CropWatch No. 96-19, Aug. 16, 1996

Lisa Brown Jasa
University of Nebraska-Lincoln, ljasa@unlnotes.unl.edu
Implications of ergoty grain serious

In the past couple weeks, we have received several reports of ergot in wheat and in bromegrass. Cool wet weather this spring and summer created ideal conditions for the infection and development of ergot in pasture grasses and susceptible small grains. Ergot sclerotia detected in grain or grass hay should not be taken lightly. If wheat has been rejected at the elevator because of ergot or if ergot bodies are found in grass hay, exercise extreme caution before feeding to livestock.

Federal grain grading standards classify wheat as ergoty if it contains more than 0.3% of ergot bodies, or sclerotia, by weight. The toxic alkaloids contained in ergot bodies affect all domestic animals, including poultry and humans. Consumption of affected grain or hay may cause blood vessel constriction and smooth muscle contractions in animals. In pregnant animals, continuous doses of ergot can cause uterine contractions leading to spontaneous abortion. Ingesting small amounts of ergot may cause a reduction or complete cessation in lactation or the loss of extremities, especially ears, tails and hooves, because of blood vessel constriction followed by the onset of gangrene. Ergot causes the condition known as “St. Anthony’s Fire” in humans.

Ergot bodies or sclerotia are black hard structures, resembling rodent droppings, produced in place of the seed. In wheat their size and shape may be similar to the kernel; in rye or triticale they’re much larger than the kernel. Ergot sclerotia produced in grass hay generally are smaller than those from cereal grains and are more difficult to detect. Inspect any suspect hay carefully before using it for feed. If you find something that resembles mouse or rat droppings, that’s probably ergot sclerotia. Screen ergot contaminated grain to remove as many sclerotia as possible.

It is highly recommended not to feed ergoty grain or hay to livestock, particularly to pregnant or young animals. Any amount of ergot in the diet of animals may cause adverse health effects.

Before considering feeding ergoty grain or hay have it analyzed by the Veterinary Diagnostic Center, University of Nebraska-Lincoln, P.O. Box 83097, Lincoln, NE 68583-0907. Dr. Norman Schneider, Chief of Toxicology at the UNL Veterinary Diagnostic Center, is interested in receiving ergot sclerotia screened from grain samples. Send the ergot to him at the above address.

John E. Watkins, Extension Plant Pathologist
Norman R. Schneider, DVM Veterinary Toxicologist

Survey indicates more farmers sampling soil for nitrogen

More Nebraska farmers are using deep soil sampling to plan their nitrogen use than did five years earlier, according to a 1995 study which compared farmer responses about the 1994 crop year to responses in a similar survey in 1989.

During the five-year period, deep soil sampling increased dramatically. In 1989 only 49% of the farmers who irrigated used deep soil sampling for nitrogen, but by 1994 the proportion had increased to 76%. In 1989 only 12% of the dryland farmers were using deep soil sampling for nitrogen, but by 1994, 48% were. Of those farmers not currently conducting deep soil samples annually, 18% of those who irrigated and 26% of the dryland farmers said they planned to adopt the practice during the next five years. The 1995 survey included 1800 Nebraska farmers.

This change follows a trend initiated in the 1960s when the UN...
ECB numbers up

Light traps at Clay Center last week were picking up more than 200 second generation European corn borer moths per night in areas where there were relatively low levels of first generation moths. This is a good example of why we say there often is little correlation between numbers in the first and second generations.

Fields in the blister stage and later are not likely to benefit economically from treatment for European corn borer.

Keith Jarvi, IPM Extension Technologist, has posted an updated list of suggested insecticides for second generation ECB on corn on the Entomology home page at http://ianrwww.unl.edu/ianr/entomol/pestcont/pestcont.htm

Robert J. Wright
Extension Entomologist

Crop update

The Nebraska Agricultural Statistics Service reported Monday that irrigated corn rated 86% good to excellent and dryland corn rated 84% good to excellent, with the remainder being 13% fair and 3% poor.

As of Sunday, 97% of the state’s corn crop had reached the silking stage compared to 82% last year and a 92% average. Acreage in dough or beyond advanced to 22%, compared with 6% last year and 39% for the five-year average.

Soybean condition was rated as 3% poor, 15% fair, 65% good, and 17% excellent. Acreage blooming or beyond progressed to 97% complete compared to 84% at this time last year and 92% for the five-year average. Statewide 51% of the acreage was setting pods, compared with 35% last year and the average of 57%.

Sorghum condition was rated as 1% poor, 17% fair, 65% good, and 17%

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Proso millet now bargain priced for feed

Proso millet is generally priced at a premium compared with corn and other feed grains. That premium is quite variable but has averaged about $1.75 per cwt. over the last 10 years. Current prices for proso millet are in a range of $6 to $6.50 per cwt. and old crop corn is priced at $7.50 to $8 per cwt. New crop corn bids are ranging from $5.35 to $5.45 per cwt. It would appear that relative to old crop corn prices, millet is under priced.

Research studies have shown the relative feed value of proso millet compared with corn to be 90-100% for cattle and swine and over 100% for poultry. Crude protein values of proso at an average of 12% at 100% dry matter are higher than corn and similar to or slightly below winter wheat. Average energy levels are slightly below corn. Fat content is similar to corn and lower than wheat.

Comments needed for Herbicide Guide

Farmers, Extension educators, industry representatives, and all other users of our Herbicide Use Guide are invited to submit suggestions for the 1997 edition. We have appreciated your previous input. You have helped make the Nebraska Herbicide Use Guide a most useful weed control aid for farmers, dealers, applicators, farm managers, consultants, Extension educators, and others.

Please send your suggestions by Aug. 30 to the Agronomy Department-Weed Science, Attention: John McNamara, 362 Plant Science Building, University of Nebraska, Lincoln, NE 68583-0915.

Alex Martin
Extension Weeds Specialist
John McNamara
Extension Assistant, Weed Science

Proso works best as a feed for cattle with some processing, such as grinding, and when limited to 50% of the diet. Some producers have successfully used proso as the sole grain component of a cattle ration, but they have to use good management to avoid problems. Fines can be a problem when grinding a small seed like proso millet.

Given the current price situation, it would appear that proso millet may be a bargain feed grain for all classes of livestock. Feed cost of gain may be reduced by feeding the cheaper millet through August, September and October until the new, lower priced, corn crop is available.

David Baltensperger
Extension Dryland Crop Specialist
Dillon M. Feuz
Extension Agricultural Economist
Burt Weichenthal
Extension Beef Specialist
Ivan Rush
Extension Beef Specialist

Winter wheat/eco farming conference begins Aug. 19

University of Nebraska Cooperative Extension Winter Wheat and Ecofarming meetings will be held Aug. 19-22 at four sites in central and western Nebraska. Conference meetings are scheduled for Monday, Aug. 19, at McCook Elks Lodge; Tuesday, Aug. 20, at Superior Elks Club; Wednesday, Aug. 21, at Arnold Legion Club; and Thursday, Aug. 22, at Ogallala Fairgrounds Exhibit Hall.

Meeting schedule

2:30 p.m. Tour of winter wheat stubble field; drills, sprayers
5:00 p.m. Booth and equipment displays
6:00 p.m. Meal
6:40 p.m. Results of 1996 Winter Wheat Variety Trials and Fertilizing for the Most Economical Yield, Robert Klein, Extension Cropping Systems Specialist
7:00 p.m. Production practices which reduce winter injury to winter wheat, John Watkins, Extension Plant Pathologist
7:20 p.m. Stubble treatments including controlling sandbur, downy brome, barnyardgrass, jointed goatgrass, and volunteer rye, Gail Wicks, Extension Weeds Specialist
7:40 p.m. Break
8:00 p.m. The winter wheat marketing plan, James Kendrick, Extension Agricultural Economist
Restricted entry periods lowered

The Environmental Protection Agency announced that the restricted entry intervals (REI) for 108 pesticides have been reduced to four hours. The restricted entry intervals are associated with the Worker Protection Standard for Agricultural Pesticides. The REI is the time that must pass after an agricultural pesticide application and before reentry of a treated area. The producers were previously listed with 12-hour REIs.

Many of the products on the four-hour REI list are biological insecticides such as BT. Other products such as DuPont’s Ally, Escort, Oust and Finesse herbicides are now included. Other four-hour REI products include Monsanto’s RoundUp Drypak and RoundUp WSD, Rohm & Haas’ Confirm insecticide, Sandoz’ Apex 5E and Enstar II, Valent’s Bolero BEC herbicide, and more. Several oil sprays have also received the four-hour REI.

A complete list of the 108 pesticides with the four-hour REI is in the UNL Pesticide Education Resources home page (http://ianrwww.unl.edu/ianr/pat/ephome.html) under the Pesticide Laws and Regulations section. The active ingredient, trade name, company name, and EPA registration number are provided for each entry. Always follow the REI on the product label.

Larry Schulze
Extension Pesticide Coordinator

Nitrogen application (Continued from page 131)

sity of Nebraska first promoted the benefits of deep sampling for residual nitrogen under dryland and irrigated cropping conditions. With the advent of mechanical soil sampling equipment and extended use of crop consultants, deep sampling increased in the 1970s. More recently, water quality concerns have led to increased use of soil sampling.

Deep soil sampling provides important information about the amount of nitrogen available in the soil profile for deep rooted plants, allowing producers more opportunity to reduce applications to just what’s needed. Eliminating unnecessary nitrogen applications reduces the amount loss to runoff or leached into the groundwater.

Deep soil sampling may be one of the factors which led to changes in nitrogen application rates since 1989. About 47% of the irrigated farmers and 28% of the dryland farmers surveyed about their 1994 crop year indicated that they had decreased the amount of nitrogen fertilizer applied per acre during the past five years. In contrast, the 1989 study of farmers found only 16% of the irrigated farmers and 10% of the dryland farmers said they had decreased nitrogen applications per acre in the last five years.

Most of the farmers surveyed said they applied nitrogen once a year, usually either preplant or at planting. Only 15% of the dryland farmers and 32% of the irrigated farmers had adopted nitrogen inhibitors for part or all of their farm operations in 1994.

One question of the survey also addressed the influence of price on nitrogen application in 1995 since nitrogen costs were unusually high that year. Thirty-two percent of the dryland farmers and 34% of the irrigated farmers said they reduced the application rate due to the higher prices.

William Miller
Extension Agricultural Economist
Raymond Supalla
Professor, Agricultural Economics
Benedict Juliano, Research Assistant
Agricultural Economics

Nitrogen use on Nebraska corn

The Nebraska Agricultural Statistics Service each year surveys producers on a variety of factors, including nitrogen use. The following table indicates the amount of nitrogen applied to corn over the past 10 years. The trend in pounds per acre is generally downward, despite increased levels of irrigation and rising average yields.

<table>
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<th>Year</th>
<th>Average application amount (lbs/acre)</th>
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<tbody>
<tr>
<td>1985</td>
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<tr>
<td>1986</td>
<td>141</td>
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<td>1994</td>
<td>139</td>
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Crop update (Continued from page 133)

excellent. Sorghum heading advanced to 57% last week, ahead of 23% last year, but behind the five-year average of 55%.

Dry bean condition was rated at 3% poor, 16% fair, 77% good, and 4% excellent. As of Sunday, 86% of the crop was setting pods, compared with 44% last year.

Nebraska Agricultural Statistics Service