Crop Watch No. 2000-09, May 12, 2000

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Crops and pests emerging early; timely scouting and response will be important

While Nebraska’s climate never seems routine, this year’s unusually mild winter and lack of precipitation are leading to earlier planting and crop emergence as well as earlier insect and weed infestations.

The word from NU specialists is: Don’t rely on your traditional dates for pest management. Scout fields early and in some instances, often, to stay ahead of problems.

This year’s mild winter led to increased winter survival of several insects, which often would have been naturally controlled through fungus or diseases. The timing of pest and plant development and lack of precipitation and warmer temperatures have diminished these natural controls. Dry conditions and drought stressed plants also are apt to affect weed control.

While temperatures are only slightly above average for the last month, winter averages were as much as 7-8 degrees above normal. Averages since January have been about 4 degrees above normal across the state (see table, page 71).

Central and eastern Nebraska continues in early to severe drought
— National Drought Monitor

With below average precipitation and warmer temperatures, soils warmed more rapidly. With little rain, producers have had few problems getting into fields to plant their corn and now their soybeans, with planting and corn emergence 7-10 days ahead of normal. In many cases soil moisture has been ad-

(Continued on page 71)

Flea beetles attacking seedling corn; some treatments started

Flea beetles have been reported damaging early emerging corn in southeast and southcentral Nebraska. Flea beetles are small (1/16 inch long), shiny, black beetles that feed by scraping the epidermis of the leaf, leaving streaks or window panes of white tissue. When abundant, they may kill leaves, and in severe cases, seedlings. They also may transmit the bacterium responsible for Stewart’s wilt of corn.

There are no experimentally derived economic thresholds for flea beetles, but the following guidelines are suggested by Iowa State University: In field corn prior to stage V5, treat when 50% of the plants have severe feeding injury and five or more beetles are found per plant; in seed corn on susceptible inbreds, treat when 10% of plants have severe feeding injury and two or more beetles are found per plant.

The March 10 Crop Watch included a discussion of expected higher populations of the flea beetles this year due to mild winter temperatures and cultural practices to help limit potential damage.

The Web Crop Watch will feature a photo of recent damage. A list of insecticides labeled for corn flea beetle control is available at http://www.ianr.unl.edu/ianr/entomol/instabls/cornfleab.htm

Iowa State University addresses flea beetle with photos at http://www.ipm.iastate.edu/ipm/icm/2000/5-1-2000/fleabeetle2000.html

Bob Wright, Extension Entomologist, South Central REC
Field updates, scouting reports

Gary Hein, Extension entomologist at the Panhandle REC: Russian wheat aphid infestations continue to be of concern; however, in some areas, it appears that aphid numbers are lower than the obvious damage would indicate. The only explanation for this would be a reduction in populations due to recent heavy rainfall and strong winds. Be sure to evaluate Russian wheat aphid situations carefully when deciding whether to treat for them. It's important to consider that treatment thresholds are based on percent infested tillers and not merely percent damaged tillers.

Ray Weed, Extension educator in Kimball and Banner counties: About 500 acres of wheat and 500 acres of alfalfa near Kimball were damaged by devastating hail May 7. The storm came about mid-afternoon and severely affected area wheat, which was just reaching the joint stage. Much of the wheat in our area, however, was outside the storm's path. Alfalfa, sugarbeets, and emerging corn will all be affected. The rain and hail came with strong winds which will crust the soil, making emergence of new plants difficult in some fields. Wheat streak mosaic virus and Russian wheat aphids continue to be an issue for wheat growers.

Jim Peterson, Extension educator in Washington County: It continued to be dry here this past week. Some rain on Monday helped a bit, but it is still extremely dry throughout the county. Corn planting is basically completed. Soybeans are being planted as fast as possible and should be completed within the next week to ten days. There have been some reports of flea beetles, but there have been few other insect or disease problems at this time.

Gary Zoubek, Extension educator in York County: A lot of soybeans have been planted the past week. We received about .6" of rain which was sure welcome. Have had several reports of flea beetle activity, but numbers seemed to decrease after the rain. Bean leaf beetles are showing up in the earliest emerged soybeans. As more emerge, they'll probably spread out into the other fields. Stands generally look good, but we'll have weed problems in some of the fields.

Ronald Seymour, Extension educator in Adams County: Most of the field corn has been planted and a few fields have emerged. Soybean planting is now underway. Flea beetles have been found in some corn fields. The most severely infested field had 12 beetles per 10 plants. Alfalfa fields are generally in good condition. The plants were 12 to 18 inches high and beginning to bud. Many of the plants had alfalfa weevil feeding damage but only a few second instar grubs were found. Aphids were present but infestations were minimal. Wheat was in the boot stage. Field heights were uneven because of late germination and moisture stress. Pasture grasses were greening up, but growing slowly because of the lack of soil moisture.

Terry Hejny, Extension educator in Fillmore County: I have received many calls and have observed several fields with corn flea beetles in southern Fillmore County. Several center pivots are watering to incorporate herbicide in corn fields. A few alfalfa fields have small populations of pea aphids which are being closely watched. We need more rain — just received .20 inches Sunday night (May 7).
Plants, pests early

(Continued from page 69)

equate to start a crop, although deeper soil moisture is inadequate across most of the state. Many sites across central and eastern Nebraska are reporting rainfall at 50-60% of normal since Sept. 1. Several western Nebraska sites, however, are reporting precipitation at 90% to as much as 147% of normal.

Typically May and June are the heaviest months for precipitation, with eastern Nebraska often getting 1.25 inches a week, said Al Dutcher, NU State Climatologist. The National Weather Service however, is predicting below average rainfall for the next 60 days for much of the state. Given the unusually large soil moisture deficit, even average rainfalls would not be enough to recharge the profile, Dutcher said.

While this week's National Drought Monitor showed a slightly improved situation for Nebraska - the entire Panhandle escaped a drought label — central and eastern Nebraska remain in a first stage or severe drought.

Next week field staff from the Natural Resources Conservation Service will be taking soil moisture readings across the state to evaluate how much soil moisture is available for sustained plant growth, according to Nebraska NRCS Director Steve Chick. (An earlier soil moisture survey they conducted was reported in the April 7 Crop Watch.)

Conserving soil moisture will be a major management factor this year. Each tillage trip can use 1/3 to 1 inch of soil moisture as well as beat down the soil structure, increase soil crusting, and possibly reduce moisture absorption, said Paul Jasa, NU Extension Engineer. Reducing or eliminating tillage can help save what moisture there is.

Crop update

In general, many of the state's crops are maturing 7-14 days ahead (Continued on page 75)
Scout early corn for cutworms

Cutworms can cause serious damage to corn in the first couple of weeks after emergence, so it’s important to scout early emerging fields for damage for the next few weeks. Each year cutworms damage corn seedlings somewhere in the state. The severity and the area affected will vary greatly, and depends on species involved, previous crop history, and weather conditions.

The cutworms that attack corn can be divided into two general categories based on seasonal life cycles. **Black** cutworms do not overwinter in Nebraska. **Dingy, claybacked, darksided, sandhills, pale western**, and other species overwinter as partially grown larvae in the soil.

Since black cutworms do not overwinter in Nebraska, they are dependent on spring weather conditions, primarily prevailing southerly winds, to bring them into the state. Nebraska is on the western edge of the black cutworm’s area of influence—they are rarely found west of the 100th meridian. Because of their cutting habits and the possibility that large numbers can be transported to Nebraska under specific weather conditions, these cutworms have the most potential to cause a widespread problem. Light traps and pheromone traps have been used to monitor the flight patterns and populations of black cutworms. Remember, the presence of moths in a trap only indicates potential problems and does not guarantee extensive damage. Trap counts are more useful in alerting growers and consultants as to when to begin scouting. No report of high black cutworm moth counts have come in; however, most damage from cutworms occurs roughly in the first two weeks after emergence, so growers should be on the lookout.

Black cutworm moths prefer to lay eggs in green vegetation or heavy surface residue, particularly soybean stubble or alfalfa residue. When weeds are destroyed mechanically or by herbicides, they will feed on the newly emerging corn. Cutworms that overwinter as larvae generally prefer to lay eggs in the fall in green vegetation such as small grain stubble, legumes, rye, and pasture. The eggs hatch and the larvae feed on the vegetation present before overwintering. In spring, after the previous crop is removed and the corn emerges, the cutworms will transfer their feeding activity to the corn. Recent experience has indicated that corn planted into alfalfa that had been killed in the spring has a greater potential for cutworm problems.

You cannot be sure that tillage will have a significant effect on cutworm populations. If fields are tilled before black cutworm migration, it may limit egg laying in those fields. Cutworms already in the field may suffer some mortality by mechanical action, but there is no guarantee that tillage by itself will eliminate cutworm problems. Many cutworm problems have occurred in conventionally tilled fields. Previous vegetation is probably the most important factor in cutworm potential.

It is extremely rare to experience cutworm problems in continuous corn. Corn stubble is not a preferred egg laying site. Potential problems in continuous corn may be the result of a previous year’s late season flush of weeds or an interseeding of a fall cover crop such as rye, which would possibly attract fall egg laying moths.

Managing cutworms in corn

Several options exist for the grower who wants to manage cutworms in corn. Since a vast majority of corn acreage is not affected by cutworms, the most economically sound practice is to scout for cutworm damage as soon as the corn emerges and apply a rescue treatment if necessary. Early detection of a problem is essential because most of the cutting occurs within seven days of plant emergence. Generally, a rescue treatment should be considered if 5% or more (1 plant in a set of 20) cutting is observed and the worms are one inch or less in length.

Rescue treatments are effective in controlling soil cutworms. Ambush 2E, Asana XL, Lorsban 4E, Warrior TC and Pounce 3.2EC have all given satisfactory control as postemergence sprays. If the soil is dry or crusted, rotary hoeing immediately before or after Lorsban application may enhance control. The other insecticides are pyrethroids and should not be incorporated.

Keith Jarvi
Integrated Pest Management
Northeast REC
Timing of weed control creates a dilemma for producers

Timing of post-emergence weed control remains a dilemma, even with recent advances with herbicide-tolerant crops. Weeds and crops are part of a dynamic biological system. Weeds compete with crops for growth limiting resources such as light, water and nutrients. The outcome of such competition depends on environmental variables and

- weed species composition within a given field,
- weed density and
- time of weed emergence relative to the crop growth stage.

In addition, deciding whether weed control is viable depends on understanding if a given weed infestation is likely to reduce yield if left uncontrolled. The critical period of weed control (CPWC) is the period in the crop growth cycle when weed control must begin to prevent yield losses. Weeds that emerge before or after this period may not threaten crop yields. The length of this period is influenced by cropping practices such as nitrogen level and row spacing. Understanding this is essential in determining the need for and timing of weed control measures, providing for more efficient herbicide use.

Critical weed control period in dryland corn as affected by nitrogen

This period in corn was significantly influenced by the level of nitrogen fertilizer. Generally, reducing nitrogen fertilizer resulted in a less competitive crop and a longer period of critical weed control. For example, research at Mead using zero nitrogen indicated the critical weed control period ranged from approximately first to eighth leaf stage of corn, based on a 5% acceptable yield loss level (Table 1). This suggests that at the zero nitrogen level weed control measures should begin at the first leaf stage of corn and be maintained through the eighth leaf stage, approximately the time of crop canopy closure. At the same location the critical period of weed control in the 55 lbs/acre of nitrogen level ranged from the third to eighth leaf stage of corn compared to the fourth to seventh leaf stage in the 110 lbs/acre of nitrogen and sixth to ninth leaf stage at 210 lbs/acre of nitrogen. A similar, but somewhat longer weed control period was observed at Concord (Table 1). For example, with 55 lbs/acre of nitrogen the critical weed control period ranged from third to eighth leaf stage at Mead compared to the third to tenth leaf stage at Concord.

(Continued on page 74)

Table 1: Critical period of weed control in corn expressed as crop leaf stage (eg. V1) and days after crop emergence (DAE) as affected by the level of nitrogen fertilizer, at two locations in 1999.

<table>
<thead>
<tr>
<th>N-Level lbs/acre</th>
<th>Mead Corn leaf stage</th>
<th>Mead DAE</th>
<th>Concord Corn leaf stage</th>
<th>Concord DAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 0</td>
<td>V1-V8</td>
<td>3-32</td>
<td>V2-V12</td>
<td>8-48</td>
</tr>
<tr>
<td>N = 55</td>
<td>V3-V8</td>
<td>11-30</td>
<td>V3-V10</td>
<td>10-39</td>
</tr>
<tr>
<td>N = 110</td>
<td>V4-V7</td>
<td>15-29</td>
<td>V5-V10</td>
<td>20-39</td>
</tr>
<tr>
<td>N = 210</td>
<td>V6-V9</td>
<td>21-32</td>
<td>no data</td>
<td>no data</td>
</tr>
</tbody>
</table>
Weed control timing  (Continued from page 73)

These data imply that an increase in nitrogen fertilizer delays when weed control measures need to begin and increases the tolerance of corn to weeds. From a practical standpoint, insufficient nitrogen can reduce corn tolerance to weeds and increase the critical period of weed control. The somewhat wider weed control window at Concord may be due to differences in weed species and amount of rainfall. Total rainfall for the season (April-September) at Mead was 25 inches versus 16 inches at Concord. At Concord, the weed population was dominated proportionately by waterhemp followed by velvetleaf and green foxtail. While at Mead, the weed population consisted mainly of Pennsylvania smartweed followed by equal proportions of velvetleaf and waterhemp. Yellow foxtail was also present in isolated patches at Mead. Waterhemp and foxtails being C-4 species, can better utilize resources under lower moisture regime and thus compete better against the crop. Conversely, C-3 species such as velvetleaf and smartweed are more competitive under high moisture and nutrient levels. In addition, both sites had strong weed pressure an average of 150 plants per square yard for broadleaves and 50 plants per square yard for grasses.

Even though there was no yield difference between the 55 and 110 lbs of nitrogen per acre at either site, the critical weed control period was shortened with the extra nitrogen. This indicates that as nitrogen rates are closer to the economic yield optimum, weed control measures are more critical to achieving maximum economic profit.

From a nitrogen restriction-use and regulatory perspective, anticipated restrictions on the level of nitrogen use in corn may require more intensive weed management programs.

Critical time of weed removal in soybean

A preliminary study was conducted in 1999 at Mead and will be repeated in 2000 at Mead and Concord to determine critical weed control periods for soybeans. Predominant weed species in 1999 were velvetleaf, common waterhemp and green foxtail.

In the 1999 study, the critical time of weed removal was significantly influenced by row spacing. Generally, greater row spacings necessitated earlier weed removal. For example, the beginning of the critical weed control period in wide-row soybean (30-inch rows) was approximately at the first trifoliate stage, based on a 5% acceptable yield loss level (Figure 1). This suggests that in wide-row soybeans control measures should begin early in the season at the first trifoliate stage. With 15-inch rows, the beginning of the critical weed control period was delayed until the second trifoliate stage, and with 7.5 inch rows, it was delayed until the third trifoliate stage (Figure 1).

This implies that reducing row spacing delays when weed control needs to begin and increases the tolerance of soybean to weed presence. The mechanism of soybean tolerance needs to be determined, although we believe it is related to crop shading effects. It is thought that even though weeds are present in the narrow row beans they are not growing as vigorously and are not as competitive against the crop, due to plant canopy shading. From a practical standpoint, these preliminary results indicate that reducing soybean row spacing increases soybean tolerance to weeds, leading to less intensive weed management programs.

Weed size

Weed size is another factor of control. In the corn and soybean studies, weeds were about the same size as the crop when removed. If the weeds are taller than the crop, begin control measures four to five days before the critical weed control period. Weed size also will affect herbicide use rates, especially the rates of Roundup in Roundup-Ready soybeans. Generally, Roundup has better activity on grassy rather than broadleaf weed species. A rate of 16 to 24 oz should control most common annual grassy species (foxtails, barnyardgrass, field sandbur, wooly cupgrass, panicums) that are 3-8 inches tall. The same rates should control annual broadleaves (velvetleaf, lambsquarters, pigweeds, mustards) that are less than 6 inches tall. For taller grasses and broadleaf species a full rate (32 oz) will be required. High rates of Roundup (40-60 oz) will be needed to control species such as ivy-leaf morning-glory, sweet clover, field bindweed, Venice mellow and various smartweeds (lady’s thumb, Pennsylvania smartweed, wild buckwheat, etc).

Timing of weed control in herbicide tolerant crops

A critical period of weed control is even more important with herbicide tolerant crops, especially Roundup-Ready soybeans. An important part of integrated weed management in answering a fundamental question “If?” and “When?” to apply postemergence herbicide. A generally sound strategy with Roundup-Ready crops would be to apply Roundup tank-mixed with a residual herbicide at the beginning of the critical period. This would provide weed control the entire critical period.

Stevan Knezevic, Integrated Weed Management Specialist
Sean Evans, Graduate Student
After few rains to incorporate herbicides

Catching grass escapes in corn

Some producers have had preemergence herbicides out for several weeks now with little or no incorporation from rainfall. With few long-term prospects for significant rainfall in some areas, producers should begin looking at post-emergence weed management options. Since most preemergence herbicides target grasses, it may be safe to assume that some grasses will escape and become problems once the corn has emerged.

Consider several factors when choosing a postemergence herbicide: efficacy on the weed species, timing, crop safety, rate used, and potential additives.

First, consider the efficacy of the herbicide on the weed species present. Obviously some herbicides provide better control on some weeds than others. Choose a herbicide that will provide the control you need. Also consider crop safety and application timing. For example, Basis Gold will have good activity on many grass and broadleaf weeds but should not be applied to corn over 12 inches. All herbicides carry timing restrictions; pushing these limits can cause crop injury or reduce weed control.

Often, efficacy is influenced by the rate used. Choose a herbicide that allows you to use the required rate for different weed sizes. For example, 24 oz/a of Roundup Ultra will do well on most velvetleaf plants in the 1- to 3-inch stage; however, if you are dealing with 4-8 inch weeds, increase the rate to 1 qt/a. Use caution when increasing rates of most herbicides since this can increase the possibility of crop injury.

Finally, follow label recommendations regarding the use of additives. In a season where both weeds and crops may be somewhat stressed due to lack of rainfall, even postemergence herbicide activity can suffer. Many labels will suggest adding crop oil or AMS to enhance herbicide uptake or movement into the plant cell. For example, the Clarity label suggests various additives, especially in dry growing conditions. Most postemergence herbicides will call for an additive of some sort to enhance activity. As always, read and follow the label recommendations and restrictions for maximum herbicide efficacy and crop safety.

Jeff Rawlinson
Extension Weed Science
Alex Martin
Extension Weed Specialist Management Assistant at the Northeast Research and Extension Center at Norfolk.

Since flea beetles are a vector for Stewart's wilt, potential also exists for increased disease outbreaks related to the increase in insect numbers. (See March 10 story).

This year producers should be prepared for earlier rootworm hatch and corn borer moth flight. "They'll need to be scouting their fields earlier than usual and not relying on traditional treatment dates," Jarvi said.

In addition with crop prices still low, producers will need to carefully weigh the costs of treatment against the potential yield reductions.

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### Postemergence Herbicides for Corn

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Action</th>
<th>Timing</th>
<th>Rate/A Additive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine</td>
<td>Broadleaf + Grass</td>
<td>Corn &lt;12&quot;, BL 2-6&quot;, grass &lt;1&quot;</td>
<td>1.4-2.2 lb</td>
</tr>
<tr>
<td>Accent</td>
<td>Broadleaf + Grass</td>
<td>Corn 4-20&quot;, BL &lt;4&quot;, grass &lt;3&quot;</td>
<td>0.67 oz</td>
</tr>
<tr>
<td>Accent Gold</td>
<td>Broadleaf + Grass</td>
<td>Up to V6, weeds 1-3&quot;</td>
<td>2.9 oz</td>
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<tr>
<td>Aim</td>
<td>Broadleaf</td>
<td>2 leaf to 48&quot;</td>
<td>1.5 oz</td>
</tr>
<tr>
<td>Banvel</td>
<td>Broadleaf</td>
<td>Corn spike to 5&quot; *</td>
<td>0.5-1.0 pt</td>
</tr>
<tr>
<td>Basis</td>
<td>Broadleaf + Grass</td>
<td>Corn spike to 2-collar, 4-leaf</td>
<td>0.33 oz</td>
</tr>
<tr>
<td>Basis Gold</td>
<td>Broadleaf + Grass</td>
<td>Up to V6, weeds 1-3&quot;</td>
<td>14 oz</td>
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<tr>
<td>Beacon</td>
<td>Broadleaf + Shattercane</td>
<td>Corn 4-20&quot;, BL &lt;4&quot;, grass &lt;3&quot;</td>
<td>0.38-0.76 oz</td>
</tr>
<tr>
<td>Bladex DF</td>
<td>Broadleaf / Some grass</td>
<td>Corn 5-leaf stage, grass up to 1&quot;</td>
<td>2.2 lb</td>
</tr>
<tr>
<td>Buctril</td>
<td>Broadleaf</td>
<td>Corn 2-leaf to V6, BL 2-6&quot;</td>
<td>1.0-1.5 pt</td>
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<tr>
<td>Celebrity</td>
<td>Broadleaf + Grass</td>
<td>Corn 4-36&quot; *</td>
<td>6.67 oz</td>
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<td>Celebrity Plus</td>
<td>Broadleaf + Grass</td>
<td>Corn 4-24&quot; *</td>
<td>4.7 oz/a</td>
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<tr>
<td>Clarity</td>
<td>Broadleaf</td>
<td>Corn 8-24&quot; *</td>
<td>0.5-1.0 pt</td>
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<tr>
<td>Contour</td>
<td>Broadleaf + Grass</td>
<td>Corn V6, weeds to 3&quot;</td>
<td>1.33 pt</td>
</tr>
<tr>
<td>Connect</td>
<td>Broadleaf</td>
<td>Corn after emergence, prior to tassel</td>
<td>1.25-1.87 lb/a</td>
</tr>
<tr>
<td>Distinct</td>
<td>Broadleaf / Some grass</td>
<td>Corn 4-24&quot; *</td>
<td>4-6 oz</td>
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<tr>
<td>Dual II</td>
<td>Broadleaf + Grass</td>
<td>Layby 1.5-3 pt</td>
<td></td>
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<tr>
<td>Exceed</td>
<td>Broadleaf</td>
<td>Corn 4-20&quot;, BL 2-12&quot;</td>
<td>1.0 oz</td>
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<tr>
<td>Extrazine II DF</td>
<td>Broadleaf + Some grass</td>
<td>Corn before 5-leaf, grass 1&quot; or less</td>
<td>1.8-2.2 lb</td>
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<tr>
<td>Hornet</td>
<td>Broadleaf</td>
<td>Corn spike to 24&quot;, BL &lt;8&quot;</td>
<td>1.6-4.0 oz</td>
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<tr>
<td>Laddoks-12</td>
<td>Broadleaf</td>
<td>Corn &lt;12&quot;, BL 2-4&quot;</td>
<td>1.3-2.3 pt</td>
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<tr>
<td>Liberty</td>
<td>Broadleaf + Grass</td>
<td>Weeds 1-4&quot;</td>
<td>20-28 oz</td>
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<tr>
<td>Liberty ATZ</td>
<td>Broadleaf + Grass</td>
<td>Corn &lt;12&quot;</td>
<td>32-40 oz</td>
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<tr>
<td>Lightning</td>
<td>Broadleaf + Grass</td>
<td>Corn to 12&quot;, weeds up to 4&quot;</td>
<td>1.28 oz</td>
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<tr>
<td>Marksman</td>
<td>Broadleaf</td>
<td>Corn before 5-leaf stage</td>
<td>2.0-3.5 pt</td>
</tr>
<tr>
<td>Northstar</td>
<td>Broadleaf / Some grass</td>
<td>Corn 4-20 ***</td>
<td>5 oz</td>
</tr>
<tr>
<td>Permit</td>
<td>Broadleaf</td>
<td>Corn spike to 20&quot;, BL 2-6&quot;</td>
<td>0.66-1.33 oz</td>
</tr>
<tr>
<td>Poast</td>
<td>Grass</td>
<td>Grass &lt;8&quot;</td>
<td>1.0 pt</td>
</tr>
<tr>
<td>Prowl</td>
<td>Some Broadleaf + Grass</td>
<td>Corn spike to layby,</td>
<td>1.8-3.6 pt</td>
</tr>
<tr>
<td>Pursuit</td>
<td>Broadleaf + Grass</td>
<td>Weeds &lt;4&quot;</td>
<td>4 oz</td>
</tr>
<tr>
<td>Resolve SG</td>
<td>Broadleaf + Grass</td>
<td>Weeds &lt;3&quot;</td>
<td>5.3 oz</td>
</tr>
<tr>
<td>Resource</td>
<td>Broadleaf</td>
<td>Corn 2-10 leaf, BL &lt;4&quot;</td>
<td>4-6 oz</td>
</tr>
<tr>
<td>Roundup Ultra</td>
<td>Broadleaf + Grass</td>
<td>Corn up to 24&quot;</td>
<td>24-42 oz</td>
</tr>
<tr>
<td>Scorpion III</td>
<td>Broadleaf</td>
<td>Corn &lt;8&quot;, BL 2-4 leaf</td>
<td>4 oz</td>
</tr>
<tr>
<td>Sencor</td>
<td>Broadleaf</td>
<td>Corn up to 8&quot;, BL 2-4&quot;</td>
<td>1.5-2 oz</td>
</tr>
<tr>
<td>Spirit</td>
<td>Broadleaf / Some grass</td>
<td>Corn 4-20&quot;</td>
<td>1 oz</td>
</tr>
<tr>
<td>Treflan</td>
<td>Grass</td>
<td>Corn 2-leaf to layby,</td>
<td>1.5-2.0 pt</td>
</tr>
<tr>
<td>2,4-D Amine</td>
<td>Broadleaf</td>
<td>When corn is small*</td>
<td>1-2 pt</td>
</tr>
</tbody>
</table>

*Corn over 8", use drop nozzles

**Other additives may be used, check label

***Corn over 20", use drop nozzles
Field trial update

Fungicides important to early planted soybeans

There has been considerable interest in early planting of soybeans to spread the workload and risk (see the March 24, 2000 issue of Crop Watch). Many producers have put in an early field or two this year. Most producers used a seed treatment to protect the seeds in the cold, wet soil environment. Some of the “coffee shop” talk now is that the seed treatment failed because some of the earliest planted soybeans emerged and were killed by frost.

With the unusually warm spring, many of the early planted fields are already growing as soil temperatures exceeded 55°F. The fungicide treatments have worked well, protecting the seed from disease. (See photo of soybeans planted March 6 at the UNL Agricultural Research and Development Center near Mead.) The seed treatments available from LG Seeds, Merschman Seeds, Callahan Seeds, and other seed companies consist of several fungicides, blended together to give broad spectrum disease protection. In addition, several fungicides are available for producers to treat their own seed at planting time to reduce the incidence of diseases. However, no seed treatment protects seedlings from frost.

Some confusion arises because several popular press articles last winter introduced an experimental polymer seed coating being developed to delay germination of soybeans. While this product does allow earlier seeding, it is not yet commercially available and it does not protect seedlings from frost. The polymer coating is being tested in on-farm research, including one site west of North Platte. (See next week’s Crop Watch for an in-depth article describing the polymer seed coating and its uses.)

As would be expected, there are reports of some bean leaf beetle feeding on several of the early emerging soybean fields. (Planting after May 5 is a cultural practice to minimize damage from bean leaf beetles.) Soybeans planted in early and late March at the Rogers Memorial Farm, east of Lincoln, emerged mid-April and were sprayed for bean leaf beetle last week. Late May and mid-June planting dates are scheduled for that location for a total of six planting dates, approximately three weeks apart, to further evaluate yields from various planting dates.

Early pests (Continued from page 75)

When plants are under drought stress, it will take fewer insects to trigger a treatment threshold, Jarvi said.

There also have been reports of increased numbers of soil insects, reported Bob Wright, Extension entomologist at the South Central Research and Extension Center near Clay Center. More wireworms and white grubs have been observed and increased numbers of dingy cutworms, which overwinter here, are likely.

If warm, dry conditions continue into the summer, there also may be an increased potential for spider mites in corn and soybeans and clover leaf weevils in alfalfa.

The potential for damage just further highlights the need to scout and use economic thresholds when deciding when to treat.

Soil insecticides may not perform as well this year due to both higher numbers of soil pests and environmental conditions. Soil insecticides often don’t work as well in dry conditions.

“After rootworm egg hatch, it will be important to scout fields, even if a soil insecticide was used. In central Nebraska we expect high

(Continued on page 78)
Wheat survey projects yields at 15-114 bu/A, but only if soil moisture is recharged

A survey of 127 wheat fields across Nebraska indicated that adequate and timely rainfall will be necessary for it to continue its good progress. All areas excluding the northwest region would need above average rainfall to continue to reflect current conditions.

Projected yields ranged from 21-69.5 bushels in eastern Nebraska to 21-114 bushels per acre in western Nebraska and 15-76 bushels per acre in southwestern Nebraska. The low end of the projected yields was often due to lack of moisture. Following is a synopsis of the report compiled after 14 teams surveyed the state’s wheat May 1-2.

**Wheat update**

The Nebraska Agricultural Statistics Service reported Monday (May 7) that quality of the winter wheat crop declined from last week to 5% very poor, 11% poor, 38% fair, 43% good, and 3% excellent. As of Sunday, 62% of the crop had jointed, the same as last year, but nearly a week ahead of the five-year average of 45%. Wheat streak mosaic and Russian aphids remained a concern for wheat growers in southern Panhandle counties and greenbugs were evident in portions of the southwest.

**Early pests** (Continued from page 77)

populations in continuous corn,” Wright said.

If the a population of corn borers or other pests is borderline to the treatment threshold, consider treatment options carefully since an insecticide also may kill natural enemies of the spider mite, for which there are few treatment options, Jarvi said.

Weeds

Weeds are developing a lot earlier than usual across much of the state, noted Jeff Rawlinson, Extension Assistant in Weed Science. “We’re already seeing things in May we don’t usually see until June.”

With weeds, the dry conditions can complicate control measures since a stressed plant is less apt to translocate the systemic herbicide to the targeted area of the weed. Dry conditions also may have hindered early weed control since there may not have been enough moisture to activate preemergence herbicides.

**Alfalfa**

Bruce Anderson, Extension forage specialist, reports that alfalfa is maturing ahead of normal with many growers apt to take their first cutting this week. This will allow for more flexibility in later cuttings, he said. In addition, an early alfalfa harvest can help control developing damage from weevils, aphids, and leaf diseases.

In pastures, cool season grasses also are ahead of normal, while perennial warm season grasses are behind normal, Anderson said.

Lisa Jasa
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