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Early season corn and soybean diseases

Corn seedling blights

Early season weather conditions were ideal for the development of corn seed and seedling diseases. Fields in several counties experienced seedling blights caused by *Pythium* or *Fusarium*; in some fields both pathogens caused blights. Due to the interaction of planting date and weather conditions, seeds took longer to germinate and seedlings took longer to emerge from the low temperature, high moisture soils. These conditions provided an extended opportunity for soil-borne pathogens to infect and colonize the developing plant (*Figure 1*). Surviving plants were stunted and yellow; some seedlings appear normal but have damaged root systems. This may impact final yield.

Corn seed is generally treated with fungicides to prevent seed decays and seedling blights. Most seed is treated with a combination of Maxim and Apron while the remaining seed is treated with a combination of Captan and either Apron or Thiram. These are excellent products that normally perform very well. However, severe weather conditions (e.g., prolonged low soil temperature and high soil moisture) can reduce their efficacy.

**Figure 1. Pythium**

**Figure 2. Leaf blight and crown cavity symptoms**

Corn foliar diseases

The first case of Stewart’s wilt in field corn was observed in Hamilton County this past week. Both the leaf blight symptoms and the crown cavity symptoms were observed (*Figure 2*). It was not widespread in the field and only one field was positive. So far this season, it appears that the winter conditions reduced the corn flea beetle populations enough to reduce the risk of Stewart’s wilt.

Lesions on the lower leaves of seedlings were evident in some fields. Gray leaf spot has been suspected in some of these fields; however, I have not received any samples positive for gray

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Gary Hall, Extension Educator in Phelps County: We missed the hail and wind damage so far; however dry field conditions are causing concern. Center pivot systems have been running due to a lack of moisture. The wheat crop is maturing quickly. Soybeans are slow to grow and there have been some emergence problems with low germination seed. Corn seems to be reaching the fertilizer bands and is taking off.

Chuck Burr, Extension Educator in Clay County: We received extensive hail, wind and tornado damage June 13. Hail damage to field crops ranged from minimal to 100% loss. Many outbuildings were destroyed as some areas lost electricity for several days. Many producers are replanting soybeans and assessing damage to corn, milo, alfalfa and wheat. Additional damage occurred June 17 from high winds and hail. This week I examined a corn field with anthracnose on the lower leaves.

Terry Gompert, Extension educator in Knox County: About 25% of the mature alfalfa has been nipped off by variegated cutworm and alfalfa loopworm. First cutting, however, was excellent.

Jennifer Chaky, coordinator of the Plant and Pest Diagnostic Clinic: The following diseases were diagnosed June 4 - June 15:

- alfalfa - crown and root rot (Polk County) and spring black stem (Lincoln County);
- soybean - Fusarium (Sarpy County), Pythium seedling disease (Lancaster County), and Rhizoctonia seedling disease (Seward County); and
- wheat - severe crown rot (two samples from Red Willow County and one sample from Harlan County), crown and root rot (Furnas County), loose smut (Franklin County), stripe rust and tan spot (Kearney County).

Keith Glewen, Extension Educator in Saunders County: Careful examination of a damaged corn field turned up a surprise -- the damaged was caused by the grape colaspis insect.

The plants were stunted and looked as though they had a phosphorus deficiency. Damaged field areas were circular and the small larvae were found on or near the roots. This insect looks much like a "white grub" larvae.

In one field approximately one-fourth of the corn was damaged. Western Illinois has had a problem with this insect in fields following soybeans. It has done about all damage it will do and will soon pupate, however, the corn is severely stunted and will not reach its full potential. If you have field areas matching this description, dig around the roots and carefully look for small, 1/8- to 1/6- inch cream colored larvae with three pairs of legs up front that are quite small. The larvae feed on root hairs, restricting nutrient and moisture uptake by the plant.

The following web sites at the University of Illinois provide more information about this insect:

- http://www.ag.uiuc.edu/cespubs/pest/articles/v9811g.html

Bob Wright, Extension Entomologist at the South Central REC, added: Grape colaspis beetles are not new to Nebraska but normally do not cause economic damage. They are most often a problem when corn follows clover, alfalfa or soybeans. They historically have been a greater problem in the eastern corn belt and the southeastern United States. At this time of year no treatment is recommended on corn. There is one generation a year of this insect. Adults will emerge in July, lay eggs, and larvae will feed during late summer and early fall, then overwinter as a partly grown larva. Damage to corn is more severe when weather conditions retard the growth of seedlings.

http://www.ag.uiuc.edu/cespubs/pest/articles/199913d.html
http://www.ag.uiuc.edu/cespubs/pest/articles/199915e.html
http://spectre.ag.uiuc.edu/cespubs/pest/articles/20010a.html
Seedling diseases  (Continued from page 125)

leaf spot. The two prevalent diseases have been anthracnose leaf blight \textit{(Colletotrichum graminicola; Figure 3)} and holcus spot \textit{(Pseudomonas syringae; Figure 4)}. It is unlikely that at this stage of plant development these early season foliar diseases will have any impact on final yield. Based on the weather conditions last week in south central and southeast Nebraska, additional fields with these two diseases are expected to be identified, particularly in Thayer, Fillmore, and Seward counties.

Soybean seedling diseases

Due to poor quality seed and favorable weather conditions, many fields in south central Nebraska are experiencing stand establishment problems. Seed and seedling diseases are prevalent. Depending on the degree of stand reduction and the spatial arrangement of plant loss, final yield may be affected. In some fields, \textit{Rhizoctonia} (Figure 5) lesions on the hypocotyl have been observed throughout the field.

Jim Stack
Extension Plant Pathologist
South Central REC

Chinch bug update

Early instar chinch bugs were present on wheat planted next to sorghum in most fields checked in Gage County (June 15).

Populations were not exceptionally high (averaged about 10 chinch bugs per plant), but some damage to sorghum will probably occur in the next week or two.

Chinch bug management information is available on the University of Nebraska Department of Entomology web site (http://entomology.unl.edu/pmguides/sorguide.htm).

Z B Mayo
Extension Entomologist
Assessing hail and wind damage

Producers are assessing crop damage from hail, high winds, tornados and in some cases, flooded fields, after a series of storms moved through the state. In some areas high winds caused greensnap in corn and possibly some early planted sorghum fields.

The following story is reprinted from the June 19, 1998 Crop Watch to provide some assistance in assessing these fields. Be sure to talk with your hail insurance agent before tearing out a field and replanting. If replanting soybeans, be sure to treat seed with a fungicide. (See the July 28, 2000 issue of Crop Watch for tables on assessing hail damage at later crop growth stages.)

Recent hail storms in areas around the state have pummeled row crops and wheat, leaving producers to determine whether replanting or planting to another crop is a viable option. Such storms are likely to occur for the next six to ten weeks.

For many producers, their options may be limited by previous herbicide selection, timing (in some areas it’s too late to replant corn), and wet fields. In many areas, with the hail came heavy rains which have made planting impossible until the soil dries further. Producers will need to consider potential yield loss of the existing crop vs. replanting costs and potential reduced yields. In some cases, the reduced yield of a hail-damaged field may be higher than the potential yield from replanting.

It’s almost too late to replant corn for grain and replanting soybeans now could mean up to a 25% potential yield reduction. Estimated yield losses for sorghum are slightly less than for soybeans at this time.

Hail damage assessment and management options vary according to plant stage, however the procedures are fairly similar from crop to crop and stage to stage:

- estimate the growth stage;
- assess the damage; and
- consider options if yield potentials are low.

Three NU NebGuides — for corn, soybeans and sorghum — offer valuable information on assessing hail damage and estimating potential yield.

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Greensnap issues

Following recent high wind storms, greensnap was reported in some corn fields. Fred Roeth, Extension weeds specialist at the South Central Research and Extension Center, noted that several factors can contribute to corn plants being vulnerable to greensnap at early growth stages. These factors, which can act alone or in combination, include the recent use of a growth regulator herbicide, crop variety, and environmental factors.

Growth regulator herbicides often are not recommended when corn is past the 6-inch stage because they can cause gooseneck or brittleness, making the plant more vulnerable to high winds. In sorghum applying a growth regulator herbicide during the fast growth stage can cause the plant to become limp, complicating cultivation.

Sometimes, however, there may not be another herbicide choice. In these cases, direct the application to keep the herbicide off of the whorl or tender tissues. In addition, considering the particularly windy conditions this year, be careful to avoid potential herbicide drift problems.
Greenbugs in sorghum

Greenbugs are present in some sorghum fields and should be monitored closely for the next couple of weeks in case economically damaging populations develop. Predator populations, particularly lady beetles, are high. Greenbug parasites were not found in the fields sampled. Because parasites and predators can be highly effective in controlling greenbugs, delay the use of insecticides as long as possible. The treatment thresholds for greenbugs are:

**Plants 6 inches tall to boot stage:** Greenbug colonies beginning to cause red or yellow leaf spotting on leaves of most plants, but before entire leaves are killed, and if parasite numbers are low (fewer than 20% of greenbugs are mummies).

**Boot to heading:** Treat if greenbug colonies are present on most plants and have killed one lower leaf, and if parasite numbers are low (fewer than 20% of greenbugs are mummies).

**Heading to hard dough:** Treat if greenbug colonies are present on most plants and have killed two normal-sized leaves, and if parasite numbers are low (fewer than 20% of greenbugs are mummies).

Parasitism should increase in the next couple of weeks. Most insecticides registered for control of greenbugs usually provide excellent control. Insecticide-resistant greenbugs have occasionally been present in Nebraska, but we have not heard any recent reports of insecticide failure in either Nebraska or Kansas. Information on recommended insecticides and management is available on the University of Nebraska, Department of Entomology Home page (http://entomology.unl.edu/pmguides/sorguide.htm)

Z B Mayo
Extension Entomologist

Slow alfalfa regrowth due to rain and insects

I cut my alfalfa a couple weeks ago and there still is little regrowth?

Alfalfa fields across the region have been slow to recover from first cutting. Sometimes there is almost no regrowth and in other fields the regrowth is slow and plants are pale green and droopy. So what’s going on?

I’ve seen two main problems. The pale green, droopy plants nearly always are in fields that have had abundant rain. So much rain in fact, that the soil has remained saturated with moisture for many days in a row.

You’ve heard that alfalfa doesn’t like wet feet. This is especially true right after harvest. For alfalfa to regrow, oxygen must be available in the soil. Water-saturated soils have little or no oxygen available for the plants. As a result, regrowth is very slow because plant roots are suffocating. This reduces nutrient and water uptake by roots as well as metabolic activity for regrowth. You can’t do much to help in this situation; just wait for better weather.

The other problem has been insects. From alfalfa weevil larvae to army worms to cutworms to alfalfa caterpillars and cloverworms, it seems like somebody, somewhere has had enough of each of these insects to hurt regrowth from feeding on the newly developing buds.

Using insecticides to kill these bugs is about the only solution for any sizable acreage. Synthetic pyrethroids like Pounce, Warrior, Baythroid, Asana, and Ambush usually give the best control. And if these worms aren’t controlled, alfalfa yield and stands will suffer.

Bruce Anderson
Extension Forage Specialist
Yellow corn and wheat

Heavy rains lead to nitrogen leaching

Table 1. Nitrate soil test

<table>
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<th>Depth</th>
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<th>May 10, 2001</th>
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<td>23</td>
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<tr>
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<td>81</td>
<td>86</td>
</tr>
<tr>
<td>Total</td>
<td>373</td>
<td>393</td>
</tr>
</tbody>
</table>

Some of the yellowing visible this spring also may be due to sulfur deficiency. Sulfate sulfur is also a negative ion in soil and moves down with water although not normally as rapidly or as far as nitrate. Sulfur deficiency on most crops is expressed as general yellowing but in corn it also may appear as leaf striping.

Yellowing usually disappears as air and soil temperatures warm. Part of the reason is that plants like warmer temperatures than this spring has offered; other reasons include warmer soils and therefore more microbial activity, which mineralizes (breaks down) nitrogen and sulfur making them available for plant uptake.

Yellow soybeans

Nitrogen deficiency and iron chlorosis examined

The following story is reprinted from Dakota Dirt, a newsletter published by the South Dakota State University Soil Testing Lab. It was written by Jim Gerwing.

It is not uncommon for the soil testing and plant analysis lab to receive soybean plants that are various shades of yellow. Two of the most frequent reasons are nitrogen deficiency and iron chlorosis.

Nitrogen deficiency occurs if plants are not nodulated and nitrate soil test levels are low. If soybeans are yellow, there are no nodules and the growth stage is approaching the third trifoliate, it is likely that they will not nodulate and nitrogen fertilizer should be applied. Rates of 50 to 120 pounds would be appropriate depending on yield potential. The next year soybeans are planted on these fields; extra effort to properly inoculate beans should be made since rhizobium bacteria populations will likely be low.

In cool wet springs when nitrate soil test levels in the surface soils are low, it is not uncommon for soybeans to be pale until nodules are formed between the first and third trifoliate. This is especially true in no-till where

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Wet hay needs special handling and storage

Recent rains in some parts of the state may have caused problems for hay producers who may’ve rushed to put this hay up when it was still wet, possibly causing mold or heat damage to develop.

Sometimes a bigger problem is the long-term damage to regrowing plants. Driving over the field repeatedly — trying to turn hay to hasten its drying — will injure regrowth and can cause soil compaction, especially if the ground is soft. However, not driving on the field leaves an even bigger problem with the windrows. If they stay there until next cutting, plants underneath will be smothered. This not only lowers yield, it creates a terrible weed problem as grasses and broadleaves infest the killed strips. These weeds will contaminate all subsequent cuttings. In addition, if rained on hay windrows are left in the field, they frequently will plug the mower on the next cutting.

The best recommendation is to remove the hay any way you can. Bale it, chop it, even blow it back on the ground as mulch. You may need to damage plants by driving on them to turn hay to speed drying and get sunlight to plants underneath; however, it may prevent the old windrows from ruining the rest of your haying year.

Afterward, be sure to watch for insect and weed problems in the damaged strips.

While there may not be much positive payback for managing hay, not managing it in a timely fashion can mean costly repercussions.

Heat damage to moist hay

If you did bale moist hay when it was a little tough, it may suffer heat damage that affects its nutritional value. Heat damage causes hay to be less digestible, especially the protein.

Heat-damaged hay often turns brown and has a caramel odor. Cattle often eat this hay readily, but because of the heat damage, its nutritional value might be low.

Heat produced by a bale basically comes from two sources. Some heat is produced by biochemical reactions from the plants themselves as hay cures. This heating is relatively minor and rarely causes hay temperature to rise above 110 degrees. Very little damage occurs to hay that gets no warmer than 110 degrees. Most heat in hay, though, is caused by the metabolic activity of microorganisms. Millions of these microbes exist in all hay and they thrive when extra moisture is abundant.

As the metabolic activity of these microbes increases, the temperature of your hay rises. Hay with only a little excess moisture probably will get no warmer than 120 degrees. Wetter hay, though, quickly can get as warm as 150 degrees. Hay that gets this warm nearly always becomes discolored, and nutritional value can be vary low. If hay temperatures rise above 170 degrees, chemical reactions can begin to occur that produce enough heat to quickly raise temperatures over 400 degrees and cause fires.

We all bale hay a little too wet from time to time. Be wary of the fire danger with wet hay and store it away from buildings and other hay. Also, remember the lower feed value caused by heat damage in wet hay. Get a thorough forage test and then use this hay accordingly.

Bruce Anderson
Extension Forage Specialist

Yellow soybeans (Continued from page 130)

nitrate levels are usually low and cool soil temperatures slow microbial activity, delaying mineralization and release of nitrogen from crop residue and soil organic matter. By the third or fourth trifoliate, when the nodules become active and nitrogen fixation occurs, these plants green up. This early season yellowing does not appear to cause yield reductions and therefore we do not recommend nitrogen fertilizer applications in these situations. However, early nitrogen applications will prevent the yellowing and result in taller plants.

Yellowing from iron chlorosis is another common situation. In soils where the pH is above 7.6, iron can become unavailable to soybeans and cause this problem although clearly not all high pH soils cause iron chlorosis. Chlorosis is usually associated with, and is enhanced by other stresses such as high salt levels, high calcium carbonate levels, herbicides, and cold, wet conditions. The symptoms are different from nitrogen deficiency in that this yellowing is interveinal (yellow leaves with green veins) and is not normally uniformly distributed across the plant or across the field like nitrogen deficiency. Often in marginal cases individual leaves can have chlorosis while nearby leaves or plants do not. Low places in fields where water pools and evaporates off the surface are the most likely places to find chlorosis. River bottoms and poorly drained fields are most frequently affected.

At this time there is no good fertilizer fix for this problem. Spraying iron chelate can help, but it is expensive and timing is critical for success (just as plants develop symptoms). Variety selection is the best alternative since some are quite tolerant of the situations which cause chlorosis. That doesn’t help this year but iron chlorosis appears in the same locations each year soybeans are planted and variety selection can minimize this problem the next time beans are planted. Not all chlorosis-tolerant soybeans are the same and the most tolerant from one company may not be as tolerant as those from another company. Also, if many stresses occur at one time, even the most tolerant beans will get chlorosis. They will, however, recover more quickly than other less tolerant varieties when growing conditions get better.

...
Farmers urged to embrace change

Nebraska farmers must adapt to changes in global agriculture if they hope to be competitive and profitable, industry experts said.

Three Nebraska agricultural leaders discussed the effects of worldwide change on Nebraska agriculture at an International Eye Opener session at the University of Nebraska-Lincoln Tuesday (June 19). The session was sponsored by the Institute of Agriculture and Natural Resources’ International Programs Division.

“The days of making money at bulk commodity production are over in the United States,” said Bryce Neidig, a Nebraska farmer and president of Nebraska Farm Bureau. “Producers must find new ways to make money if they want to keep farming.”

Neidig, who has traveled the globe extensively to study agriculture, noted that Nebraska’s farmers soon will face stiffer competition from other countries producing corn and soybeans.

“Brazil has doubled its soybean production in the last 10 years through improved genetics alone,” he said. “They have the capability to easily double their production again in six weeks time just by putting additional acres into use. It’s hard to compete with that.”

Brazil also is developing infrastructure to better support a growing agriculture industry. These factors, combined with lower input costs and cheaper labor, may soon make Nebraska’s commodities seem expensive in global markets.

The U.S. response to low prices -- shutting down production -- is not a viable solution in the changing global marketplace, Neidig said.

“When we shut down production to raise prices, we are leaving the door wide open for others to fill the market,” he said.

Brazil also is working to improve beef genetics and lower the cost of cattle production.

“It’s very possible that Brazil could overtake Australia as the largest beef exporter in the future,” said Steve Cady, executive director of the Nebraska Pork Producers Association. “These countries are very aggressive and they are coming after us. There’s plenty of discussion over industrialization versus niche markets. I think there is room for both in Nebraska.”

Many producers like the idea of selling products to niche markets, but are unsure of where to find them or what to produce, Cady said.

“Maybe these producers should look within the state of Nebraska first,” he said. “Certain groups, such as Nebraska’s Hispanic population, may want different products. Find out what they need and try to produce it for them.”

Marketing and product branding also will become more important as Nebraska’s producers struggle to compete for business.

“Producers need to learn to market meat, not hogs and cattle,” Cady said. “Consumers don’t know what good meat is or even where their meat is coming from.”

“People assume that because the package says USDA, they are buying U.S. beef,” Cady said. “If we could put a label that says Nebraska beef on the package and meet the price of outside producers, consumers likely would choose to support their state producers.”

Convincing Nebraska public schools and universities to serve Nebraska beef would also open the market for producers, he said.

The United States also should consider changing the way it gives aid to other countries, said Larry Hudkins, area farmer and Lancaster County commissioner.

“France sells as much of their crop as they can at home, then discounts commodities for poorer countries as foreign aid,” he said.

“Foreign aid doesn’t have to be cash. If you send those countries commodities and other consumable items, they will be used up.”

In many instances, the cash sent to other countries as aid ends up competing with American producers when those countries use it to build infrastructure to support growing agriculture industries, Hudkins said.

“U.S. farmers have changed in the past, but usually not until they had to,” Neidig said. “Maybe that’s what it will take this time, too. There is hope for Nebraska’s agriculture industry, but farmers have to stop wishing for the good old days. The good old days have never really existed. We need to focus on the future.”
Integrated weed research is multi-faceted at Northeast REC and Haskell Ag Lab

(This is the third in a series of stories on the research being conducted by Crop Watch contributors.)

Stevan Knezevic, Extension integrated weed management specialist at the Northeast Research and Extension Center, was born and raised in Europe. He earned his BS in Plant Protection at University of Belgrade (Yugoslavia), his MS in Weed Ecology at the University of Guelph (Ontario), Canada, and his PhD in Weed-Crop Ecology at Kansas State University. He lived and worked in Canada for 11 years and in the United States for 7 years.

An assistant professor in the NU Department of Agronomy and Horticulture, he conducts his program from the Haskell Agricultural Laboratory. His research, and that of the graduate students studying with him, focuses on developing Biologically Based Integrated Weed Control strategies. This multi-disciplinary approach builds bridges among scientific disciplines, especially between weed/crop ecology and herbicide technology. The research interests include, but are not limited to weed ecology, crop-weed interactions as affected by cropping practices and nutrient management, herbicide technology and systems simulation. Herbicide screening and crop variety testing also are conducted annually.

Dr. Knezevic has been advocating the use of biologically based weed management practices for the past several years in Manitoba, Ontario and Nebraska. He has made presentations on the timing of weed control and weed thresholds in corn, soybean and sorghum and is currently conducting several research projects related to the critical period of weed control in corn and soybean as affected by cropping practices and nitrogen use.

He also is interested in the concept of biologically effective doses for herbicides and weed species and is testing the concept on several new herbicides.

Knezevic is leading efforts on integrated management of purple loosestrife (see May 15 Crop Watch). Purple loosestrife is a new noxious weed for Nebraska which can have a devastating impact on wetland by out-competing native plants and creating a habitat unsuitable for wildlife. Control methods being tested include herbicides, repeated diskng, repeated mowing, planting replacement species and burning.

Knezevic is also involved in ongoing programs related to herbicide screening and soybean and corn variety trails. This year they are testing about 100 soybean varieties (80 Roundup Ready and 20 conventional) and 60 corn hybrids at both Concord and a sandy irrigated site in Antelope County.

Further information on current research projects follows. Results and updates from many of these projects will be featured in future issues of Crop Watch.

1. Critical period of weed control in corn as affected by nitrogen fertilizer. This study examines the effects of three nitrogen rates on corn competitiveness and the timing of weed removal. This study is also a Master of Science thesis for graduate student, Sean Evans. The results indicate that a reduction in fertilizer rate reduced corn tolerance to weeds and increased the need for more intensive weed management.

2. Critical time of weed removal in soybean as affected by row spacing. This study examines the effects of three row spacings (7.5-, 15- and 30-inch) on soybean competitiveness and the timing of weed removal. Data from the last two years indicates that soybean planted in 7.5-inch rows was the most competitive against weeds while the 30-inch row beans were the least competitive.

3. Biologically effective rates of Roundup on problematic weeds in Roundup-Ready crops. The list of weed species includes: morninglory, bindweed, buckwheat, Pennsylvania smartweed, Venice mallow, sweet clover, velvetleaf, lamb's-quarters, and nightshade. Data from last year indicated that control of these weeds may require higher rates than the labeled rate of Roundup Ultra.

4. Integrated management of purple loosestrife. Control methods being tested include herbicides, repeated disking, repeated mowing, planting replacement species and burning. The herbicide trials are being conducted at four locations along the Missouri, Niobrara and Platte rivers, at Kearney, Dixon County, Holt County, and Ainsworth. Collaborators are Doug Smith (Dixon County), Ralph Kulm (Holt County), Dick Kincaid (Kearney), Rod Stolcpart and Mick Goodrich (Ainsworth). Preliminary results indicate the most effective herbicides are Rodeo, 2,4-D and Garlon.

5. Bio-control of purple loosestrife. Several leaf and flower feeding insects are being evaluated. Insect release and monitoring are underway through Doug Smith’s work in Dixon County.

6. Weed control methods in tree and shrub seedlings. Herbicides and mowing are being evaluated for weed control in newly seeded tree sites. Several species of trees were seeded with the no-till wheat drill. The sites are part of developing a habitat for various wildlife species, including pheasants.

7. Effects of planting depth, crop safener and hybrid selection on corn tolerance to Balance herbicide. A multi-location study is being conducted with other UNL weed specialists.

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Knezevic
(Continued from page 133)

8. Weed control in newly seeded alfalfa. This is a first year, preliminary study on cultural and chemical control methods in newly seeded alfalfa. Cultural methods include planting several cereal crops (wheat, oat and rye) with alfalfa to suppress weed growth.

9. Weed control in buffer crops. Our station is leading a multi-disciplinary project on evaluating various aspects of buffer crop establishment and demonstration. Knezevic is evaluating the effects of several control methods in the year prior to planting buffer crops. In general, selecting and preparing the site for future buffer crops should be part of the site selection and planning process. Depending on the level of weed infestation at potential sites, weeds should be controlled at least a year prior to planting buffer crops. This is especially important to sites with perennial weed species. Perennial weed structures (eg. rhizomes and stolons) provide a source for further site infestation and are generally hard to control due to the presence of the buffer crop. This year researchers will evaluate the effectiveness of following treatments: (1) Roundup-Ready soybeans, (2) Roundup-Ready corn, and (3) spring rye. The use of the three crops would allow producers to collect the yield from the land before it is transformed into the buffer strips. The use of Roundup herbicide would help with weed control, especially perennial species. Dave Shelton, Extension Ag Engineer, is a lead collaborator on the project.

10. Red cedar control in pasture. A study is being initiated to test several herbicides and their mixes for broadcast application over the top of young cedar trees and stem treatment of individual trees.

Dr. Knezevic invites inquiries regarding any of these research topics. His office is at the Haskell Agricultural Lab near Concord, part of NU’s Northeast Research and Extension Center. He also can be reached by phone (402-584-2808) or by email (sknezevic@unl.edu).

Market Journal discussion to focus on farm biosecurity

After the outbreak of foot and mouth disease in Europe, American livestock producers are being more cautious about potential dangers to their herds.

Biosecurity measures will be discussed on the June 28 “Market Journal” with host Doug Jose, NU agricultural economist, and guests Dr. Jim Weiss, Nebraska Bureau of Animal Industry pseudorabies epidemiologist; Al Prosch, coordinator of NU-based Pork Central, and Dr. David Smith, NU Extension veterinarian.

“Biosecurity is the practices that a producer might take to prevent the transmission of pathogens that cause diseases you’d be concerned about,” Smith said.

To minimize disease risk, farmers should try to increase resistance of host to agent, eliminate agent from environment and keep susceptible host animals from contact with agent, Smith said.

Farmers need to be aware of possible “reservoirs” that can house harmful agents, including trucks and visitors coming onto the farm.

“Movement of the animals is the greatest risk factor in most cases,” he said.

Different diseases affect different livestock species. Farmers must identify what diseases could affect their livestock and develop a biosecurity plan around those diseases, Smith said.

One livestock disease detected in several Nebraska swineherds is pseudorabies. Several herds in Colfax, Cuming, Platte and Boone counties have become infected, Weiss said.

“We haven’t been able to positively identify where it came from or how it got started,” he said; however, many experts believe an outside source caused the outbreaks. Producers in counties with reported cases should vaccinate everything, Weiss said.

The risk of foot and mouth disease entering the United States and infecting livestock is still great.

Because of this, U.S. biosecurity efforts have increased. To reduce chances of outbreaks, both Smith and Weiss recommend farmers be wary about farm-to-farm contact and movement of animals. Furthermore, they advocate keeping potential disease-carrying sources away from animals and controlling animal proteins in livestock feed.

The June 28 edition of “Market Journal” will be webcast from 8 to 9 p.m. (CST). “Market Journal,” which runs until December, airs the second and fourth Thursdays of the month. Each month’s first edition is downlinked live to more than 20 sites across Nebraska, and each month’s second edition is webcast live at marketjournal.unl.edu. Both editions will be archived afterward for viewing on this site.

StarLink not found to cause allergies

Following months of tests, the U.S. Centers for Disease Control said June 13 that it did not find any evidence that genetically modified StarLink™ corn had caused allergic reactions in those people who reported illnesses after consuming food products which contained the Cry9c protein.


For further information, check the CropWatch focus site on this issue at cropwatch.unl.edu.