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Lisa Brown Jasa

University of Nebraska-Lincoln, ljasa@unlnotes.unl.edu

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Greenbugs spotted in Nebraska wheat; watch for move to sorghum seedlings

Although greenbug damage occurs in some areas of Nebraska each year, greenbugs have not been a widespread serious problem for several years. Planting Biotype E greenbug resistant grain sorghum combined with the reduced number of acres planted to sorghum have probably been important factors in preventing widespread, severe greenbug outbreaks the past few years. (Fewer acres planted to sorghum results in fewer greenbugs for migration into other fields.)

This spring, however, greenbug damage on wheat in Oklahoma and southern Kansas has been extremely severe and creates concern regarding the potential for greenbug damage later this season. A few greenbugs were found in south central Nebraska wheat fields last week. We do not expect greenbugs to develop into damaging populations in wheat in Nebraska, but they could serve as a population source to move into emerging sorghum.

Greenbugs on seedling sorghum often are eliminated by adverse weather conditions such as rain and hot dry winds. If greenbugs migrate into sorghum fields and weather conditions do not eliminate them, populations can develop quickly and severe damage may result. Examine sorghum fields frequently, at 5-7 day intervals, to detect greenbugs early to enhance chances of preventing heavy damage.

The treatment threshold for seedling sorghum is: greenbug colonies on 10-20% of the plants and yellowing or spotting of leaves is visible because of greenbug feeding. This threshold works for both greenbug resistant and susceptible sorghum because greenbug resistant sorghum can withstand more feeding before damage occurs. Although it is tempting to apply an insecticide when greenbugs are first detected, we recommend waiting until the greenbug population and damage reaches the treatment threshold. A thunder shower or hot wind may eliminate the greenbug problem before treatment is necessary. Predators and parasites also can reduce greenbug populations, however these factors usually are more effective later in the season.

Consult University of Nebraska Extension publication, EC94-1509, Insect Management Guide for Nebraska Corn and Sorghum for greenbug control recommendations. Additional information on greenbug management is available in Extension NebGuide G87-838, Sorghum Greenbug Control.

Another concern this year is the continued spread of Biotype I greenbugs.

(Continued on page 79)
Adjust soybean planting rate for seed size

The Nebraska Agricultural Statistics Service reported that the state's soybean planting was 43% complete as of Monday, this is well ahead of last year when 14% had been planted by this time, but behind the five-year average of 53%.

This week's rains have delayed further planting for much of the soybean area. A producer posed the following question to Agronomist Roger Elmore at the South Central Research and Extension Center near Clay Center.

This year's soybean seeds are smaller than usual. Should I adjust my planting rate?

Soybean seed sizes are probably more variable and in general smaller than normal this year. This is related to the early frost last year. Our typical irrigated and dryland plant population suggestions are for 150,000 live seed/acre. We like to increase these rates by 10% or so in drilled situations. Seeding rates for determinates are higher: 200,000-225,000 live seed/acre. A problem can develop when we plant by pounds per acre rather than seeds/acre. With smaller than average seed producers could end up with considerably more seed per acre than needed. For example: 60 lbs of 2500 seeds/lb results in 150,000 seeds/acre; 60 lbs of 3000 seeds/lb results in 180,000 seeds/acre. Higher seeding rates probably will not reduce yield potential if lodging is not a problem, but higher rates will unnecessarily increase seed costs.

Be sure to check seeding rates by counting seeds per foot of row planted (8.5 seeds/foot in 30 inch rows = 150,000 seeds/acre).

Roger Elmore
Extension Crops Specialist

Cutworm alert

A few corn fields in Cass County were reported to have 2-4% chewing/cutting damage by third instar black cutworms and large dingy cutworms (reported May 26).

The treatment threshold for cutworms on corn is: 5% of plants damaged, cutting is observed, and worms are one inch or less in length.

For more information on cutworms, refer to the May 17 CropWatch (96-8) article on pages 57 and 59.

Z B Mayo
Entomology Professor

Crop update

The Nebraska Agricultural Statistics Service reported Monday that corn planting was 95% complete, ahead of last year's 70% and the average of 90%. Crop condition was rated at 2% poor, 23% fair, 68% good, and 7% excellent. Corn emergence was rated at 71% complete, considerably ahead of last year's 17% and a five-year average of 60%.

Sorghum planting was 38% complete, compared with 7% last year and a five-year average of 43%.

Nebraska Agricultural Statistics Service

CropWatch

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Lisa Brown Jasa, Editor

For more information about a particular subject, write the authors at the addresses below:

UNL Department of Entomology
202 Plant Industry Bldg.
Lincoln, NE 68583-0816

UNL Department of Plant Pathology
406 Plant Science Bldg.
Lincoln, NE 68583-0722

UNL Department of Agronomy
279 Plant Science Bldg.
Lincoln, NE 68583-0915

UNL Department of Agricultural Meteorology
236 L.W. Chase Hall
Lincoln, NE 68583-0728
Stop leafy spurge before it spreads

Leafy spurge is an aggressive weed that continues to spread in Nebraska, greatly reducing the carrying capacity of grazing land. The weed is more common across northern Nebraska, but can be found elsewhere. Leafy spurge is a perennial and reproduces from seed as well as from buds on its deep, extensive root system. It reduces forage production, and cattle avoid grazing infested areas because it is an irritant.

Control on a large area is costly and difficult. Treat small patches before the weed spreads. Plants in a new infestation are more readily controlled than established stands because the root system is not yet fully developed. Once leafy spurge has become well established it cannot be eliminated with a single herbicide treatment.

The ideal time to treat leafy spurge this year in much of Nebraska is early to mid June. Leafy spurge is easily spotted now that plant tops are bright yellow. All plant parts also contain a white milky sap.

Herbicides for leafy spurge control are: 2,4-D ester (4 pounds per gallon) at 2 quarts per acre; 1 quart of 2,4-D plus 1 pint of Tordon per acre; or Tordon 22K at 2 to 4 quarts per acre. The treatments would cost $6 per acre for 2,4-D, $15 for 2,4-D plus Tordon and from $45-$90 per acre for Tordon. Apply 2,4-D in early June just as the plant flowers. A second treatment in late fall, if moisture permits good regrowth, provides increased control. If only one treatment per year is possible, make it in early June. Don’t expect to eliminate leafy spurge in one or two years. It will take several years to make progress toward reducing the infestation.

Tordon 22K is much more effective than 2,4-D against leafy spurge. A 2-quart-per-acre application usually provides 50-80% control a year later, and the 4-quart rate gives 90-100% control. June is the best time to apply Tordon, although it is also effective at other times. Tordon is long lasting and mobile in the soil. It should not be used near trees or on sandy soil where the water table is within 15 feet of the soil surface at any time.

Use weed counts to assess potential losses

Weeds are rapidly emerging and producers will need to decide about postemergence weed control. Table 1 shows the number of weeds per 100 ft² that will cause a given yield reduction in corn. This assumes that weeds emerged with corn and no herbicide has been applied. These numbers only consider the effect of the weed in the current year and do not account for future weed problems due to weed seed production. This factor, however, should be considered if these numbers are used for long-term planning.

David Holshouser and Alex Martin
Extension Weed Specialists
John McNamara
Extension Assistant, Weed Science

Table 1. Number of weeds per 100 ft² causing a 1.0, 2.5, 5.0, and 10.0% yield loss in corn.

<table>
<thead>
<tr>
<th>Weed</th>
<th>% Yield Loss</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Barnyardgrass</td>
<td>24</td>
</tr>
<tr>
<td>Sandbur</td>
<td>18</td>
</tr>
<tr>
<td>Fall Panicam</td>
<td>18</td>
</tr>
<tr>
<td>Crabgrass</td>
<td>15</td>
</tr>
<tr>
<td>Foxtail</td>
<td>7</td>
</tr>
<tr>
<td>Lambquarters</td>
<td>5</td>
</tr>
<tr>
<td>Common ragweed</td>
<td>5</td>
</tr>
<tr>
<td>PA Smartweed</td>
<td>5</td>
</tr>
<tr>
<td>Russian thistle</td>
<td>3</td>
</tr>
<tr>
<td>Kochia</td>
<td>3</td>
</tr>
<tr>
<td>Pigweed</td>
<td>3</td>
</tr>
<tr>
<td>Waterhemp</td>
<td>3</td>
</tr>
<tr>
<td>Shattercane</td>
<td>2</td>
</tr>
<tr>
<td>Black nightshade</td>
<td>2</td>
</tr>
<tr>
<td>Velvetleaf</td>
<td>2</td>
</tr>
<tr>
<td>Cocklebur</td>
<td>1</td>
</tr>
<tr>
<td>Sunflower</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>
Leafy spurge (continued from page 79)

Biological control

The use of biological control measures instead of herbicides to manage leafy spurge infestation is gaining interest among some producers. Biocontrol is the use of organisms (i.e., insects, pathogens, livestock) that feed on leafy spurge to reduce its density, reproduction or competitive vigor. Several species of European flea beetles belonging to the genus *Aphthona* have been released in North America to control leafy spurge. Leafy spurge biocontrol programs are still in the early phase of development. Research is being conducted to improve the rate of success with biocontrol agents. Although biocontrol holds great promise for controlling leafy spurge, it is imperative that producers continue to use herbicides to control leafy spurge now. Relying solely on biocontrol measures now will not provide acceptable control and the size and density of leafy spurge infestations will increase.

David Holshouser and Alex Martin
Extension Weed Specialists

John McNamara
Extension Assistant, Weed Science

Greenbugs (continued from page 77)

continued spread of Biotype I greenbugs. Surveys in Kansas and Texas last year indicated Biotype I was present in most areas. Biotype I was detected in Nebraska late last year and caused isolated heavy damage in some sorghum fields. Biotype I is capable of damaging most Biotype E resistant sorghum hybrids. Biotype E is still the predominate greenbug and we recommend planting Biotype E resistant sorghum hybrids. However, growers need to monitor fields closely this summer to take appropriate control action if damaging greenbug populations occur.

Insecticide resistant greenbugs have been reported for both greenbug Biotypes and could be a problem if widespread reliance on insecticides occurs. The most common insecticide resistance in greenbugs is to organophosphate insecticides, but some resistance to carbamates has been reported.

Z B Mayo
UNL Entomology Professor

June is optimum time for controlling woody plants

June is the best time for foliar applications of most herbicides for woody plant control. To achieve the best control, thoroughly cover foliage when plants are in full leaf and foliage is tender. Later in the summer the plants are often stressed due to dry conditions, resulting in reduced benefit from the herbicide.

Several herbicides are available for woody plant control in pastures. These include 2,4-D, 2,4-DP, Crossbow, Banvel, and some formulations of Tordon. In non-cropland situations, Garlon, Krenite, Spike and Velpar also can be used for woody plant control. With the exception of Krenite, June is the best month for foliar applications. Krenite should be applied in late summer or early fall.

David Holshouser and Alex Martin
Extension Weed Specialists

John McNamara
Extension Assistant, Weed Science