Nemaha County Ag Line

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By: Gary Lesoing, Nemaha County Extension Educator

TREE CARE WORKSHOP

Trees are very valuable in our landscapes. They provide us with beauty, shade, oxygen, and better resale on our homes. These trees need our help to ensure they have healthy growth. When they have a disease or insect problem, it is up to us to manage those pests to help them live many years. On Tuesday, October 16th, from 6:00-7:30pm at the 4-H Building on the Nemaha County Fairgrounds in Auburn, Nicole Stoner will teach us what to do with our trees. Nicole Stoner is a Horticulture Educator from Nebraska Extension in Gage County. This tree program is free and will provide you with a great educational opportunity to help you learn to plant and properly care for your trees. Nicole will cover watering, insect and disease problems, general care, and planting of trees. Please pre-register by October 12th with Nebraska Extension in Nemaha County. You can pre-register by calling 402-274-4755 or by emailing glesoing2@unl.edu .

FALL IS A GOOD TIME TO SAMPLE FIELDS FOR SCN

With soybean harvest just getting underway in the region this fall, 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 maybe 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 farmers 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.

WHAT ABOUT A COVER CROP THIS FALL?

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 coming out now, and then potential for fall rains, cover crops can still 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 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. 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.

AG ESTATE PLANNING WORKSHOP SCHEDULED FOR NOVEMBER 12TH IN HUMBOLDT

An Ag Estate Planning Workshop has been scheduled for November 12th at the Richardson County Ag Building in Humboldt at 9:00 a.m. Allan Vyhnalek, Extension Educator in Farm Succession will team up with a lawyer for this program. The program starts with registration and refreshments from 9:00 – 9:30. Allan Vyhnalek will begin the program discussing the importance of planning and with emphasis on communications needed and the process required. Then a lawyer will address end of life decision making, power of attorneys, living will and the difference from a regular will. Lunch will then be provided by area business sponsors. Following lunch Allan will speak again. In this session negotiations (with family members and others), and how you start with the succession/transition process will be discussed. The lawyer will finish up the day with a discussion on how to proceed with plans and what tools to be used to complete an estate plan. The program should conclude at 3:00 p.m.

There is no cost for the program, but pre-registration is required by November 7th so we can obtain a lunch count for the day.

To register contact Gary Lesoing, (402) 274-4755 or e-mail glesoing2@unl.edu at Nebraska Extension in Nemaha County. For more information or other questions about the program please contact Allan Vyhnalek, Extension Educator, Farm Succession. Phone: 402-472-1771 or e-mail avyhnalek2@unl.edu .

WHAT ABOUT SOIL SAMPLING?

Fall is an excellent time to soil sample fields for nutrients following harvest. With low commodity prices and potentially higher fertilizer prices, it is key 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 2018, you may be able to apply a significant nitrogen credit (at least 40 lbs. of N) for 2019 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 CONTROL OF WINTER ANNUALS

With harvest getting in full swing, 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. Marestail or maybe more specifically, glyphosate resistant marestail has become a major problem in Nebraska. Control has been challenging the last couple of 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 and potentially improve soil health. 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. This past spring and summer, it appeared in general, weed control was much better than in the spring of 2017, especially marestail control. Sometimes wet or windy weather can prevent you from timely controlling weeds. With the heavy rains in September, 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 2018 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 FOR WEED CONTROL IN YOUR LAWN, ON YOUR FARMSTEAD AND IN YOUR PASTURES

With the all the rain received last month, weeds are flourishing and several biennials and winter annuals have germinated as well in lawns, non-crop areas and pastures. 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 in Auburn (402) 274-4755.

FARMER/RANCHER GRANTS

I would like farmers to be aware of this program in Nebraska. For the past 26 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 62 grants for a total of over $390,000. 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 6, 2018. 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-Grant-Programs/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. Two 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 this past year. 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 for information on this grant program. You can also contact me at (402) 274-4755 or 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 15, 2018. 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.

HARVEST— A TIME OF EVALUATION

With harvest progressing at a fast rate the past couple of weeks, hopefully you were able to have the opportunity to do some evaluation of your crop yields and problems that arose this past year. With some wet conditions predicted this week, harvest may slow down some and you will have more time to look ahead to 2019. In accompanying articles in this newsletter, I have spoken about potential cropping issues; i.e. SCN in soybeans, weed control and crop fertility. There have been other isolated problems in areas of southeast Nebraska that I have not discussed, but want to bring to your attention as we move to 2019.

First, there is another soybean pest that has shown up in Nebraska in 2018. This pest is the orange gall midge. It has been identified in Nemaha County, and other counties in southeast Nebraska as well. Little is know about the orange gall midge and if it will have significant yield impact on soybean yields in 2018. The pest was discovered in some soybean fields in eastern Nebraska in June, with areas of soybeans dying. It is believed that the orange gall midge played a role in the damage to the soybeans in these fields. Entomologists at UNL are trying to learn as much about this insect as possible. If you suspect you may have had it in your field(s), contact Justin McMechan at justin. mcmechan@unl.edu.

Another pest that has been moving northward and eastward in Nebraska from Kansas is the Dectes Stem Borer. This pest has been in the northern counties of Kansas and several of the border counties of Nebraska, but there are more fields showing up with stem borer damage. The most important thing is to harvest stem borer infested fields as soon as possible because they will lodge and there could be significant harvest losses if not harvested early. Also it is not recommended to plant soybeans in fields close to the stem borer infested fields the following year. Here is a link to a NebGuide on the Soybean Stem Borer; http://extensionpublications.unl.edu/assets/pdf/g2082.pdf.

In 2018 the Japanese Beetle showed up in Nemaha County. While it was evident that it did not affected corn or soybeans, the population will just continue to increase, so we must keep on guard for it in 2019. It can clip the silks on corn and potentially impact corn yields and also under very heavy infestations defoliate soybean leaves to cause economic yield losses.

A corn disease which has been fairly widespread across most of Nebraska is Bacteria Leaf Streak. Late this summer it had not been confirmed in Nemaha County, but that does not mean it isn't here. The difference between bacterial leaf streak and gray leaf spot is bacteria leaf streak usually affects the corn earlier (June) than gray leaf spot. Also a fungicide will not control this disease. So if you see a disease on your corn in June, it is a good idea to get a positive identification on it before you spend money on a fungicide.

A weed that is a major concern in Nebraska and has shown up in some fields in southeast Nebraska is Palmer Amaranth. This weed is extremely invasive, a prolific seed producer and it thrives under hot conditions. It may have been spread up in southeast Nebraska from the south with feed; i.e. cottonseed meal. What really makes this weed difficult to control is when it becomes glyphosate-resistant. If you believe you have this weed on your farm try to get a positive identification and do whatever it takes to keep it from going to seed.

Finally, as you move forward with harvest, be careful. Harvesting conditions generally get worse as we progress through the fall, with potentially wet weather. Machines usually do not work as well under these conditions and there is concern to get the crop harvested successfully without significant losses. It is important to always BE CAREFUL!! Do not get in too much of a hurry, this is when accidents happen!! **HAVE A SAFE AND SUCCESSFUL HARVEST !!!**

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