazard-warning lights. Operating headlights and hazard-warning lights provide advance warning for other drivers on highways and country roads.

Safety at the farmstead and in the field must not be overlooked either. Equipment, tractor, and truck operators must always be aware of other people in the area, particularly young children and elderly people. When entering the farmyard, especially at night, be alert to pedestrians. If you are starting up and will be moving equipment, check to make sure everything is clear and there isn't anyone playing or looking around the equipment. Many times young children may be playing in and around equipment and are difficult to see. Sometimes people may be looking at equipment and they do not hear it being started up and may end up in the way and at risk of getting injured. The most common accidents that occur in handling grain involve suffocation, falls, entanglement, and electrocution. In 2018 there were two fatalities reported in grain bin accidents in Nebraska. Just last month a worker was killed in a grain handling facility at Fremont, NE. Another farmer was electrocuted on the farm this year. There was also a fatality from a utility vehicle accident in Nebraska. Always protect yourself, use caution, and practice safety first!

Finally safety in the field must not be overlooked. While you may be very careful when you're on the road or at the farmstead when other people are involved, **don't forget safety in the field**. During harvest there is pressure to get the crop harvested as soon as possible. We must not ignore safety when we're harvesting the crop. **Always** be sure to follow all safety guidelines listed in the manufacturer's operator manual and **always** have shields in place, and support equipment properly when working under it. Never try to unplug a combine when it is running. There have been too many people that have lost a limb or have died trying to do this. Here is a link to the website The National Education for Agricultural Safety: <http://www.necasag.org/nationalfarmsafetyandhealthweek/>. This website has some excellent resources that address farm and agricultural safety issues. The bottom line is **"JUST BE CAREFUL!"**

### COVER CROPS - A TOOL YOU CAN USE ON YOUR FARM

The last few years there has been a major focus on cover crops here in southeast Nebraska as well as other

parts of Nebraska. Cover crops have been used for a number of years particularly in organic cropping systems. They have been a source of nitrogen, organic matter and other nutrients when incorporated as green manures in these systems. Cover crops have also been planted as forage crops for livestock for grazing or hay for many years. In recent years there has been increased interest in the use of cover crops in conventional cropping systems. The USDA NRCS (Natural Resource Conservation Service) has promoted cover crops and provided cost-share programs for farmers to encourage their use to help improve soil health and reduce erosion and degradation of soils.

With crops just starting to come out and the recent rains last weekend, cover crops can be drilled in to provide much needed erosion control on highly erodible land. Many areas of southeast Nebraska received some torrential rains this year, and there has been extreme erosion in many areas. Check with your local NRCS about programs on the use of cover crops to control ephemeral erosion. Some producers have used cereal rye, wheat or triticale with success in controlling erosion. On highly erodible soil, a cover crop of rye following soybeans can be very beneficial, it is generally the most winter hardy of the cereal crops. Cover crops may be used as an annual waterway that can hold the soil and prevent ephemeral erosion. Cover crops can also have the potential to provide other benefits as well; i.e. improve water infiltration, scavenge nutrients, weed suppression and forage for livestock.

If you need forage for grazing in late winter or early spring, either rye or triticale provides excellent forage for cows or yearlings. Either of these forages planted in corn stalks also provides excellent forage for grazing along with the corn stalks, and generally can be utilized longer in the spring for grazing if the field is going back into soybeans. These forages can provide excellent quality forage, lower hay and pasture requirements, and reduce soil erosion from springtime thunderstorms. A number of farmers in southeast Nebraska are making excellent use if cereal rye as a forage for their cowherds and also seeing some of the other benefits.

In research conducted in Illinois, rye has shown to be beneficial in suppressing some weeds (Marestail and Glyphosate-resistant Marestail) and also disease pests, i.e. SCN (Soybean Cyst Nematode), SDS (Sudden Death Syndrome) and other foliar diseases in soybeans. Research in Northeast United States shows that rye has an allelopathic (weed suppressing) effect on pigweeds, lambsquarters and crabgrass. Recent research at Kansas State University showed cereal rye was effective in suppressing growth of Palmer Amaranth, one of the most invasive weeds in the United States that has recently made its presence in southeast Nebraska. Research indicates cereal crops, such as wheat and rye can delay emergence up to 3-4 weeks and slow down growth of Palmer Amaranth compared to no cover crop. Farmers in Nebraska have also seen the benefits of cereal rye suppressing Marestail. A significant amount of research is currently being conducted in Nebraska to evaluate the

impact of cover crops in cropping systems, although many farmers have been utilizing cover crops in no-till cropping systems for several years and also as forages for grazing. Research is indicating benefits of growing a cover crop by adding carbon and building soil structure, especially under no-till environments. If winter hardy cover crops like rye or triticale are planted, they are usually chemically killed prior to planting in the spring, although under intensive management some producers are planting green into the rye with success. If using a cover crop, be sure to check with your crop insurance agent on the rules for cover crop termination in crops. To find out more about cover crops in Nebraska, go to: <https://cropwatch.unl.edu/cover-crops>. You can also go to: <https://cropwatch.unl.edu/farmresearch/resultshome> and find a number of on-farm research experiments that have been conducted across Nebraska with cover crops the past few years. If you have questions, feel free to contact me at (402) 274-4755.

## GOOD TIME TO SOIL SAMPLE THIS FALL

Fall is an excellent time to soil sample fields for nutrients following harvest. In 2019 there were a number of fields in southeast Nebraska that showed signs of nitrogen deficiencies, with potential for other nutrient deficiencies or imbalances. Reports of preliminary stalk nitrate tests show low stalk nitrate levels that indicate a probable nitrogen deficiency that will also result in lower corn grain yields. The erratic weather conditions we experienced this past growing season resulted in extreme growing conditions throughout southeast Nebraska. As we plan for 2020 it is important to use fertilizer wisely and being efficient as possible with the fertilizer that is applied. With the erratic weather patterns and some torrential rains we sometimes have received, there is potential for nutrients to be lost through erosion, leaching or denitrification. You may want to consider soil sampling fields for nutrients, such as phosphorus, potassium, sulfur and nitrogen. With very irregular precipitation patterns this growing season, crop yields will probably be extremely variable this year, with some very good to excellent yields and others, poor to average. Depending upon soybean yields in 2019, you may be able to apply a significant nitrogen credit (at least 40 lbs. of N) for 2020 corn following soybeans. Nutrient deficiencies in soil can also have a significant impact on yields of both corn and soybeans. If you soil sample, you may be able to save on your fertilizer bill for next year. Soil pH can have a real impact on nutrient availability and consequently reduce yields, particularly soybeans. Liming could help improve the availability of nutrients in your fields and help improve yields. This is why soil sampling is important. If you have fields that have not been sampled for several years, it may be a good time to sample these fields.

Under irrigation where yields are usually less variable than dryland crops, there is heavy removal of nutrients in the grain that may need to be replaced for next

year's crops. Soil sampling in the fall or winter also allows for more time in planning limestone and fertilizer programs for the coming year. The UNL publication EC117 "Fertilizer Suggestions for Corn" provides excellent advice for sound fertilizer management and gives you the tools to make sound decisions on fertilizer needs for corn. This publication can be accessed on the web at: <http://agronomy.unl.edu/faculty/ferguson/ec117.pdf>.

University of Nebraska-Lincoln Extension also has a nitrogen calculator available on the web you can use to calculate nitrogen needs for your corn crop. If you go to this link: <http://cropwatch.unl.edu/soils> and then click on **Corn Nitrogen Recommendations Calculator**, you will be able to access this tool.

If you have questions on soil sampling, soil test labs in Nebraska or other questions, feel free to contact me at University of Nebraska Extension-Lincoln in Nemaha County at (402) 274-4755 or your local county Extension office.

## **FALL IS A GOOD TIME FOR WEED CONTROL IN YOUR LAWN, ON YOUR FARMSTEAD AND IN YOUR PASTURES**

With the all the rain received this fall, weeds are flourishing and several biennials and winter annuals have germinated as well in lawns, non-crop areas and pastures. Hopefully we will get a break in the weather in the next few weeks and you will be able to treat these weeds. If you have troublesome perennial or biennial weeds in your lawn, in non-crop areas around your farm or in your pastures, fall is a good time for control. In lawns, now is an excellent time to eliminate perennials, such as dandelions, plantain, clover, and ground ivy. This time of year perennial weeds are transporting carbohydrates and energy to the crowns and roots for storage over the winter. Herbicides applied to weeds now should be transported down to the roots where it will act to kill those roots. In the fall, weeds have less wax on the surface so absorption is greater into the plant. Even if weeds survive an application of herbicide in the fall, they are often weakened and killed by the cold temperatures of winter. The application of growth regulator herbicides, most of which are 2, 4-D based, will do an excellent job this time of year in reducing lawn weeds. Most herbicides used around the yard for broadleaf weeds will contain both 2,4-D and Banvel (dicamba). Some of several commercial herbicides used for broadleaf weed control include: 2, 4-D, Banvel, Weed-Be-Gon, Trimec Plus, and Trimec Classic. These are just a few of the well know herbicides, but there are many

more that contain 2,4-D and/or dicamba and will do the job as well. Wait for a warm, sunny day with little or no wind to spray if possible.

A very difficult weed to kill is field bindweed. Bindweed should be treated when the plant has vigorous fall growth. The application of one quart of 2, 4-D or one quart of 2, 4-D and ½ pint of Banvel per acre is recommended. This won't kill all the bindweed out, but it will reduce your infestation. You should plan on treating the bindweed for several years before you completely eliminate it. You can also spot treat areas with Roundup (glyphosate) this time of year, but it will kill your grass as well.

For winter annuals or biennials, an application in the rosette stage of growth is recommended. It is much easier to control these weeds in the rosette stage than in the spring after they bolt. Herbicides should be applied after rains to actively growing weeds for best control. Some of the weeds that fall into this category include field pennycress, common mullein, bull thistle, musk thistle and poison hemlock. Good control of musk thistle can be obtained in October and November. Ideally herbicide should be applied close to a hard frost. Research in Iowa indicated effective control was achieved using 2,4-D with applications made after several nights when temperatures fell below 32 degrees. With the leaves of musk thistle close to the soil surface, the plant is protected from freezing temperatures. Daytime temperatures in the 50's are satisfactory for control. The addition of Banvel to 2,4-D provides better weed control as temperatures get colder. If it gets really cold before you get a chance to spray and thistles may be dormant, use Tordon 22K because it has residual activity up until next spring.

The use of herbicides without good cultural practices will usually give poor weed control. Be sure to read and follow label directions when using herbicides in your lawn or non-cropland. If you have other questions on weed control, contact me at the University of Nebraska Extension office in the lower level of the courthouse at 1824 N St in Auburn, (402) 274-4755.

## **FALL CONTROL OF WINTER ANNUALS**

With harvest getting started here in southeast Nebraska, there is an opportunity to check your fields this fall and provide weed control in your fields if needed. By identifying the weed, extent of any infestations and locations of weed problems, you will have a better strategy for managing these weeds in the future, maybe even this fall. Marestalk or maybe more specifically, glyphosate resistant marestalk has become a major problem in Nebraska. Control has been challenging in recent years. Once it bolts from the rosette state it is hard to control. It can emerge in the fall, so keep an eye out for it. Several growers have actually found that cereal rye has been

very effective in control of marestail. This may be another option and at the same time provide erosion control, potentially improve soil health and could provide grazing for cattle. Fall control of winter annuals should improve field conditions next spring for planting and weed control in next year's crop.

Do you have several winter annuals emerging in your fields now or in the spring blanketing your fields? Several winter annuals have been increasing in the region due to increasing adoption of reduced tillage or no-till systems. Winter annuals, such as henbit, pennycress, chickweed, marestail and tansy mustard are problems in some fields, but generally can be controlled with most herbicides. In 2018, it appeared in general weed control was much better than in the spring of 2017, especially marestail control. In 2019, there were many challenges with weed control in several fields. Sometimes wet or windy weather can prevent you from timely controlling weeds. With the rains we have received in September, and more forecast for early October, you should get a good idea during harvest of winter annuals emerging this fall that may require control. Another weed that is showing up more in the southeast corner of Nebraska is field pansy. It is a tough weed to kill and has caused some problems in Kansas and Missouri. If you have a problem with these weeds, fall is an excellent time for control.

If you let these weeds overwinter, they will begin growing next spring and start robbing soil moisture from subsequent crops and create dry soil conditions and a poor seedbed especially for early planted corn. They also can have the opposite effect if springtime environmental conditions are cold and wet. A vegetative mat of winter annuals can slow drying and warming of soil before planting thus delaying planting. In the spring time, unfavorable weather conditions may also make it difficult to apply burndown herbicides in a timely manner and delay planting further. Under these types of conditions, a fall herbicide application can provide a wider window for planting next spring.

So when is the best time to spray in the fall? The ideal treatment period is from late October through mid November. The later you wait the more weed seeds that will germinate and that you can control in the fall. Don't be concerned that it is too cool to control weeds in late October or November. These are cool season plants and are not killed by frost. They will be actively growing during mild weather and are susceptible to herbicides even after a hard freeze. Herbicides are more effective and economical to use on winter annuals in the fall than in the spring.

What are the most economical herbicides for fall treatment? Glyphosate, 2, 4-D and dicamba (Banvel) are very effective treatments on most winter annuals. Using chemicals other than glyphosate or a combination of glyphosate with another chemical is a good practice to reduce the potential for development of glyphosate resistant weeds. If you believe you have glyphosate resistant marestail, you will want to use 2, 4-D or dicamba for control in the fall.

The 2019 Guide for Weed Management (Extension Publication EC130) also has ratings for weed response to fall burndown herbicides for both corn and soybeans. For questions, contact me at the Nemaha County Extension Office at (402) 274-4755.

## **FALL IS A GOOD TIME TO SAMPLE FIELDS FOR SCN**

With soybean harvest just starting, you may want to consider getting your fields sampled for soybean cyst nematode (SCN) if you have never sampled them or if it has been a while; especially if yields may be lower than expected or if you have areas in fields that have spots that yielded poorly. These could be hot spots for SCN. It would be good to definitely sample these areas of the field. Sudden Death Syndrome (SDS), a disease that lives in the soil also showed up in some fields this year. There is a very close relationship between SDS and SCN. Many times if you have SDS, you also may have SCN. You may want to sample areas in a field where SDS was present for SCN.

We have been emphasizing the importance of sampling your fields for SCN the past several years. Loren Giesler, UNL Extension Plant Pathologist and John Wilson, Extension Educator have conducted several workshops over the years, about the importance of managing for SCN and that soybean cyst nematode is the most important pest of soybean in the world. It can reduce soybean yields 30% without showing any visible symptoms. It can cause significant yield loss if not kept under control. It has been moving west from the Missouri River. This pest has been identified as a common problem in Missouri and Iowa and it is being identified in more fields each year in Nebraska as well. Every county that borders the Missouri River in Nebraska is infected with SCN. Soybean cyst nematodes live in the soil and once they infest your soil, you will have them forever. Most of the soybean growing regions of the United States are infested with SCN.

The University of Nebraska-Lincoln has conducted SCN research in Nemaha County and other locations in southeast Nebraska as well. Nebraska Extension's On-Farm Research Program had a research trial evaluating the seed treatment ILeVO on a farmer's field in Missouri in 2016. Nebraska Extension and the Nebraska Soybean Board continue to have a program that will pay for a soil analysis for SCN. If you are interested in sampling some fields, UNL Extension in Nemaha County has instructions on sampling for SCN, a soil probe available for use, and sample bags in our office. I am also available to sample fields in southeast Nebraska this fall. Feel free to call (402) 274-4755 or stop by our office in the Nemaha County courthouse in Auburn if you are interested in participating in this program.

So if you sample your fields, what should you do if you find SCN? Soybean cyst nematodes can be controlled by best management practices and their impact on soybean production will be reduced significantly. If you do have SCN, plant a resistant variety, rotate to non-host crops, such as corn and wheat, and plant soybean varieties with different sources of resistance. You may want to consider planting these fields last and/or cleaning any tillage or planting equipment before moving on to a different field. Check with your seed dealer to determine the best soybean varieties to meet the requirements of resistance for SCN. If you have any questions about SCN, feel free to contact me at (402) 274-4755 or [glesoing2@unl.edu](mailto:glesoing2@unl.edu).

## FARMER/RANCHER GRANTS AVAILABLE

I would like farmers to be aware of this program in Nebraska. For the past 27 years the SARE (Sustainable Agriculture Research and Education) program has made available Farmer/Rancher (Producer) grants. In Nebraska we are part of the North Central Region so farmers and ranchers compete with farmers and ranchers from 11 other states in this region. Over the years in Nebraska we have received 67 grants for a total of over \$400,000. A farmer or a rancher can apply for a grant to use on their farm and can receive a maximum of \$9,000, two farmers from different operations can apply together for a grant and receive up to \$18,000 for a project and a group of producers (3 or more) can apply together for a grant and receive up to \$27,000 for their project. This program is focused on providing support to farmers and ranchers that are striving for agricultural sustainability. These proposals are due December 5, 2019. Farmer Rancher grants are to be submitted on-line. This is an excellent opportunity to investigate an innovative idea on your farm or even with other farmers and receive funding to assist with your project.

What type of projects will this program fund? They are looking for proposals that will address specific issues on farms. A recently funded project conducted in south central Nebraska addressed the use of cover crops in no-till production under irrigation. Another rancher is looking at agri-tourism as a way to diversify their ranching operation. A recent Nebraska project was funded to investigate the feasibility of growing canola, pressing the seed for oil and then recycling the used canola oil for use as a fuel. Another Nebraska farmer/rancher grant experimented with aquaponics to grow vegetable greens and fish in urban Omaha. These grants are for farmers and ranchers to conduct on-farm research and education projects that explore and advance sustainable agriculture. A proposal can build on something that has already been investigated or address something new. It is important not to submit a proposal on something that has already been done. If you are interested in learning more about the SARE Farmer Rancher Grant Program, go to this website:

<http://www.northcentralsare.org/Grants/Our-GrantPrograms/Farmer-Rancher-Grant-Program>. You can access all the information you need including an application for the grant, the guidelines, requirements, call for proposal and information on previously funded grants. Projects address many issues in alternative or diversified agricultural enterprises, including methods of grass-based meat goat production, use of flames for non-chemical weed control, use of wind and solar energy for water development and supplemental power for home and shop, using meat goats to control sericea lespedeza and prairie restoration to use for agritourism and education. These are just a few of the previously funded projects. Three years ago, Dean and Deb Stevens from Richardson County Nebraska received a Farmer/Rancher Grant. The focus of their project was more efficient use of nitrogen (N) by their corn crop. With the use of a drone with a sensor, they determined the N requirements of the growing corn crop and developed a N prescription map for the corn field and then applied N with an airplane to the field. Crop yields, nitrogen use efficiency and the economics of this system will be determined for this on-farm experiment. This project was repeated and expanded with another farmer in 2018. There are usually about 200 applications of which about 50 are funded each year in the North Central Region. You can contact Joan Benjamin, the Project Coordinator in the Farmer/Rancher Grant Program in the North Central Region at 573-681-5545 or 800-529-1342 or [BenjaminJ@lincolnu.edu](mailto:BenjaminJ@lincolnu.edu) for information on this grant program. You can also contact me at (402) 274-4755 or [glesoing2@unl.edu](mailto:glesoing2@unl.edu) if you have questions. I am the Nebraska State SARE Coordinator so I am very familiar with this program. There are also youth educator grants available for \$4000. These are due on November 14, 2019. If you have kids that may be interested or know of a 4-H leader or Voc Ag instructor that maybe interested, they can contact me at the phone number listed above. Nebraska has been successful in receiving several of these youth educator grants the past few years. To find out more about the Youth Educator Grant or look at an application go to: <https://www.northcentralsare.org/Grants/Our-Grant-Programs/Youth-Educator-Grant-Program>.

## FARM BILL INFORMATIONAL MEETING SCHEDULED FOR NOVEMBER 12TH IN HUMBOLDT

Austin Duerfeldt, Extension Educator from Southeast Nebraska with a focus on Ag Economics, announced Nebraska Extension will conduct an informational meeting concerning the most recent Farm Bill and options for sign

up on Tuesday, November 12<sup>th</sup> in Humboldt, NE. Nebraska Extension staff will discuss the various programs available through the Farm Bill and what programs may be best for your farm. For more details or to register, you can contact Austin at 402-782-1166 or Gary Lesoing at (402) 274-4755. More details will be forthcoming as we get closer to this event.

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