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

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Disease update

Temperatures ideal for soil-borne wheat mosaic

Warmer temperatures and rain have stimulated growth in our winter wheat. In general it appears that winter wheat came through winter in good condition; however a few reports of disease activity are beginning to filter into county extension offices and the Plant and Pest Diagnostic Clinic. Diseases have included soil-borne wheat mosaic, wheat streak mosaic and crown rot.

Temperatures are ideal for expression of symptoms of soil-borne wheat mosaic. This virus occurs from eastern to west central Nebraska. In fields, the disease appears as irregular patches of yellow or light green wheat. These may be uniform across a field, but are usually more pronounced in low areas such as terrace channels, water ways, etc. Leaves of infected plants show a yellow-green mosaic pattern which is most evident on the youngest leaves.

Losses to soil-borne wheat mosaic are difficult to predict since varieties react differently to infection. A long cool, wet spring enhances symptom expression and increases the potential for greater losses in susceptible varieties.

Nothing can be done to alleviate the problem once plants are infected. Disease management begins in the fall with the selection of resistant varieties. The Nebraska-released variety ‘Wesley’ and a number of Kansas-released varieties (Ike, Jagger, Karl 92, Betty, Heyne and 2137) are resistant to soil-borne mosaic. Early planting in the fall will result in a higher incidence of soil-borne wheat mosaic.

Symptoms of wheat streak mosaic also are beginning to appear.

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Field Scout Training May 23

Training for pest management field scouts will be held Wednesday, May 23 at College Park, 3180 W. U. S. Highway 34, in Grand Island. The program also will be offered over the Nebraska Television Satellite System. Primary downlink sites have been established at the West Central Research and Extension Center in North Platte and at the Lifelong Learning Center in Norfolk. Secondary downlink sites will be available at county Extension offices.

The program will begin at 8:30 a.m. and end at 3 p.m. Field scouting principles and insect, weed and disease pests of corn and soybeans will be covered. The Grand Island program will cost $20, but there is no charge for attending at one of the downlink sites. A manual will be available at all locations for $40.

Contact Ron Seymour at the Adams County Extension Office for pre-registration at Grand Island, Jack Campbell at the North Platte site and Keith Jarvi at the Norfolk site. Contact your local extension office if you would like to view the program closer to home.

Ron Seymour, Extension Educator
Adams County
**Field updates**

Ron Seymour, Extension Educator in Adams County: Field conditions are still wet but improving. A few producers have cut corn stalks and a few have attempted to apply anhydrous ammonia fertilizer. The mid afternoon soil temperature is 55°F. Alfalfa and wheat continue to improve.

Gary Hall, Extension Educator in Phelps and Gosper counties: Rain, snow and cold temperatures have prevented fieldwork in our area. Should the weather turn more seasonable this week, some planters will begin moving to the fields. With most farmers planting 50% corn and 50% soybeans, the time crunch doesn’t seem to be quite as critical.

Terry Gompert, Extension Educator in Knox County: Pastures and alfalfa are starting very slow. It appears that there will be winter kill in some of the alfalfa. It also looks like about 5% to 10% of pine trees are stressed and might not survive.

We received 2 to 3 inches of moisture in April following a very dry March. There is moisture a couple feet deep, but the deep soil moisture is nonexistent. There has been no field work. Very little oats or barley have been planted. It is appearing to be a slow spring.

Ralph Anderson, Extension Educator in Buffalo County: There really is just not much happening in Buffalo County. The soil test labs have been busy and there are a few floaters applying fertilizer in the field but not much other activity. Grass, wheat and alfalfa are greening up and are looking pretty good so far. The real test will be if we get some heat and moisture stress.

Nebraska Agricultural Statistics Service: Topsoil moisture rated mostly adequate while subsoil moisture rated mostly short to adequate.

The winter wheat crop rated 1% very poor, 10% poor, 35% fair, 47% good, and 7% excellent. About 2% of the crop had jointed, compared with 13% last year and 3% for the five-year average. Corn planting made a very limited start in a few eastern and southern counties. Last year at this time, 3% had been planted with the average at 1%. Hay and forage supplies were below year ago levels.

**NU weed tour dates set for June 18-21**

The itinerary has been set for the 2001 Nebraska Weed Tour. The tour, which will begin at the Haskell Ag Lab near Concord, provides a hands-on look at University research herbicide trials. While most participants are from the agricultural chemical industry, the tour is free and open to the public. Individuals may attend all or part of it. The itinerary is:

**Monday — June 18**
1 p.m., Concord, Haskell Agricultural Laboratory

**Tuesday — June 19**
9 a.m., Lincoln, Havelock Research Farm
3 p.m. Clay Center, South Central Research and Extension Center

**Wednesday — June 20**
9 a.m., North Platte, West Central Research and Extension Center
3 p.m. (MDT), Sidney, High Plains Agricultural Laboratory

**Thursday — June 21**
8:30 a.m. (MDT), Scottsbluff, Panhandle Research and Extension Center

Brady Kappler
Weed Science Educator

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Wheat diseases (Continued from page 51)

in west central Nebraska. Because of cooler temperatures, it’s still too early to tell how extensive any wheat streak problems are in western Nebraska. Once temperatures consistently stay above 70°F, the symptoms will become more evident. Watch for it in locations where wheat was hailed last year, resulting in an early volunteer wheat crop that wasn’t destroyed last year after harvest. We will be conducting a thorough wheat survey in western Nebraska the second week of May to assess any potential wheat streak mosaic and crown rot problems.

As with wheat streak mosaic, we’ve had a few calls on crown rot causing partial stand loss. As wheat continues to green up and grow in the next week or two, stand problems due to crown rot will become more evident. Affected plants will be unthrifty, generally chlorotic and have discolored crowns. Crown rot can be detected by digging suspect plants, splitting the crowns for evidence of infection. Healthy crowns will be white and diseased crowns tan to brown. Symptoms in the field are worst on exposed hillsides, terrace tops or where seedbeds last fall were loose. Crown rot is initiated by cold injury or other stresses during late fall and winter followed by secondary invasion by fungal pathogens.

For marginal stands, estimating the yield in early spring is difficult. Use Table I to estimate potential yield and help determine whether to keep or destroy a marginal stand.

Recent rains have resulted in tan spot symptoms developing on the leaves of wheat that is either growing in wheat stubble or is adjacent to a stubble field. If we have a wet spring up to heading, tan spot could become severe enough, along with leaf rust, to reduce yields. By late March only light amounts of leaf rust were being reported in Texas. The cold winter in the Great Plains probably forced leaf rust to overwinter further south, delaying it’s arrival here this spring.

We will continue to monitor reports of its development south of Nebraska.

Three systemic fungicides (Quadris & Tilt-Syngenta and Stratego-Bayer) and one contact fungicide (mancozeb) are registered for control of rusts and leaf spots on wheat. Stratego, a new product from Bayer and Tilt from Syngenta should be applied at Feeke's Stage 8 (emerging flag leaf). Quadris can be applied up to Feeke's Stage 10.5 (late head emergence). A single application of one of the systemic products provides good disease control, whereas two applications of mancozeb are needed to be equally as effective. Treatment cost will range from $15 to $18 per acre.

John E. Watkins
Extension Plant Pathologist

### Table 1. Estimated potential yield in bushel of winter wheat based on five tillers/plant, 22 seed/head and 16,000 seed/lb. (Source: NebGuide G92-1097, Root and Crown Rot-Winterkill Complex of Winter Wheat)

<table>
<thead>
<tr>
<th>Drill Row Spacing in Inches</th>
<th>Healthy Plants/ Foot of Row</th>
<th>Yield Bushels per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>7.7</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>15.0</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>22.5</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>30.0</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>37.5</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
<td>45.0</td>
</tr>
<tr>
<td>7</td>
<td>70</td>
<td>52.5</td>
</tr>
<tr>
<td>8</td>
<td>80</td>
<td>60.0</td>
</tr>
<tr>
<td>9</td>
<td>90</td>
<td>54</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td>11</td>
<td>110</td>
<td>55</td>
</tr>
<tr>
<td>12</td>
<td>120</td>
<td>60</td>
</tr>
<tr>
<td>13</td>
<td>130</td>
<td>65</td>
</tr>
<tr>
<td>14</td>
<td>140</td>
<td>70</td>
</tr>
</tbody>
</table>

Yield potential should be adjusted for fewer or more tillers, seeds per head, and seed size. For information on seed size of winter wheat refer to EC-103, Nebraska Fall-Sown Small Grain Variety Tests, which is published annually. Winter wheat ranges from about 12,000 to 20,000 seed/lb.
Organic soybeans: High quality warrants higher income potential

Probably the oldest and most consistently profitable identity preserved soybeans are organic soybeans. The market for both food grade and feed grade organic soybeans has been a premium market for about 25 years. Recently the price has been three to five times that of the commodity crop. Many of the agronomic considerations for production are essentially the same as for commodity soybeans, but there also are some significant differences.

Initially a farmer interested in growing organic soybeans should contact a valid certifying organization. At least three do certifying in Nebraska: Farm Verified Organic headquartered in North Dakota, Organic Growers and Buyers Association of Minnesota and Organic Crop Improvement Association (OCIA) which is an international certifying agency headquartered in Lincoln.

After selecting a certifying agency to work with, a producer will need to complete the following steps to accomplish certification. (This example is for OCIA.)

- The producer joins the organization, studies the standards and develops an appropriate farm plan, in compliance with organization standards.
- The producer applies for certification, submitting a completed questionnaire about the farming/processing operation.
- The producer documents at least three years of operation without synthetic chemicals.
- The producer grows the crops or livestock according to the certifier’s standards.
- Each year an inspector examines the fields and operations and reviews the producer’s records.
- Processed products are checked at every stage of processing and packaging.

- Committees review the certification application, inspector’s reports and documentation.
- If the certifying organization is convinced that the organic standards are met, it grants certification for the product for the crop year.

Certifying will be necessary to participate in national and international markets. For food grade organic soybeans buyers require clear hilum varieties. In most cases the soybean variety grown can be selected from a small number of choices while in others a specific variety is required by the buyer. Feed grade organic soybeans need not be clear hilum varieties, providing a greater latitude for varietal selection. No Genetically Modified Organism (GMO) varieties are acceptable.

At harvest a much narrower moisture level range is acceptable in these beans compared to commodity soybeans. Preferred moisture is 12.0% - 13.5%. Dryer beans increase splits and risk of refusal by buyers. Quality is paramount in food grade organic soybeans and higher quality feed grade soybeans will be rewarded with a higher price.

Growing organic soybeans requires more active marketing by the producer. In addition, the grower will need to plan to store beans in an identity preserved way on the farm until the market is ready to accept them for processing.

Growing organic soybeans requires a higher level of thoughtfulness, planning and management than commodity soybeans, but it has provided a consistently higher rate of return to growers who can successfully accomplish these added tasks.

For further information, contact these organic certifying organizations:

- FVO, RR1 Box 40A, Medina, ND 58467
- OGBA, 1405 Silver Lake Rd, New Brighton, MN 55112
- OCIA, 101 Y Street Suite B, Lincoln, NE 68508-1172

Paul Swanson-Extension Educator in Sustainable Agriculture, Direct and Cooperative Marketing
Control volunteer herbicide-resistant corn

With more and more acres of herbicide resistant corn being planted every year, producers need to consider control options for volunteer corn in the following year’s soybeans. Corn harvest is never 100% efficient and kernels left in a field may emerge the next spring as volunteer corn. Volunteer corn often occurs in clumps as a result of ears remaining from the previous crop. In addition you may have some herbicide resistant volunteer corn even though you planted conventional varieties last year. If your neighbor had herbicide resistant corn then pollen drift into your field, for at least the first few rows, is a possibility. This is where those open communication channels with your neighbors really pay off.

Effectiveness of soil-applied herbicides in high density clumps is reduced due to "competition" between individual plants for the herbicide. Postemergence herbicide effectiveness is reduced in high plant density clumps of corn because one plant shields another resulting in inadequate herbicide coverage. As a result, complete control of volunteer corn is unlikely from a single soil-applied or postemergence herbicide application. A follow up operation will be required to control survivors.

If you look at some of the herbicide resistant corn, you’ll find products resistant to sethoxydim (active ingredient in Poast Plus) and “IMI” corn which is resistant to certain imidazolinone herbicides (active ingredients in Pursuit and Lightning). Originally these active ingredients used in the soybean market provided grass control in a broadleaf crop (soybean). It made sense to breed and develop herbicide resistant corn varieties because it allowed the control of grass weeds in a grass crop (corn).

The other area is the herbicide resistant corn varieties such as Liberty Link™ and Roundup Ready™ These corn varieties were genetically engineered to tolerate the nonselective herbicides of Liberty and Roundup.

Control options

Several methods of weed control
-- cultural, mechanical and chemical

(Continued on page 56)

Table 1. Chemical control options based on previous herbicide-resistant corn variety.

<table>
<thead>
<tr>
<th>Volunteer corn trait</th>
<th>Control in soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMI or Clearfield™</td>
<td>Assure II, Fusilade, Fusion, Poast Plus, Select, and Roundup, Touchdown, Extreme, and other glyphosate products.</td>
</tr>
<tr>
<td>Liberty Link™</td>
<td>Assure II, Fusilade, Fusion, Select, Poast Plus, and Roundup, Touchdown, Extreme, and other glyphosate products, Raptor&lt;sup&gt;2&lt;/sup&gt;, Pursuit + Scepter&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>Roundup Ready™</td>
<td>Assure II, Fusilade, Fusion, Select, Poast Plus, Raptor&lt;sup&gt;2&lt;/sup&gt;, Pursuit + Scepter&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>SR™ or Poast Ready™</td>
<td>Assure II, Fusilade, Fusion, Select, and Roundup, Touchdown, Extreme, and other glyphosate products, Raptor&lt;sup&gt;2&lt;/sup&gt;, Pursuit + Scepter&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

1 – Roundup, Touchdown, Extreme, and other products containing glyphosate requires Roundup Ready soybeans
2 – Raptor will provide moderate control of volunteer corn. Best results occur if applications are made when the volunteer corn is 6-12 inches tall.
3 – Pursuit and Scepter will provide suppression of volunteer corn. Best results occur if applications are when the volunteer corn is 6-12 inches tall.

Table 2. Herbicides to control volunteer herbicide-resistant corn in soybean.

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Rate</th>
<th>Additives&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Volunteer corn height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assure II</td>
<td>8 oz/acre</td>
<td>1% COC &amp; 0.25% NIS</td>
<td>6-18”</td>
</tr>
<tr>
<td>Fusilade</td>
<td>6 oz/acre</td>
<td>0.5% - 1% COC or 0.25 – 0.5% NIS</td>
<td>12-24”</td>
</tr>
<tr>
<td>Fusion</td>
<td>6 oz/acre</td>
<td>0.5% - 1% COC or 0.25 – 0.5% NIS</td>
<td>6-10”</td>
</tr>
<tr>
<td>Glyphosate products, Extreme, Roundup, and Touchdown</td>
<td>Consult label of particular product for exact rates, additives and weed heights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select</td>
<td>4-6 oz/acre</td>
<td>1% COC + 2.5 - 4 lbs AMS</td>
<td>4-12”</td>
</tr>
<tr>
<td>Poast Plus</td>
<td>1.5 pts/acre</td>
<td>COC, MSO, or Dash HC + UAN or AMS: consult label for exact rates</td>
<td>&lt; 20”</td>
</tr>
</tbody>
</table>

<sup>1</sup> – Always consult label for exact descriptions and rates of additives
Herbicide-resistant (Continued from page 55)

are available. All will provide varying degrees of success so you will need to evaluate your management system to see which fits best. Combining two or more control strategies into an integrated weed management plan will increase the chances of controlling volunteer corn plants.

Cultural Control

No-till and ridge-till systems aid in the control of volunteer corn. Tillage “plants” volunteer corn ears and kernels. Under no-till a smaller percentage of volunteer corn kernels will germinate compared to a tilled seedbed. A ridge-till system which uses a “ridge clearing” device can move most of the volunteer corn kernels from the ridge (new corn row) and deposit them between the rows where the resulting volunteer corn can be controlled with a cultivator. The ridge clearing device must be adjusted to scrape surface soil (at least 1 inch) off the ridge in order to effectively move corn kernels to the inter-row area. Both no-till and ridge-till reduce volunteer corn establishment, reducing the task of controlling the remaining volunteer corn.

Chemical Control

Recommended rates and herbicides to achieve chemical control are listed on page 55. When using rope wicks or bean bars be sure you use a product that will control the volunteer crop. The traditional use of glyphosate products with these devices will not work in Roundup Ready beans.

Mechanical Control

Cultivation is also an option in wider row soybeans. It can provide excellent control between the rows, but provides little for volunteer clumps within the row. It works nicely with ridgetill systems that have moved the corn out of the row earlier in the season. The nice thing about cultivation is that it doesn’t matter what herbicide-resistant variety was planted the previous year.

Brady Kappler
Extension Educator, Weed Science

Winter annuals likely unchecked by long, cold winter

Winter annuals are species that germinate in fall, overwinter and then continue growing in early spring. A long, cold winter with snow cover less than 3 inches deep can reduce their survival rate; however, most of the state had adequate snow cover this year to protect the seeds.

As soon as the soil temperature reaches 50-55 F, winter annuals like field pennycress, shepherds purse, henbit, and mustard species will begin rapid growth. Perennials like dandelion and curly dock also can be seen at this time of the year.

These weeds can be controlled both by mechanical and chemical means. If you are in a conventional tillage situation, a herbicide application may not be necessary. In most cases tillage prior to planting will provide adequate control of winter annuals.

In no-till fields, winter annuals can be effectively controlled with several herbicide options. Winter annuals usually need to be controlled by April 15 before they become too large for herbicide efficacy; however, this year’s cooler spring may widen the window for controlling these weeds. Usually a burndown herbicide program is best and several post emergence herbicides provide excellent activity.

Examples of burndown herbicides in corn include: 2,4-D Ester, 2,4-D Ester + Bicep, Banvel, or Atrazine, Atrazine + Banvel, Roundup Ultra/Touchdown, Field Master, Gramoxone Extra, and Gramoxone Extra + Atrazine.

Examples of burndown herbicides in soybean include: Command 3E Gramoxone Extra, Pursuit, Pursuit Plus, Sencor/Lexone DF, Canopy XL, and Roundup Ultra/Touchdown.

More detailed information and other options can be found in the 2001 Guide for Weed Management under “Burndown Tables for No-Till”.

Also, consult the label direction for the pre-plant and post-plant intervals. For example, 2,4-D should be applied at least five days before or three days after planting corn. Also 2,4-D can be used for burndown in soybean but it must be at least seven days prior to planting. More details on herbicide use rates and pre-emergence options can also be found in the 2001 Guide for Weed Management, available from local NU Extension offices.

Stevan Knezevic
Extension Weeds Specialist

Brady Kappler
Extension Educator, Weed Science

Check out Crop Watch on the web for color photos and AgNews at cropwatch.unl.edu
Spartan granted Section 18 for sunflowers

Spartan herbicide by FMC has been granted a Section 18 exemption in 2001 for use in sunflowers grown in conservation tillage systems in Nebraska.

Spartan herbicide has provided excellent control of troublesome broadleaf weeds, such as kochia, Russian thistle, and pigweed in no-till sunflower for the past several years.

Previously, it had been difficult to consistently achieve a high level of broadleaf weed control in sunflower without herbicide incorporation, however Spartan provides that consistency. It has a much greater water solubility than Prowl, primarily a grass herbicide, and requires much less precipitation to move the herbicide into the soil. Spartan does not photodegrade at the soil surface so delayed rain does not diminish its effectiveness as it does with other herbicides. While Spartan provides excellent broadleaf weed control and has some activity on grass weeds, it should be tank-mixed with Prowl herbicide at labeled rates for control of many grass weeds. If grass weeds are not a concern, an alternative to tank mixing Prowl with Spartan is to plan on a postemergence treatment of either Poast or Select herbicides if grasses become a problem. Select herbicide was recently labeled for use in sunflower. The drawback to this strategy is the potential cost. The postemergence treatments, if needed, will cost $9-$10 per acre for product plus the application cost versus $8-$9 per acre for Prowl.

Some crop injury has been reported from using Spartan. The injury was typically restricted to high pH, low organic matter soils on hilltops and consisted of leaf chlorosis, plant stunting, and occasionally plant death. Injured plants generally grew out of the injury within a few weeks and yield differences were minimal at harvest.

Spartan use rates range from 2.0 oz of product/acre on coarse soils with less than 1.5% organic matter to 5.33 oz of product/acre on medium or fine textured soils with organic matter content greater than 3%. For most western Nebraska soils, efficacy at the lower application rates has not been a problem, except with very dry conditions. We recommend using the lowest labeled rate appropriate for your soil if treatments are made preemergence or up to 20 days prior to planting. Growers need to increase the herbicide rates slightly for early preplant applications made more than 20 days before planting.

Early preplant applications have been shown to reduce crop injury with Spartan herbicide and may be a good option for no-till sunflower production in many areas. Early preplant applications also are more likely to catch an activating rain in time to provide excellent in-crop weed control. Spartan has a long soil residual, which maintains in-crop weed control with early preplant applications up to 30 days before planting.

Recropping intervals include: anytime for soybeans; 4 months for wheat, barley, rye, oats and triticale; 10 months for field corn and sorghum; 12 months for proso and pearl millet; and 18 months for sweet corn.

Follow all label directions. Applicators wishing to apply Spartan herbicide in sunflower must have a permit issued by the Nebraska Department of Agriculture and must possess a copy of the Section 18 label at the time of application.

Drew Lyon, Extension Dryland Cropping Systems Specialist
Robert Klein, Extension Cropping Systems Specialist
Both at the West Central REC

Farm visitor policies may hinder spread of diseases

With livestock diseases running rampant across the ocean, Nebraska producers may be wondering what they can do to prevent disease from reaching their farms. While it is impossible to eliminate all risks, farm visitor policies can be an important step in reducing risks.

Moving animals from farm to farm presents the greatest risk of spreading livestock disease, said Dave Smith, NU dairy and beef veterinarian.

"Some operations can make decisions about animal movement and some can't; it depends on how the business is set up," he said. "The important thing is to know where the risks are and try to minimize them whenever possible."

The first step in minimizing risk is to evaluate all visitors. Some visitors pose more of a threat than others.

"Visitors with recent exposure to livestock are more likely to carry in pathogens, so you should ask if visitors have been on farms or had other contact with livestock," he said.

If visitors' livestock exposure was in another country, producers should require a five-day waiting period, ask that all clothing be laundered and that shoes and personal items are cleaned and wiped with a bleach solution.

"While visitors from other countries that haven't visited farms likely don't present risks, it is prudent to require all foreign travelers to wait five days before visiting. Also prohibit visitors from bringing imported meat or milk products that lack USDA approval," he said.
Soybean planting date issues for 2001

It will be especially important this year to provide the optimum micro environment possible when planting soybean seed, given the short supplies available for replanting and the lack of vigor in much of the available seed.

A soil temperature of 86°F is optimum for soybean germination. Seed planted into soil that is 50°F will germinate slowly and emergence may be reduced. Planting into seed beds with temperatures in the low 50s is, therefore, not advisable unless soil temperatures are rising rapidly. A good target to begin planting is at 60°F. This is especially true in a year like 2001 when seed supplies are short.

Soybeans have a unique ability to perform well over an extended array of planting dates, permitting them to complement other crops in Nebraska's cropping systems.

The study summarized in Table 1 was conducted with a determinate variety and five indeterminate varieties. Soybeans planted in May were the most productive, with a fast drop in yields after mid-June. Plant heights were greatest in late May and mid-June and were shorter with earlier planting dates.

<table>
<thead>
<tr>
<th>Average planting date</th>
<th>Yield potential %</th>
<th>Plant height inches</th>
<th>Physiological maturity days to r7</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 7</td>
<td>97</td>
<td>28.3</td>
<td>125</td>
</tr>
<tr>
<td>May 29</td>
<td>100</td>
<td>31.5</td>
<td>113</td>
</tr>
<tr>
<td>June 15</td>
<td>84</td>
<td>31.9</td>
<td>101</td>
</tr>
</tbody>
</table>

Determinate (semi-dwarf) varieties respond to planting date like indeterminate varieties. However, due to extreme environmental stresses that late-planted soybeans are often subject to and because of their short stature, determinate varieties are not recommended for planting after mid-June in Nebraska.

For optimum yields in a year like this, soybeans should be planted when soil temperatures are 60°F or higher. Both indeterminate and determinate adapted varieties will perform well. After mid-June it is best to plant varieties that are considered mid-season for the particular area. This latter recommendation would also apply to double crop situations.

Soybean seed supply is short in 2001 and available seed may lack vigor. In addition, there is very little seed available for replant. Crop producers may wish to think twice about planting before the suggested planting dates and soil temperature.

Robert Klein
Cropping Systems Specialist
West Central REC
Roger Elmore
Extension Crops Specialist
South Central REC

Snow mold common in eastern Nebraska turf

Although turfgrass is not a field crop unless it is being grown for sod or seed, most CropWatch readers have a lawn. If you live in the eastern third of Nebraska, your lawn probably has some degree of snow mold injury. Due to the number of calls regarding this, I’m including a little background information on the situation.

Two snow mold diseases primarily occur on turfgrass in Nebraska, i.e. pink snow mold and gray snow mold. Most of this year’s damage is due to gray snow mold, although pink snow mold is present in some situations. Gray snow mold likes cold winters with good snow cover, which is exactly what we experienced. When snow came in December, the ground wasn’t frozen which set our turf up for infection by Typhula ishikariences, the cause of gray snow mold. The greatest injury occurred where snow remained all winter with symptoms ranging from small one foot diameter bleached-tan patches of turf to large dead areas.

Trying to correct the situation by applying fungicide now won’t work. The damage has already been done. For turfs where the grass is still alive in the injured areas, raking the area and applying a starter fertilizer will stimulate recovery. For larger areas where the turf was killed, rake, aerify, overseed and apply a starter fertilizer with siduron (for weed control). Seed that falls into the aerifyer holes will germinate, helping to re-establish the stand this spring.

John E. Watkins
Extension Plant Pathology