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CROP WATCH

University of Nebraska Cooperative Extension
Institute of Agriculture and Natural Resources

No. 98-25
Oct. 16, 1998

Be alert to diseases in fall-planted wheat

Thin wheat stands in October and November could be due to a number of factors such as seedling disease, insect injury, depth of planting, environmental stress or loose seedbeds. Dry weather in September kept some growers from planting their wheat, particularly in eastern Nebraska, but recent rains should provide good moisture.

Seedling blights are not a major problem for Nebraska wheat growers, but occasionally, this disease complex does cause a thinning of stands in the fall. This usually occurs when less than optimal quality seed is planted into a loose seedbed. Seed with germination below 85% due to scab or black point produces weak seedlings that often cannot tolerate adverse growing conditions in the fall. The seedlings die and the stand is thinned. Semidwarf varieties with short coleoptiles should not be planted too deep. Planting a semidwarf variety 4 inches deep to

reach moisture produces weak seedlings if and when they emerge.

Use the following guidelines to help ensure a healthy wheat stand going into winter:

- Plant only good quality seed that is free of scab, black point or other diseases.
- Treat the seed with a fungicide to prevent seedling blights and smut diseases.
- Seed into a moist (not wet), firm and mellow seedbed.
- Plant at the proper depth for that variety.
- Plant at the proper plant date.

To determine the cause of a thin stand, you need to dig suspect plants and examine the roots, crowns and subcoronal internodes for discoloration. Until the secondary roots form from the crown, young wheat seedlings survive on the primary roots that develop from the seed. Nutrient and water

uptake must pass through the subcoronal internode that runs between the primary roots and the crown. If either the primary roots or the subcoronal internodes become nonfunctional due to fungal infection and the secondary roots haven't formed, the diseased seedlings usually die. When the primary roots or subcoronal internodes become infected they turn a dark brown. Seed treatment fungicides usually protect the primary roots and subcoronal internodes from early infection in the fall. This protection usually lasts for about three weeks after germination.

I don't anticipate many wheat seedling problems in Nebraska this fall and will be conducting surveys in October and November to follow the health of the crop.

John E. Watkins
Extension Plant Pathologist

Another survey? Yes, but, *we're* listening and responding

In many areas, harvest is complete or almost complete and producers, consultants and agribusiness may be taking a few moments to review the season. Similarly, the faculty and staff who work on *Crop Watch* review its production season and plan changes and improvements for next year.

The best way for us to do this is to learn more about how you use

the newsletter and what kinds of information you need.

Please take a few moments and fill out the survey on pages 219-220 and return it postage-free. Tell us what you like and don't like and what you would change. Every survey is read and the results are considered when we plan for next year.

Lisa Jasa, Editor

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Soybean seed quality "average"

Reports from the Nebraska Crop Improvement Association field services and seed analysis staff indicate that soybean seed quality is about average. These reports are made as NCIA completes field inspection of over 30,000 seed production acres for Roundup Ready, STS and conventional varieties and begins quality analysis of seedlots in the laboratory.

Average soybean seed quality in Nebraska does not mean all factors are perfect; instead a wide range from very good to poor exists. Seed quality problems should be manageable by seed conditioning professionals and measurable by qualified seed analysis.

The structure of the soybean seed and its high susceptibility to

quality damage from weathering and handling makes soybeans one of the most difficult crops to manage for high uniform quality of most key factors. The increased intensity and acres in soybean production also have caused an increase in the incidence and severity of diseases, insects and weeds affecting seed quality.

Conditions found by NCIA staff which alone or in combination could have a negative effect on seed quality were (not in any particular order): low seed moisture at harvest (10% or below); black nightshade; and "bleeding hilum", white mold, and anthracnose diseases.

**Roger Hammons, Manager
Nebraska Crop Improvement
Association**

Crop update

Corn harvest was nearing the halfway point and over 50% of the soybean crop was combined. Frost was noted over portions of the western two-thirds of Nebraska.

Corn for grain harvest was 44% complete and nearly two weeks ahead of 19% last year and 18% average.

Soybean harvest moved to 52% complete, behind 58% last year and 55% average.

Sorghum harvest was slow to pick up momentum as producers focused on corn and soybeans. Wet soils in the southeast Nebraska hindered progress. Acreage harvested advanced to 21%, behind 32% last year but equal to the average.

**Nebraska Agricultural
Statistics Service**

Online pesticide label site grows

C&P Press, known for its annual agricultural pesticide label book, is doing a great job of keeping their web site current with label changes. A recent check of "What's New" on the C & P Press web site (<http://www.greenbook.net/>) revealed how fast their label and MSDS database is growing. During the last two months, 465 new or revised pesticide labels were posted from the 32 participating companies.

In "What's New", a date is given for each pesticide label or MSDS document addition to the database.

C & P Press also provides a subscription Premium Service for enhanced, online cross-referenced searches. Subscribers can locate products by any combination of brand names, company names, crops/plants/and labeled sites, pests, common name (active ingredient) and product category.

**Larry Schulze
Extension Pesticide Coordinator**



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From seed to production to marketing: Stay informed about today's changing agriculture

The next two issues of Crop Watch will feature information on educational opportunities available this fall through University of Nebraska Cooperative Extension.

Crop Protection Clinics

Each year the University of Nebraska Crop Protection Clinics feature practical, economical and environmentally sound management strategies for insect, plant, disease and weed problems in crops. Topics for individual meetings will vary by location. For all meetings, registration begins at 8 a.m., with sessions continuing from 9 a.m. to 4 p.m. The \$20 registration fee includes proceedings, publications, refreshment breaks and noon meal.

Jan. 5, Lincoln, Lancaster County Extension Education Center, 444 Cherrycreek Rd

Jan. 6, Auburn, Arbor Manor, 1617 Central Ave.

Jan. 7, Fremont, Holiday Lodge, 1220 E. 23rd St.

Jan. 8, Norfolk, University of Nebraska Learning Center, 601 E. Benjamin St.

Jan. 12, York, Chances "R" Restaurant, 124 W. Fifth St.

Jan. 13, Hastings, Garden Cafe in the Holiday Inn, 2201 Osborne Drive East

Jan. 14, Fairbury, 4-H Building, 56885 PWF Road

Jan. 15, Holdrege, Ag Center, 1308 Second St.

Jan. 19, Scottsbluff, Panhandle Research and Extension Center, 4502 Avenue I

Jan. 20, Ogallala, Ramada Ltd., 201 Chuckwagon Road

Jan. 21, Broken Bow, Elks, 625 S. 10th St.

Jan. 22, O'Neill, Allison's Restaurant, Fifth and Douglas streets

Commercial pesticide recertification in the Agricultural Plant category is available at all locations. For more information on these clinics, contact your local Cooperative County Extension Office.

Alex Martin
Extension Weed Specialist
Jeff Rawlinson
Extension Assistant Weed Science

Seed Improvement Conference

Representatives of all segments of the Nebraska seed industry, from research to production to marketing, will gather Feb. 1-3 at the Holiday Inn in Hastings for the Nebraska Seed Improvement Conference.

The annual conference, open to all interested in the Nebraska seed industry, brings together members of the Nebraska Crop Improvement Association (NCIA) and the Nebraska Seed Trade Association (NSTA) for educational presentations, business meetings, and dialogue. This year's theme is "Advancing Innovation."

"Our goal is to offer NCIA and NSTA members a worthwhile, valuable conference," said Rod Fritz of Stock Seed Farm in Murdock, 1999 program chair. "It starts with the participants who use their time and the opportunity for one-to-one sharing that is only possible at times like these. It is fully realized through presentations of practical, useful information about timely topics by knowledgeable speakers and complemented by the trade show exhibitors."

For program and registration information, contact Diane Brestel at the Nebraska Crop Improvement Association by phone (402-472-1444) or fax (402-472-7904) or Email

(dbrestel@unlinfo.unl.edu).

Lodging reservations can be made directly with the Hastings Holiday Inn at the conference rate of \$50 a night by calling 888-905-1200

Roger Hammons
Manager
Nebraska Crop Improvement Association

Agronomy Highlights

"New Ways of Doing Business" will be the theme for this year's Agronomy Highlights. The program will be held Tuesday, Dec. 15, at the Cornhusker Hotel in Lincoln.

Speakers and poster sessions will focus on new ways for growers and the University of Nebraska to conduct business as the face of agriculture changes rapidly.

Further information should be in the next issue of Crop Watch or contact JoAnn Collins at 402-472-2811.

Alex Martin
Extension Weed Specialist
Jeff Rawlinson
Extension Assistant Weed Science

Organic Crop Training

Producers wanting to learn more about growing organic crops for alternative markets should check out an upcoming training opportunity to be sponsored by University of Nebraska Cooperative Extension, the Nebraska Sustainable Agriculture Society and the Center for Rural Affairs.

Organic production uses alternatives to traditional commercial pesticides and fertilizers to control pests and build soil fertility, said Andy McGuire, project coordi-

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Winter meetings

(Continued from page 217)

nator and NU Extension educator. The winter training sessions will be conducted as part of a project designed to teach and provide support to new organic farmers. The project is being funded by a \$40,000 EPA grant.

Program topics will include organic certification, the transition to organic production, pest control and soil fertility. Fall and winter meetings covering the basics will be followed next summer by day-long workshops on organic farms.

A network of farmer groups and staff from the three cooperating organizations will provide support to farmers switching to organic production, McGuire said.

The sessions will be held from 10 a.m. to 3 p.m. at each site. Cost is \$5 for the meal to those who register at least three days before each meeting. To register, call the extension office nearest the meeting location or call McGuire at (402)254-2280.

Program dates and locations are:

Nov. 16, Bloomfield Community Center;

Dec. 9, Wunderlich's Restaurant in Columbus;

Dec. 10, the Ag Hall, Fillmore County 4-H Fairgrounds, Geneva;

Dec. 16, Research and Education Building, NU Agricultural Research and Development Center near Mead;

Jan. 11, Adams County Extension office, Hastings;

Jan. 19, Five Rivers Resource Conservation and Development Center, Tecumseh.

The Nemaha Natural Resource District will sponsor the Tecumseh session.

Andy McGuire
Extension Educator
Haskell Agricultural Laboratory

Monsanto pursues unlawful use of biotechnology

Producers beware: Monsanto says it is now vigorously pursuing growers who pirate any brand or variety of its genetically enhanced seed. Nebraska is one of many states where Monsanto says it is investigating specific reports of the unlawful use of pirated seed, such as Roundup Ready soybeans.

In a recent press release, Monsanto described several settlements with royalty payments ranging from \$10,000 to \$35,000. Although royalty terms vary by case, all of the settlements described included on-site farm and record inspections for at least five years. In other cases, seed also was confiscated and crop was destroyed.

"In each of these cases, the royalty payment far exceeded any cost savings the farmer could have gained from saving and replanting

pirated seed," according to the press release.

Scott Baucum, Monsanto's intellectual property protection manager, emphasized that seed piracy is illegal even if a farmer didn't sign an order/invoice statement for the seed at the time of purchase.

"Monsanto invests many years and millions of dollars in biotechnology research to bring growers new technologies sooner rather than later. When growers save and replant patented seed, there is less incentive for companies to invest in future technologies that will ultimately benefit farmers."

For more information, contact your local agricultural chemical dealer, Monsanto representative, or call 1-800-ROUNDUP.

Think you've had enough gray leaf spot? Just wait for its cousin

Scientists with the Agricultural Research Service have discovered a "cousin" of the fungus that causes gray leaf spot in corn — a finding that could mean double trouble for growers across the Cornbelt.

The fungus *Cercospora zeamaydis* causes gray leaf spot. Spores from the fungus land on corn plant leaves and infect the tissues, opening the way to other crop-damaging diseases. A severe infestation can reduce corn yields by up to 25%.

Now, a plant pathologist at ARS' Crop Production and Pest Control Research Laboratory in West Lafayette, Ind., has found a second type of gray leaf spot fungus in the eastern United States. This

fungus "cousin" causes the same disease symptoms in corn but has slight genetic differences from the more common type.

The finding could prove crucial as scientists probe the genetic makeup of the disease to learn more about its virulence. Breeders will have to develop new varieties resistant to both forms of the gray leaf spot fungus.

Both types of fungus overwinter in crop residue and in the spring produce spores called conidia, which are blown by wind or splashed raindrops to spread the disease.

Dawn Lyons-Johnson, USDA
Agricultural Research Service

Crop Watch Reader Survey

Dear Subscriber,

We value your opinion and want to know what you think about *Crop Watch*. Is it meeting your needs? How can we improve it? Please take a moment and fill out this survey. Then fold, staple or tape it, and return it to us, postage free. *Thank you.*

1. What is your occupation?

<input type="checkbox"/> Farmer	<input type="checkbox"/> Consultant	<input type="checkbox"/> Farm manager/investor
<input type="checkbox"/> Fert./Chem. dealer	<input type="checkbox"/> Company rep	<input type="checkbox"/> Sales/applicator
<input type="checkbox"/> University Extension/Research	<input type="checkbox"/> Other (specify) _____	
2. If you are a **farmer**, how many acres do you farm and what crops do you produce? _____

3. What is most valuable about *Crop Watch*? _____

4. Are there subject matter areas you would add or delete? If yes, what?
Add: _____ Delete: _____
5. Special topics from this year included:

<input type="checkbox"/> 1) site specific management	<input type="checkbox"/> 2) genetically altered crops	<input type="checkbox"/> 3) grain storage
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 With "1" being most helpful and "5" being least helpful, please rate these topics.
 What "special" topics would you suggest for next year? _____
6. Have you changed any pest management or crop production practices as a result of information in *Crop Watch*?
 Yes _____ No _____ If so, in what areas? (Please check all that apply.)

<input type="checkbox"/> Pesticide selection	<input type="checkbox"/> Pesticide timing	<input type="checkbox"/> Weed scouting
<input type="checkbox"/> Insect scouting	<input type="checkbox"/> Disease scouting	<input type="checkbox"/> Soil sampling for fertility
<input type="checkbox"/> Reduced insecticide rates	<input type="checkbox"/> Reduced herbicide rates	<input type="checkbox"/> Crop rotation
<input type="checkbox"/> Split fertilizer application	<input type="checkbox"/> Reduced tillage	<input type="checkbox"/> Nonchemical controls
<input type="checkbox"/> Irrigation scheduling	<input type="checkbox"/> Use or management of genetically altered crops	
7. Can you assign a dollar value per acre of any savings that might have occurred because of these changes?
 \$ _____/acre for _____ (how many?) acres. For what change(s)? _____

8. Will the change(s) potentially reduce pesticide, fertilizer or irrigation requirements per acre? Yes ____ No ____
 Please describe which ones. _____
9. Do you anticipate making any future changes in management/production as a result of information in *Crop Watch*?
 Yes ____ No ____ If so, in what areas? _____
10. What kinds of information do you need to change or adopt practices, as may be described in the newsletter?

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

12. Do you plan to subscribe to *Crop Watch* next year? ____ Yes ____ No ____ Printed ____ Web

— OVER —

13. With "1" being most important and "12" being least important, please rank the following subject matter areas in the order of their importance for you.

- | | | |
|--|---|--|
| <input type="checkbox"/> Agronomic information | <input type="checkbox"/> Insect control | <input type="checkbox"/> Disease control |
| <input type="checkbox"/> Pesticide updates | <input type="checkbox"/> Meeting/training notices | <input type="checkbox"/> Weed control |
| <input type="checkbox"/> Soil fertility | <input type="checkbox"/> Variety trials | <input type="checkbox"/> Weather data |
| <input type="checkbox"/> Tillage issues | <input type="checkbox"/> Field reports | <input type="checkbox"/> Ag statistics |

14. Do you have or use any of these "new" technologies?

- | | |
|---|--|
| <input type="checkbox"/> Yield monitor without GPS | <input type="checkbox"/> Yield monitor with GPS |
| <input type="checkbox"/> Spray rate controller without GPS | <input type="checkbox"/> Variable rate sprayer with GPS |
| <input type="checkbox"/> Fertilizer rate controller without GPS | <input type="checkbox"/> Variable rate fertilizer with GPS |

15. Do you have a computer with access to the World Wide Web? Yes No

If yes, would you be apt to use an expanded version of *Crop Watch* on the Web? Yes No

Please add any other comments _____

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