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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 91-8] [May 10, 1991]

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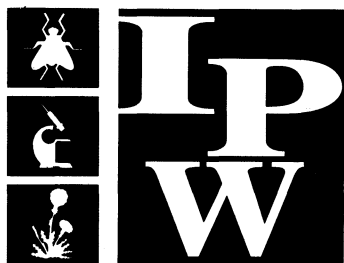
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Insect Science Plant Disease Weed Science

NEWS

UNIVERSITY OF NEBRASKA COOPERATIVE EXTENSION • INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES

No. 91-8

May 10, 1991

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PLANT DISEASE

Cool, Wet Spring Contributes to Wheat Problems

Powdery mildew is occurring in eastern Nebraska. Disease symptoms are a powdery grayish-white mildew on leaves and stems. Be alert for signs of this disease since it can reduce yields. It is most likely to develop in thicker-planted wheat where the humidity in the microclimate is higher. Growers should scout their fields frequently during the next few weeks. Powdery mildew can be controlled with a fungicide application. If Tilt is considered, it must be applied before Feekes Growth Stage 8 (flag leaf emergence), which may have already passed for some fields. Bayleton 50WP or Bayleton 50WP + Mancozeb 4 can be applied later, i.e. early boot stage, when the flag leaf is fully emerged.

A recent survey of the Nebraska Panhandle revealed a variety of problems related to drought, disease, wind erosion, and winter kill. The hardest hit fields are in the northern Panhandle. Crown rot, wind erosion, and winter kill had killed plants in almost all fields surveyed. Affected areas ranged from small scattered spots to large areas. Exposed sites in fields were showing the greatest loss. Also, fields where there was little stubble mulching showed extensive damage. This points to the value of stubble

Crown rot, winterkill, and wind erosion have killed plants in almost all fields the authors surveyed in the northern Panhandle.

mulching and the use of shelter belts to trap snow and reduce wind erosion. In the southern Panhandle, wheat in Cheyenne and Deuel counties was surveyed. Generally, fields north of Sidney did not show extensive crop injury or loss. Stands were fairly uniform and the growth and color were good. An area in Deuel County, north and west of Chappell, had significant crop loss in fields where strip cropping and stubble mulching were lacking.

Eric Kerr and John Watkins



UNIVERSITY OF NEBRASKA-LINCOLN, COOPERATING WITH THE COUNTIES AND THE U.S. DEPARTMENT OF AGRICULTURE



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Alfalfa Samples Show Black Stem and Leaf Spot

The alfalfa fungal disease called 'spring black stem and leaf spot' has been identified in several recent samples examined by the Plant Disease Diagnostic Clinic. In Nebraska, spring black stem and leaf spot is usually only a problem on the first alfalfa cutting. Wet spring weather disease development can cause heavy premature defoliation. Regrowth from the first cutting may become infected, but the disease is usually less intense due to drier weather.

The leaf spots are small, black to dark brown, irregular in shape, and numerous. Leaves, stems and petioles can be

infected. Heavily infected leaves eventually yellow and drop. Stem lesions may enlarge and merge until most of the stem is black.

Chemical controls are not recommended for this disease in Nebraska. However, early cutting is recommended. Stands should not be cut before the bud stage. One-tenth bloom is the optimum stage for harvesting while still maintaining forage quality and reducing yield loss due to premature defoliation caused by spring black stem and leaf spot.

Luanne Coziahr

Anthracnose Fungus Active in Sycamores

Phone calls to the Plant Disease Diagnostic Clinic and the observation of campus sycamore trees indicates that the fungus causing sycamore anthracnose is active. Recent cool, wet weather conditions have been favorable for the development of this disease. Many readers may remember the defoliation caused by this disease in late May and early June 1990. This year's disease severity will depend on the May weather. Warm, sunny, dry conditions will reduce the amount of disease, but cool, cloudy, damp weather will allow for disease development.

Symptoms of sycamore anthracnose are evident at several phases. The first phase involves canker formation which may result in twig dieback and reduced bud development. Look closely at the branches for cankered areas with small, black fruiting structures. The second phase, shoot blight, involves the rapid death of expanding shoots and leaves. This can be confused with late spring frost injury. The third phase is a leaf blight which is the direct infection of expanding leaves. Foliar lesions usually expand along the veins. The severity of each phase is dependent on weather conditions. Fortunately, this disease rarely causes serious damage in Nebraska. Even with last year's abundant leaf blight and subsequent defoliation, there was little evidence of the disease by midsummer. The trees leafed out again and were fine.

Cultural practices can reduce disease severity. Remove dead leaves in the fall since infected leaves can spread infection. Space trees properly and plant where they will have good air circulation. This will help keep leaves dry and reduce disease development. Keep trees as healthy and vigorous as possible with protection from mechanical injury and proper watering.

Chemical sprays are not usually justified to treat anthracnose in Nebraska. The exception would be young or weak trees and trees which have suffered repeated anthracnose defoliation. Thorough coverage with fungicides like benomyl, chlorothalonil, liquid lime-sulfur, Bordeaux

mixture, or other coppers can control the fungus. Read and follow label instructions. To be effective, applications should have been made at bud swell, with one or two additional applications made at 10-14 day intervals afterward. We are well past the stage for beginning treatment.

Luanne Coziahr

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Lisa Brown Jasa, Editor

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WEED SCIENCE

Annual Loss Estimated at \$2 Million

Timing is Essential to Control Leafy Spurge

Leafy spurge is a perennial weed which is becoming a serious problem in Nebraska. Most infestations occur in northern and eastern Nebraska, although leafy spurge can be found in virtually every county.

Leafy spurge usually occurs in untilled land such as range and pasture situations, along roadsides, and in tree stands. Leafy spurge also has been reported to have infested land that has been placed into the conservation reserve program. This situation may cause leafy spurge populations to increase dramatically in the near future.

Leafy spurge infestations can result in a tremendous economic loss to the state. Leafy spurge emerges early in spring and is an aggressive competitor with forage grasses. The carrying capacity of range and pasture land can be reduced from 50 to 70 percent. Cattle and wildlife avoid grazing areas infested with leafy spurge because the plant is poisonous. The land becomes unproductive and eventually may be dropped from the tax rolls. When other control costs are included, leafy spurge costs the state about \$2 million a year at the current level of infestation.

Leafy spurge is extremely difficult to control. The problem lies in the fact that it is a perennial which reproduces from an extensive root system. The root system can extend as much as 15 feet down in the soil with numerous buds along the way, each bud being capable of producing new shoots. Leafy spurge is also a prolific seed producer, generating about 140 seeds per stem. The seeds can remain viable for eight years which means that control measures must be continued for several years.

The type of control depends on the level of infestation and what's affordable. Good grass management will slow the spread of leafy spurge but won't control it. Control is most effective if treatments are applied within the first two years after leafy spurge moves into an area. The root system of new infestations is not well developed and herbicide treatments are more effective.

Proper timing of herbicide applications is critical for good control. Treatments should be applied when most plants are developing flowers. If there are only small patches, Tordon 22K is probably the best choice. An area 10 to 15 feet wide around the edge of the patch should be treated to control any new sprouts which may arise from the roots. Although Tordon is very effective it should not be used near trees, surface water or where the water table is near the soil surface. A 2-quart rate usually provides 60% to 80% control a year later, and a 4-quart rate gives 90% to 100% control. Tordon applied with a ropewick provides control equal to a broadcast application but at a lower cost.

Applying Tordon at 1 pint with 1 quart of 2,4-D is economical; however, long term control is not as complete as with the higher rates of Tordon. Other options include 2 quarts of 2,4-D or 1 quart of 2,4-D plus 1 pint of Banvel. For treatments such as 2,4-D alone or in combination with Banvel, spring and fall applications are required for consistent control.

Bob Stougaard
Extension Weed Specialist

Now is Optimum Time for Controlling Buckbrush and Snowberry

Buckbrush and western snowberry development has been favored by precipitation this spring. Research shows there is a brief two-week period in May when 2,4-D can effectively be used to control these two woody plant species. Control time is now — May 10-25 in eastern and southern Nebraska. Northward, initial treatment could be delayed until May 20. Apply 1/2 quart of low volatile 2,4-D ester (4 lbs active ingredient per gallon) per acre in enough water for good coverage.

Western snowberry and buckbrush are similar in appearance. Western snowberry with white berries is most common in western Nebraska and to a lesser extent in eastern Nebraska. Buckbrush has red berries and is most prevalent in eastern Nebraska.

Alex Martin
Extension Weed Specialist

1990 Winter Wheat Herbicide Selections May Influence This Year's Planting Options

Interest in spring planted crops has increased in the dryland production regions of western Nebraska as a consequence of low wheat prices and new farm bill legislation. If you are planning to plant a spring crop on last year's wheat ground, check to see what herbicides were applied to the wheat and when they were applied. Several herbicides used in winter wheat have long rotational restrictions.

Sunflower and safflower may not be planted for 22 months after the use of Ally in winter wheat. Corn may be planted 12 months after the use of Ally if the soil pH is less than 7.5; if soil pH is 7.5-7.9, the rotational restriction is 22 months. Proso millet may be planted 10 months after Ally is applied in winter wheat. Therefore, proso millet may be planted this May or June in wheat fields treated with Ally last year.

If Tordon was used for weed control last year, only grass, barley, oats, wheat, or flax may be planted this year. If Curtail was used, proso millet and corn may be planted 12 months after application. Sunflower and safflower also may be planted 12 months later. However, under the low rainfall conditions and low organic matter soils of western Nebraska, some injury may be observed and 18 months may be a more appropriate waiting period.

The use of 2,4-D, Banvel, or Buctril last year will not restrict planting options this year. Be sure to check the rotational restrictions listed on product labels before using. As cropping flexibility becomes more important, so will your need to know a product's rotational restrictions before use.

Drew Lyon
Extension Dryland Crops Specialist

Weed Science Briefs

Summer Weed Course Offered

A "hands on" weed identification course, *Identification of Weed Species - Agronomy 896*, will be taught this summer by Emery Nelson. The three-credit course will meet one evening a week, May 20-July 12. For more information contact Dave Mortensen, 472-1543.

Igran Still Available

Ciba-Geigy discontinued the manufacture of Igran, a sorghum herbicide, a few years ago; however, the herbicide is still registered and available. Igran used prior to sorghum emergence is particularly useful to no-till sorghum producers because of its "burndown" activity and its short period of soil residual activity.

Herbicide Guide Correction

Sod Seeding. On page 29 of the Extension publication 1991 Herbicide Guide the rates for Roundup used for sod seeding are incorrect. The rates for sod suppression are 1 pt/A in August and 1 qt/A in the spring on cool season grasses.

Glean Use on CRP Acres Eliminated

DuPont has deleted all Conservation Reserve uses from the Glean label. This was done to help avert the further development of weed resistance to Glean and other sulfon-ylurea herbicides. Glean in older containers labeled for CRP acres may be used according to the label.

Alex Martin
Extension Weed Scientist

INSECT SCIENCE

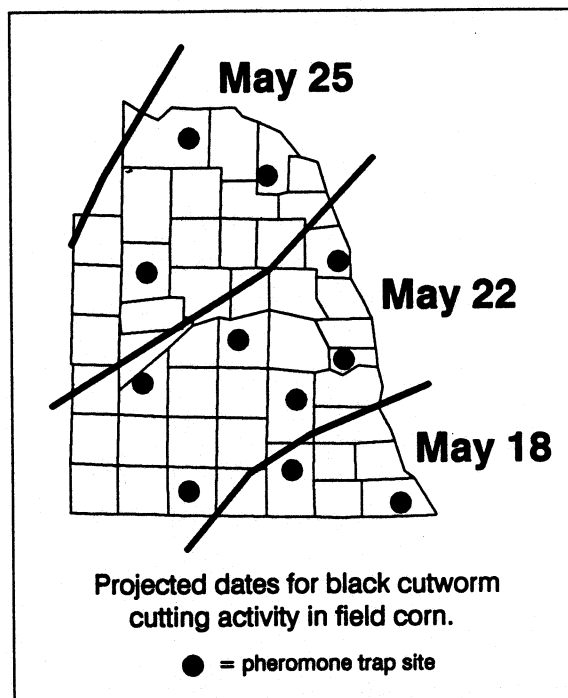
Black Cutworm Moths Trapped; Scout Now

Significant numbers of black cutworm moths have consistently been captured at most pheromone traps in the eastern third of the state. Field scouts and growers are advised to be alert for black cutworm damage to corn or sorghum beginning in late May. Conditions have been ideal for black cutworm larval development, including moderate temperatures, abundant moisture, and weedy growth in fields where tillage or planting have been delayed.

Cutting of plants usually occurs when cutworms are 1/2 inch long or after 300 growing degree days (base 50) have accumulated after egg-laying. See the map for projected cutting dates in your area. These projections assume average temperatures through May; if actual temperatures are below normal, cutting activity will be delayed. Young cutworms prior to the cutting stage may damage plants by chewing small holes in foliage.

Several factors affect the potential and severity of cutworm damage. Fields with significant weed growth or residue, or planted no-till, are more attractive for egg-laying, and thus are at higher risk. Planting seven or more days after weeds have been destroyed reduces the risk of damage. Sudden hot and dry conditions following larval hatch can cause substantial mortality.

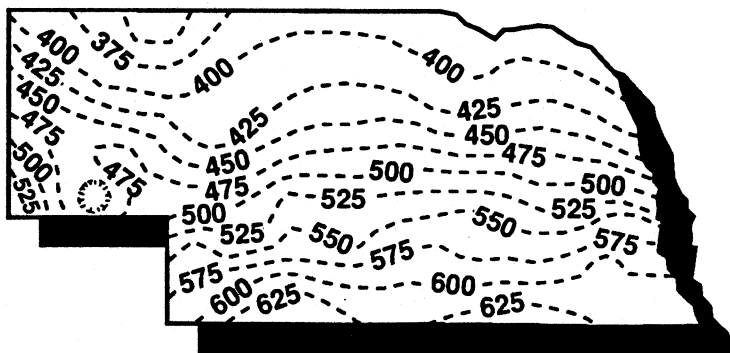
The severity of damage to corn depends on cutworm growth stage and coincident plant growth stage. Plants cut at the soil surface before the six-leaf stage likely will recover, as the growing point is still below ground. However, if conditions are dry, cutworms feed deeper in the soil and may destroy the growing point. If corn is at an early growth stage (prior to the three-leaf stage) and cutworms are nearly mature (well over 1-inch long), overall damage will be significantly reduced.



Preventative insecticide treatments applied at planting for cutworm control have rarely provided an economic return in Nebraska and are **NOT** recommended. Treatment is advised when 5% of corn plants are damaged. Regular field scouting with early detection is essential for effective management. For information on recommended insecticides, refer to Extension publication EC 91-1509, 1991 *Insect Management Guide for Nebraska Corn and Sorghum*.

Jim Kalisch

Alfalfa Weevil Growth Progresses Across State



No economic alfalfa weevil infestations have been reported thus far, although weevil larvae and damaged plants are noticeable in southern and eastern counties.

Steve Danielson

The map shows degree day accumulations from Jan. 1 to May 5.

