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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 91-22] [Aug. 30, 1991]

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Insect Science
Plant Disease
Weed Science
NEWS

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

No. 91-22 Aug. 30, 1991

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PLANT DISEASE

Inspect corn and sorghum for stalk, root rot

As summer ends, stalk rots of corn and sorghum will begin to appear. These diseases, caused by a complex combination of several species of soil-inhabiting fungi, are among the most destructive diseases of corn and sorghum in the Midwest.

As plants approach maturity and grain reaches the last of the filling process, stalks begin to age and lose their internal strength and integrity. Stalk rots decrease grain yields in two ways: (1) by loss due to poor grain fill because of premature plant death, and (2) by ear loss associated with stalk lodging when structural strength is lost.

Because yield losses can be significant, growers should routinely scout corn and sorghum fields beginning about a month after pollination. Early above-ground symptoms of stalk rot include leaves that become blue-green or gray-green (resembling moisture-stressed or frost-injured leaves), wilt, then quickly turn tan, dry and die. Stalk tissue may remain green for a while, but the lower internodes become tan or straw-colored and may be spongy. Premature death of the entire plant quickly follows and stalks break over or are easily crushed when decay is advanced.

Check for stalk rot by pinching the lower internodes or by pushing plants 6 to 8 inches from vertical as an indication of lodging potential. Select five to 10 inspection sites per field and examine 25 to 50 continuous plants in two adjacent rows. Average the number of "at risk" plants across all sites. Consider scheduling a field for early harvest when stalk rot is evident on 10% to 15% of the plants. If early harvest is needed, be sure to check the grain moisture and be prepared to dry the grain before storage.

David Wysong

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

Cooperative Extension provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.

Use teamwork to fight wheat streak mosaic

Several years ago Kansas State University started a Good Neighbor Policy as a preventative measure for wheat streak mosaic. Since then, Nebraska and Colorado have adopted it.

The Good Neighbor Policy refers to controlling volunteer wheat and other grassy weeds to prevent the spread of wheat streak mosaic. It takes just one weedy stubble field to serve as a source of wheat curl mites and the wheat streak mosaic virus. From this one source, the mites can carry the virus to nearby winter wheat fields during September and October. Therefore, it takes a neighborhood effort to clean up stubble fields and prevent the spread of this serious wheat disease.

The basic principles behind the Good Neighbor Policy are:

- Control volunteer wheat and the grassy weeds that harbor wheat streak mosaic virus and the wheat curl mites that carry it.
- Hessian fly and Russian wheat aphids also over-summer in volunteer wheat.
- If volunteer wheat and grassy weeds are killed before fall-planted wheat emerges, the risk of wheat streak mosaic and these insect pests can be greatly reduced.
- Plant winter wheat at the proper date. (See *IPW News*, 91-19, page 109.) Don't plant early!

John Watkins

For your information

The following new or revised Extension publications recently were released by University of Nebraska-Lincoln Commmunications and Computing Services. They are available from your local Extension office or from UNL Communications and Computing Services, Room 104, Ag. Communications Bldg., Lincoln, NE 68583-0918.

RP 377 Herbicide Mode of Action and Injury Symptoms. This North Central Regional Extension publication classifies currently used herbicides by their mode of action and ties mode of action to herbicide injury symptomology. The seven major modes of action described are: growth regulation, amino acid synthesis inhibition, lipid synthesis inhibition, seedling growth inhibition, photosynthesis inhibition, cell membrane destruction, and pigment inhibition. The color photos of plant injury can aid in identification. (Cost is $2.00 plus postage and handling)

CC 178 Crop Varieties Suggested for Nebraska. This is a list of crop varieties by cropping districts.

CC 361 The Food, Agriculture, Conservation, and Trade Act of 1990: An Overview — Miscellaneous Proivions. This is the last of three campaign circulars intended to outline major provisions of the FACTA. This circular touches on a wide array of topics.

CC 362 Integrated farm management program Option. The purposes of this circular are to explain the IFM program — one of the new initiatives in the 1990 Food, Agriculture, Conservation and Trade Act — and to compare it to another option, the 0-92 program.

IPW News

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Lisa Brown Jasa, Editor

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ENVIRONMENTAL POLICY

Ground water contamination addressed

Proposed EPA program could ban atrazine use

This is the third article in a four-part series on agrichemical regulation in Nebraska.

EPA regulates pesticide availability and use under FIFRA, the Federal Insecticide, Fungicide and Rodenticide Act. Under EPA's proposed Pesticides in Ground Water Strategy, expected to be adopted within the year, states would be required to regulate those pesticides most likely to contaminate ground water. Nebraska is the only state that does not administer the FIFRA user certification and enforcement program and thus will not be able to administer the new pesticide strategy. EPA currently administers pesticide certification and enforcement in Nebraska and also would be expected to administer the Ground Water Strategy. This article discusses potential pesticide use regulations under this program.

Pesticide Strategy

EPA's Pesticide in Ground Water Strategy will require eligible states to prepare pesticide management plans. These plans will identify what programs and activities states will implement to prevent ground water contamination levels from exceeding levels designated as safe for drinking water. The plans will outline how states will:

(1) identify areas vulnerable to pesticide contamination;
(2) identify pesticides most likely to contaminate ground water;
(3) require additional applicator training and reduced application rates in vulnerable areas, and
(4) reduce application rates or suspend use when pesticides are detected in ground water.

The Nebraska Department of Environmental Control (DEC) already has made a preliminary identification of vulnerable areas — areas with shallow depths to ground water and/or sandy soils — as well as those pesticides most likely to contaminate ground water.

While the EPA will have to approve state plans, states are likely to have some flexibility regarding when and how pesticide use is restricted. A significant policy issue is what level of ground water contamination will trigger pesticide restrictions. Reduced applications could apply in:

(1) areas where certain contamination levels are detected; for example, it might be designated as 20% of the maximum contamination level for that pesticide; or
(2) all vulnerable areas, regardless of the contamination level.

Pesticide use could be banned, for example, if contaminatin levels reach 50% of the maximum contamination level for drinking water. For example, mandatory reduced application rates for atrazine could be triggered when ground water contamination levels reach 0.6 ppb or 20% of the 3 ppb maximum contamination level. They also could be triggered when contamination levels reach 1.5 ppb or 50% of the maximum.

EPA will probably retain the authority to establish reduced application rates for individual restricted use pesticides. It is not known, however, whether EPA will also determine the triggers for pesticide bans or whether states will define those triggers. It seems unlikely, however, that EPA would accept a trigger greater than 50% of the maximum contamination level for banning that pesticide since EPA wants to prevent pesticide contamination levels from exceeding maximum levels. If a 50% trigger were used, atrazine would be banned in some irrigated areas of Nebraska, including portions of the central Platte River Valley. If Nebraska does not assume administration of FIFRA and the Pesticide Strategy, EPA representatives have indicated that the EPA may ban atrazine use within the entire state.

J. David Aiken
Water and Ag Law Specialist

August 1991

Dear Subscriber,

There is something extra is in this issue of the *Insect Science, Plant Disease, and Weed Science News* — a reader opinion survey. We would like you to help us evaluate our selection of topics and content as well as the changes we've made in format. We want to know what you like about the newsletter and what you would like to change. We also want to know more about who our readers are and what kind of information you need.

We would appreciate it if you would take a few minutes to complete the attached survey and mail it back, postage-free. Your comments and suggestions will help us plan for the next season. We value your opinion and hope you will take the time to complete this survey.

Lisa Brown Jasa

Reader survey

August 1991

Dear *IPW News* Subscriber,

We value your opinion and want to know what you think about the *Insect Science, Plant Disease and Weed Science News*? What do you like and what don't you like about it? How can we improve it for you? Please take a moment and fill out this survey. Then fold it, staple or tape it, and return it to us, postage free. Thank you.

1. What is your occupation? _____ How would you categorize it?

   Farmer/Rancher _____ Business Manager _____ Sales/Applicators _____

   Consultant _____ University Extension/Research _____ Other (specify) _____

2. If you are a producer, 1) how many acres do you farm and what crops do you produce; or 2) what kind and how many lifestock do you raise? _____

3. What is most valuable about *IPW News*? _____

4. What changes would you make in the subject matter? _____

5. What changes would you make in the format? _____

6. Have you changed any pest management or crop production practices as a result of information in *IPW News*?

   Yes _____ No _____ If so, in what areas? (Please check all that apply.)

   Pesticide selection _____ Pesticide timing _____ Scouting _____

   Nonchemical controls _____ Other (Please describe) _____

7. Are you getting the information you need on a timely basis? _____ If not, please give specific examples.

8. Do you read all or part of the newsletter and how do you decide what to read? What do you do with the newsletter when you're done reading it? _____

9. Is there anything else you would like to add? _____

Thank you for your cooperation!

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