# Nemaha County Ag Line

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By: Gary Lesoing, Nemaha County Extension Educator

## LOCAL STORM CAUSES CROP DAMAGE TO CORN & SOYBEAN FIELDS

There have been storms in southeast Nebraska the past couple of weeks that have dropped torrential rains on some areas and also caused some hail damage. A storm that came through southern Lancaster County on Thursday, June 18th in the late afternoon caused some hail and wind damage to some fields. On Monday night, June 22nd, an area in southwest Lancaster County and northern Gage County was hammered with hail, strong winds and heavy rains. Then last Friday night, June 26th, storms came through areas in southeast Nebraska and I know northern Nemaha county had some hail, near Brock, damaging crops. While many corn and soybean fields looked pretty beat up a day or two after the storm, it is best to wait and check the fields 7-10 days following the storm before making a decision on what to do with the damaged corn and/or soybeans. University of Nebraska Extension has some excellent resources available at ***CropWatch*** through HAIL KNOW. You can access these resources at https://cropwatch.unl.edu/hailknow . University of Nebraska Crop Experts discuss what to do following having your crops damaged by a hailstorm. One thing for sure, it is recommended to **WAIT 7-10 DAYS and COME BACK AND ASSESS YOUR CROPS.** This time of year we can expect chances of severe weather anytime, so if it does happen, be prepared to address the situation accordingly. If you have questions you can contact Gary Lesoing at glesoing2@unl.edu, (402) 274-4755 or (402) 274-9639 (cell).

## WHAT ABOUT DISEASES IN CORN?

As the corn crop progresses, it is important to check cornfields for potential disease outbreaks. Scouting fields for diseases is an important IPM tool to use to determine if and when corn diseases become problems in corn fields and if fungicides should be applied. It is important to keep updated on ***"CropWatch"*** at http://cropwatch.unl.edu/ to see what diseases or insect pests are moving into Nebraska. Tamra Jackson-Ziems, UNL Extension Plant Pathologist does an excellent job of keeping on top of the corn diseases as they develop around the state. Corn diseases may be developing in the near future, but there will still be time to treat the diseases if warranted. Positive identification of the disease is important, i.e Goss's Wilt, Bacteria Leaf Streak, Southern Corn Leaf Rust and Gray Leaf Spot in corn. If you have some minor infestation, you may be able to spray at a later date, get better control and save having to potentially spray twice for later season infestation of diseases. If corn becomes injured due to hail or wind, this provides an entry way for diseases to enter the plant. Goss's Wilt is a disease that enters the plant in this manner. It is also a bacteria, so a normal fungicide will not control it. Another bacterial disease which could be showing up now is Bacterial Leaf Streak. It has not been confirmed in Johnson, Nemaha, Richardson or Pawnee Counties in Nebraska in previous years, but it has caused issues in other parts of Nebraska. This doesn't mean we do not have it here though. This disease does not need an injury to the corn plant to infect it. This disease has infected fields as early as the V6 stage, so it can be much earlier than Gray Leaf Spot usually infects corn, which looks quite similar to this disease. Southern Corn Leaf Rust has also caused problems in southeast Nebraska in previous years. It is important to scout your fields for this disease. Southern Rust pustules are smaller than those of common rust. Southern rust spores are typically orange to tan in color and produced in pustules predominantly on the upper leaf surface, although they can also be produced abundantly on/near the midrib on the underside of the leaves. Timely fungicide applications can be very effective at controlling rust and other fungal diseases in corn. It is important to remember that making applications too early might mean that the protection they provide may be worn off before substantial Southern Rust or Gray Leaf Spot develops, leaving plants

vulnerable to disease spread. Systemic fungicides can provide protection from disease spread for about 21 days, so application timing is important to make the best use of the protective and curative characteristics of the products. In 2016 some fields were hit hard with infestations of Southern Corn Leaf Rust in southeast Nebraska that came in late summer. I believe the producer may have lost 30-40 bu/ac in yield for an irrigated field. Most hybrids do not have very good resistance to this disease in Nebraska. That is why it is important to scout for diseases throughout the summer.

Under certain conditions the use of fungicides can definitely be insurance against some diseases, especially under circumstances where disease development is more favorable. Fungicides can also serve as a management tool to improve plant health and reduce lodging under adverse weather conditions, which could reduce down corn and potentially increase harvestable corn yields. In southeast Nebraska there have been several reports of significant corn yield responses to fungicide applications, especially in corn hybrids susceptible to Gray Leaf Spot. In all crops, environmental factors and cultural practices, such as variety, planting date and irrigation, may influence the incidence of disease infection. In some years, conditions have been favorable for disease development, such as Gray Leaf Spot, and application of fungicides provided significant yield responses in a number of University trials. In other years, environmental conditions were less favorable for disease development, and fungicides had less of an impact on corn yields.

For corn the best strategy is: apply a fungicide only when warranted, use IPM and scout fields, use recommended fungicide rates and mix or alternate fungicides with different modes of action. If you have questions about diseases in corn or other crop related issues, feel free to contact me at (402) 274-4755, (402) 274-9639 (cell) or at glesoing2@unl.edu.

## BE AWARE OF POTENTIAL MID TO LATE-SEASON SOYBEAN PESTS

As we move into the "Dog Days of Summer" be alert to the risk of potential insect pests in soybeans. While I haven't seen too many grasshoppers to date, you need to continue to scout for infestations, especially along field borders if it gets hot and dry later in the summer for an extended period of time. Treat heavy infestations before they inflict an economic loss to your soybeans. Here is a link to a NebGuide on grasshoppers in crops: http://extensionpublications.unl.edu/assets/html/g1627/build/g1627.htm . If conditions do remain dry this summer, another pest that shows up in soybeans could be the two-spotted spider mite. Dry conditions magnify the impact of spider mites, and the late-planted soybeans will be impacted more. For more information about the impact and treatment of spider mites in crops, view this article archived from CropWatch in 2016, http://cropwatch.unl.edu/2016/managing-spider-mites-corn-and-sobyean.

The bean leaf beetle is another pest that sometimes can cause economic damage to soybeans here in southeast Nebraska. If populations across a field average 3 beetles or more per sweep consider an insecticide treatment. If the bean leaf beetle population is below this level, scout the field five days later. Injury to the soybeans usually occurs when beetles are feeding on the pods. I have not seen or heard of any reports of high populations in southeast Nebraska, but we can have high populations of bean leaf beetles later in the growing season. If populations are high during the reproductive stage, chemical treatment may be required to prevent economic loss. For information on treatment of bean leaf beetle, go to: http://cropwatch.unl.edu/archive/-/asset_publisher/VHeSpfv0Agju/content/1185519.

I have discussed the painted lady butterfly and the thistle caterpillar in a previous article. A number of farmers treated fields in 2019. If populations of a second generation of the painted lady butterfly are high, it may result in the need for treatment in soybeans later in the growing season, probably in August. Treatment thresholds are 20% defoliation for soybeans in the reproductive stage.

In 2011, we were invaded by an unusual looking caterpillar that caused some significant crop damage to soybeans late in the summer. The silver spotted skipper caused defoliation of soybeans in a number of fields. A few fields were almost completely defoliated by very high populations of this caterpillar. Some producers treated fields with insecticides, while others decided not to treat. I have not heard of any high numbers causing problems this year yet. The caterpillar has a yellow body, narrow neck and brown head with orange eyespots. It was very unusual looking, almost like some creature from outer space. These caterpillars come from eggs laid by a butterfly that has brownish-black wings with white spots on the underside of the wings. In 2011 we had thousands of these butterflies in the area with several questions about them.

A couple of pests that are showing up in southeast Nebraska are the Soybean Stem Borer and the Soybean Gall Midge. Unfortunately once

they infest the soybean plant, there is no insecticide available for control. For the stem borer, if it is identified in a field, harvest this field early to reduce the impact of lodging and yield loss from the stem borer. Here is a guide to soybean stem borers, with recommendations on management: http://extensionpublications.unl.edu/assets/pdf/g2082.pdf . There are areas along the Kansas border in Nebraska border counties with infestations of this pest and outbreaks have also been found in Otoe County.

I have previously mentioned the soybean gall midge in a publication. While this pest has been found in counties of southeast Nebraska, infestations have been worse in Cass and Saunders counties, but showing up in locations of Lancaster and Otoe counties as well. To find out more about the soybean gall midge, go to: https://cropwatch.unl.edu/2018/orange-gall-midge-soybeans .

If you have questions concerning any insect pest, contact me at the Nemaha County Extension office at (402) 274-4755.

## MANY FACE-TO-FACE EVENTS SWITCHING TO VIRTUAL THE SUMMER AND FALL OF 2020

Due to the concern from COVID-19, many usual face-to-face Extension Programs (Field Days, Workshops, Tours and Conferences) will be held virtual this year. What does this mean? Information that you would normally see at a face-to-face event will be videotaped and made available to farmers, ag consultants, ag suppliers and other ag service providers online through podcasts, webinars, etc. Keep informed through your local Extension website and also at ***CropWatch, https://cropwatch.unl.edu/*** to see if new topics are available to view throughout the summer. There will also be some virtually field days available to watch as well. If interested, the On-Farm Research Network on Facebook has published a number of videos about the research that is being conducted in Nebraska and will have several more to watch throughout the summer. You can access these field days at: https://www.facebook.com/OnFarmResearch/ . If you have questions in regard to some of the virtual offerings from Nebraska Extension feel free to contact Gary Lesoing at glesoing2@unl.edu or (402) 274-4755 or (402) 274-9639 (cell).

## NITROGEN MANAGEMENT IN CORN

In 2019 with all the rain received and flooding in southeast Nebraska, much of the corn looked very anemic, even up to harvest. End of season stalk-nitrate testing indicated some growers were nitrogen deficient at harvest and corn yields were below expectations. Other growers that applied nitrogen during the growing season had adequate nitrogen to produce excellent corn yields in 2019. At the end of June this year, 2020, corn looks much better than in 2019, at least it appears to have sufficient nitrogen (corn is a dark green color). With good growing conditions in southeast Nebraska, there may be an opportunity to increase corn yields with added nitrogen. I have seen some growers fly on nitrogen with an airplane last week. Earlier this summer, some growers were applying nitrogen dry with a ground rig over the top. Farmers with center pivot irrigation also have the opportunity of applying liquid nitrogen at different times throughout the growing season. This is a very efficient method of applying nitrogen when the corn plant needs it most.

There may be a few fields in southeast Nebraska that have areas that are staying yellow, but nothing like last year. These yellow areas have probably lost nitrogen to the environment if liquid nitrogen had been applied on the surface, much of this may have washed away. If nitrogen was applied into the soil, it may have been leached down below the current root zone. Under the saturated (anaerobic) soil conditions, nitrogen may have been lost to the atmosphere as a gas in a process called denitrification. All of these factors may be contributing to the yellow corn and it may respond to added nitrogen.

With current technology, some producers are using sensors either on a ground rig or with an unmanned aerial vehicle to evaluate nitrogen status of corn and applying nitrogen accordingly to meet the crop needs. Nebraska Extension has been conducting research using sensors on a high clearance ground rig to improve nitrogen management, especially in nitrogen management areas where ground water is threatened by high nitrogen levels. A base amount of nitrogen is applied before planting and nitrogen is then side-dressed with this rig to meet the crop needs. To learn more about "**Project Sense**" this research project and tool for nitrogen management go to: http://cropwatch.unl.edu/

projectsense . Nebraska on-farm research is conducting nitrogen management through **Project Sense** on dryland fields here in southeast Nebraska in **2020**.

If corn is nitrogen deficient, the application of 75-100 pounds of nitrogen per acre should pay for itself if you can get it on. The past few years, farmers in northwest Missouri, northeast Kansas and southeast Nebraska have applied nitrogen with airplanes in fields that were N deficient. High clearance ground rigs may also be used for nitrogen application. If sensors indicate corn may respond to added nitrogen with higher yields under ideal growing conditions; this may be the year when it pays to add additional N in-season to some of your corn fields.

If you have questions about this subject feel free to contact me at Nebraska Extension (402) 274 -4755 or (402) 274-9639 (cell).

## BAGWORMS STILL COULD BE A PROBLEM

I know many of you have evergreen trees, especially cedar trees in windbreaks or evergreens (spruce, firs and pine trees) on your farmstead or in your landscape. Last week I was called to a home here in Auburn in Nemaha County and found my first hatch of very small bagworms on an arborvitae tree. I believe the hatch and emergence of bagworms was later than normal in 2020 due to the cold temperatures we had this spring. While we have had an ongoing battle with bagworms for several years and have reduced their numbers significantly in southeast Nebraska, there are still bagworm infestations in some areas. Last year was one of the worse years we have had for bagworm infestations in southeast Nebraska in recent years. In southeast Nebraska, the larvae emerged over several weeks during the summer, but usually beginning around Memorial Day. With the variable weather we have seen this spring, some very warm and some colder than normal temperatures, it is difficult to predict when bagworm larvae may emerge. It is important to keep an eye on your evergreen trees this year and watch for infestations of bagworms. If you had bagworms last year, and have not removed the bagworm bags from your trees earlier this spring, you should check your trees this month and remove those you can easily pick off your trees.

Bagworm eggs usually hatch in late-May to mid-June. Check your evergreens for infestations of these young larvae. They will form a new bag over their bodies. They start out very small with a 1/8" bag around their bodies, but grow in size and construct a bag 2" long by mid-August. Bagworm larvae damage the tree by feeding on leaves or needles causing defoliation. It is best to spray when you see the larvae. If you do see them, there are several types of sprays that can be used for control of the bagworm. If you want to use something natural, BT is effective in controlling bagworms and can be purchased as Dipel from most garden centers. The small larvae can be controlled chemically by Sevin, Eight, DeltaGard, Orthene or Malathion, among other things. If you wait until August and the larvae are 2" long and inside their bags, chemical control will be very poor. You can contact me, Gary Lesoing at Nemaha County Extension office at (402) 274-4755, (402) 274-9639 (cell), email at glesoing2@unl.edu or your local extension office for information about bagworms. There is also information on the web about bagworms at: **http://lancaster.unl.edu/,hort/bagworms.shtml**.

## NEBRASKA GRAZING CONFERENCE GOING VIRTUAL IN 2020

Due to COVID-19 restrictions, please be on the lookout for updated information about registering for the 2020 Nebraska Grazing Conference which will be held in a virtual format this year (more details to come soon). Dates for the event are the afternoons of August 11th and August 12th.

## 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.

Later this growing season cover crops can be flown on or following harvest 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. We are collecting more data each year to document some of the benefits of cover crops, especially in soil health and more importantly in controlling erosion and saving our soil under some very significant rainfall events. 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 or (402) 274-9639 (cell) .

## COUNTY AND STATE FAIRS WILL GO ON IN 2020

It was just announced Tuesday, June 30th that the Nebraska State Fair will take place in 2020 in Grand Island. It will be different as admission will be free and it will primarily be a show and display for 4-H and FFA projects. The 4-H contests and shows will be the first weekend of the fair, August 29-30, with the FFA contests and shows on the second weekend of the fair, Labor Day weekend. It will be different, but at least the 4-H and FFA members will be able to showcase their projects and compete in contests as they ordinarily do at the Nebraska State Fair.

All the area counties will also be having their fairs, although most are somewhat different than normal. Some of the events have been cancelled due to challenges with social distancing and conflicts with schools starting early. The

county fairs will not be your typical county fair, but at least youth will have the opportunity to compete with several shows and contests planned for area county fairs. To find more about your county's fair, go to their webpage to learn about each county's fair and how it will proceed this year.

**Contact:**
Nebraska Extension—Nemaha County
1824 N Street, Suite 102
Auburn NE 68305
Phone: 402-274-4755

**Extension Educator:** Gary Lesoing, Unit Leader
glesoing2@unl.edu

**Website:** www.nemaha.unl.edu

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