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Harvest well underway, looking good

Near perfect weather during the past two weeks has resulted in a rapid harvest of the state’s soybean crop. As of October 13, 64% of the soybean crop across Nebraska has been harvested, slightly behind the five-year average of 68%. The soybean harvest should be nearly complete by this Sunday.

Corn and sorghum harvest activities have been slow due to high grain moisture levels. Corn harvest activities have increased during the past few days as those farmers who completed combining soybeans turned their attention to corn acreage. The state corn harvest was 13% complete as of October 13, compared to the five-year average of 30%. The sorghum harvest was only 8% complete, compared to the five-year average of 34%.

Initial harvest reports indicate that most soybean yields are running between 40 and 60 bu/acre across eastern Nebraska. No firm estimates are available for corn or sorghum yields, although there appears to be considerable variability among the scattered reports received so far. (See district reports on page 162.) Some producers have indicated that a hard freeze would help speed up the grain dry down process.

During September, there was a pronounced tendency by the weather forecasting community to call for an early frost. The only areas that received an early frost (32 F or lower) were scattered within the Panhandle. Most areas within the Panhandle had a frost between three days early and five days later than normal. In fact many areas of the state still haven’t had their first frost of the year.

The western third of Nebraska did have an early hard freeze (28 F or lower). The average hard freeze date

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Corn root and stalk rot threatening; check fields

It’s World Series time — a reminder it’s time to check corn fields for root and stalk rot. An increasing number of calls from Extension educators, crop consultants, and growers strongly suggests that corn root and stalk rot is becoming more apparent as the crop continues to dry down in the field. Stressed plants are more likely to exhibit root and stalk rot earlier than otherwise “healthy” plants, with the loss of stalk strength developing more rapidly than one would ordinarily expect.

I saw an example of this in our “corn lethal necrosis/stalk rot” hybrid evaluation trials in Orleans last week. In a replicated test involving 56 corn hybrids planted in paired rows (one row inoculated with the corn lethal necrosis viruses and the other row serving as a non-inoculated check), the inoculated rows averaged about three and a half times more stalk rot than the non-inoculated check rows (64% and 18%, respectively). The same may hold true for severely infected gray leaf spot diseased fields.

Lessons learned in the past still hold true this year: identify those fields where stalk rot appears to be most severe and flag those for harvest as soon as weather and kernel moisture permit. A “quick and dirty” test to determine lodging potential is to hand-crush the lower internodes, or push plants 10 to 12 inches from their normal vertical position. Select five to ten inspection sites scattered over the field and examine 25 to 50 continuous plants in two adjacent rows at each site. Average the number of “at risk” plants (plants with crushable internodes or that do not return to the vertical position when pushed) from all sites. Consider scheduling a field for first harvest if 10% to 15% of the plants are at risk. If early harvest is required, be sure to check the grain moisture and be prepared to dry the grain before storage.

David S. Wysong
Extension Plant Pathologist
Lincoln

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Crop update (Continued from page 161)

occurred about one week early across the Panhandle and 10-14 days early over west central Nebraska. The remainder of the state hadn’t received a hard freeze as of Oct 16. Most of the state has already or will have passed its mean hard freeze date if the event doesn’t occur by Oct. 22.

Harvest activities should continue to proceed at a fairly rapid pace. Weather forecasts indicate that temperatures should average below normal and precipitation should be normal to below normal through Oct. 27. The storm system which is forecasted to bring rain to the entire state and some wet snow over western Nebraska on Oct. 16-17 may delay some harvest activities. Delays will depend on the amount of precipitation received, and at this point, it doesn’t appear to be a significant event.

Al Dutcher
State Climatologist
Agricultural Meteorology

Following are crop updates from two Extension districts.

West Central

There is little harvest activity in the West Central District right now except for some high moisture corn being harvested. The cool summer but warm fall without a killing frost in most of our area except for the northern sandhills allowed all of the corn to mature. Even though we have had warm weather recently, the crop probably matured at a higher moisture content than in many years with a more normal hotter summer, consequently, much of the corn is right between 22% and 26% moisture and most farmers are waiting until it drops below 20% to start harvest. The one concern in plots I hand picked was evidence of considerable damage from second and possibly third brood corn borer. Most farmers treated for first, but because second was so spread out, many did not treat or treated only a portion of the population.

Gary W. Hergert and Paul Nordquist
Agronomy Professors
West Central District

South Central

In south central Nebraska, corn harvest is in full swing. Kernel moisture content late last week was running 18-22% on average. Drying conditions were excellent over the weekend. Yields reported to date are excellent for both irrigated and dryland. The same is true for soybeans. Most farmers are finished with soybean harvest or nearly finished in this immediate area

It looks like the frost late last week finally killed the grain sorghum. Some hybrids were not quite ready for a freeze and their test weights will be lower.

Roger W. Elmore
South Central Research and Extension Center

Grain storage tips

1. Don’t turn off the fan until the outside temperature is 20°F for at least one week.
2. Don’t turn off the aeration fan on foggy or rainy days.
3. Use a spreader when filling the bin; it distributes the fines.
4. If possible, use a rotary grain cleaner to remove fines and foreign matter.
5. Load in layers if moisture is over 20 percent. Don’t add more than four feet per week.
6. Don’t use an in-bin stirring device because it disrupts the drying front moving through the grain.

Paul Jasa
Extension Engineer

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Lisa Brown Jasa, Editor

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Trees provide tomorrow’s protection

Plant seedlings now to benefit crops

Fall is the time for harvest and evaluation — the time when you can judge how well that new hybrid did. Did it yield what the company claimed? Did it yield the same from one side of the field to the next or in the next field? Maybe it yielded best next to the windbreak you have for cattle protection during the winter and early spring.

In the Spring 1996 issue of The Furrow, an article entitled “Windbreaks For Corn?” quotes Guy Ewald of Waldorf, Minn.: “I’ve noticed that corn rows near tree lines often grow taller and tassel earlier than in the rest of the field. This can increase yields, especially in early planted fields. When we can, we select yield-contest acres near a grove or hedge to take advantage of any beneficial effects there might be.”

(Continued on page 164)

Trees available for sale for the Nebraska State Forester.

<table>
<thead>
<tr>
<th>Conifers</th>
<th>Broadleaf Trees</th>
<th>Shrubs</th>
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<tbody>
<tr>
<td>Eastern Redcedar</td>
<td>Siberian Elm</td>
<td>Cotoneaster</td>
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<tr>
<td>Ponderosa Pine</td>
<td>Hackberry</td>
<td>Common Lilac</td>
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<tr>
<td>Austrian Pine</td>
<td>Thornless Honeylocust</td>
<td>Amur Honeysuckle</td>
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<tr>
<td>Scotch Pine</td>
<td>Cottonwood</td>
<td>Chokecherry</td>
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<tr>
<td>Jack Pine</td>
<td>Silver Maple</td>
<td>Nanking Cherry</td>
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<tr>
<td>Colorado Blue Spruce</td>
<td>Black Walnut</td>
<td>Skunkbush Sumac</td>
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<tr>
<td>Bald Cypress</td>
<td>Green Ash</td>
<td>Sand Cherry</td>
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<td>Russian Olive</td>
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<td>Red Oak</td>
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<td>Bur Oak</td>
<td>American Hazel</td>
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<td></td>
<td>Black Cherry</td>
<td>‘Midwest’ Crabapple</td>
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<td></td>
<td>Kentucky Coffee Tree</td>
<td>Arnold Hawthorne</td>
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<td>Red Mulberry</td>
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<td></td>
<td>River Birch</td>
<td>Golden Currant</td>
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<td></td>
<td>Osage Orange</td>
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<td>American Plum</td>
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Well planned field windbreak systems offer short-term and long-term benefits to agricultural producers by providing for enhanced yields near the plantings, reduced soil erosion, and by providing a habitat for wildlife.
Tree planting (Continued from page 163)

This effect has been proven in Nebraska through research conducted by Jim Brandle, a shelterbelt ecologist with the University of Nebraska. He has seen yield increases of 15% for winter wheat and soybeans and 12% for corn, as reported in an earlier Crop Watch and in the Spring 1996 issue of The Furrow. Dr. Brandle said that increased yields are most apparent during years of low precipitation, high temperatures and wind.

Now is the time to start planning and planting a field windbreak system that will protect the soil from wind erosion, increase crop yields, improve soil moisture, and provide some wildlife habitat. University of Nebraska research has shown that a well designed field windbreak system can improve the economic return from the farming operation.

This is an excellent time to call your local Natural Resources District (NRD) or Natural Resources Conservation Service (NRCS) office and ask for help in planning your windbreak system. All NRDs can provide assistance through their tree planting programs.

Seedlings are also available through the Nebraska Conservation Tree Program run by the Nebraska State Forester. This year 38 different species of trees and shrubs are available.

These species are the backbone of any conservation planting you may be planning. The price of trees is $46 per 100 plus appropriate city and state sales tax. There is a minimum order of 100 seedlings. Species can be ordered in lots of 25. For more information, write to the Nebraska State Forester, 101 Plant Industry Bldg., UNL, Lincoln, NE 69583-0814 or call 1-800-600-1573. Visa or Mastercard orders are accepted.

Bill Lovett
Tree Improvement Forester
Nebraska Forest Service

Manage compaction at harvest

Most of us think about minimizing compaction during spring field operations when the soils are often wet. However, fall harvest may coincide with wet soils as well. In addition, our heaviest equipment includes the combine and grain cart.

Many parts of Nebraska have received some rainfall since September.

1. If crops were not actively taking up this soil water, it is still in the ground. Soils with water contents above field capacity in the upper 6 to 8 inches are especially vulnerable to compaction.

Tractors may range from 5 to 10 ton per axle. Combines and grain carts may range from 15 to 20 ton per axle or more. If fluid has been put in the tires for ballast, duals are used, or extenders have been added to carry more grain, axle load can reach upwards of 40 ton per axle.

High axle loads translate into the potential for deep compaction.

To minimize soil compaction at harvest consider these options:

1. Harvest fields with the driest soil first.
2. Keep grain carts and trucks off the field; unload at the end of the field.
3. If unloading on the go, keep the grain cart in the same wheel tracks as the tractor used for planting.
4. Transport grain off the field using the same “roadway” over and over again. While the roadway will become compacted the other portions of the field will be unharmed.
5. Unload grain at the end of the field before the combine is completely full.
6. Allow grain to dry as much as possible in the field so that less water is being transported.

Alice J. Jones
Extension Soil and Water
Fall weed control

**Time's optimum for killing weeds in alfalfa**

Weeds in established alfalfa can be easily controlled with fall treatments. Weed populations must not be allowed to achieve high levels or become competitive with the alfalfa. A herbicide treatment in the absence of good cultural practices will seldom give desired results. Management is a major role in maintaining weed-free stands of alfalfa.

Few weeds can compete with vigorously growing alfalfa that is mowed two or more times per season. Mowing healthy alfalfa at the right time weakens -- and may kill -- most annual and many perennial weeds. Herbicides can be integrated with proper cutting frequency and effective insect control measures so the alfalfa production is maximized and weed growth minimized.

Treatments such as Karmex, Lexone, Sencor, Sinbar, and Velpar will control both winter annual grasses and broadleaf weeds in alfalfa established one year or longer. These treatments are made in late fall or early spring to dormant alfalfa to control winter annuals such as downy brome and pennycress. Karmex fits best on soils with low organic matter. These herbicides may cause alfalfa injury if the soil organic matter is less than 1%.

Butyrac, Butoxone (2,4-DB), and Buctril also can be used for broadleaf weed control, but are temperature sensitive. Butyrac and Butoxone (2,4-DB) should not be used if the temperature will drop to 40 degrees within three days after application. At 40 degrees the growth processes of many weed species will slow down and, consequently, the herbicide activity will be reduced. To avoid injuring the alfalfa, so not use Buctril if temperatures are above 70 degrees. Buctril and 2,4-DB will not control mustard larger than 1” in diameter.

Pursuit can be used in the fall for broadleaf control in new and established stands.

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**Stop the spread of musk thistle; treat now**

**Musk Thistle**

Musk thistle is primarily a biennial, but may act as a winter annual or, less frequently, as an annual. It is a prolific seed producer — one plant can produce up to 20,000 seeds. It has spread throughout the state and will invade almost any location with sufficient moisture and light. Since this fall has started out moist in many areas of the state, conditions for large populations of musk thistle appear to be good.

Fall applications of herbicides for musk thistle should be made after Oct. 1. Options include Tordon 22K at 6 to 8 fluid ounces, 2,4-D + Banvel at 1.0 qt + .5 pt, Ally at .3 ounce, Curtail at 2 pt, and 2,4-D at 1.5 to 2.0 qt. These herbicides will be most effective when the musk thistle is actively growing prior to a hard freeze. Tordon 22K is the best treatment when conditions are cool and dry.

**Pesky perennials**

As the perennial weed approaches the “dormant” stage of its life cycle, nutrients from the summer’s top growth are translocated into the root system. Herbicides applied this fall can actively move with the nutrients. Canada thistle, Russian knapweed, field bindweed and many other perennial weeds can be effectively treated with herbicides at this time.

Herbicides which are most effective in controlling these perennials include Tordon at 1-4 qt/A depending on the weed and combinations of 2,4-D + Tordon. Banvel and Roundup combinations with 2,4-D are useful on Canada thistle and field bindweed. Applications, other than high rates of Tordon, must be made more than once to gain control. Tordon use for perennial weeds is limited to non-crop areas. Ally at 1 oz and Curtail at 2-4 pts can also be used for Canada thistle control. Treat after mid-September before a hard freeze occurs and when daytime temperatures are still in the 50s.

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

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**Coming in future issues**

- Winter meeting schedule
- Planting and seed concerns
An alternative crop with familiar strategies

White corn may offer higher profits

Traditionally, white corn has been thought of as low yielding, difficult to manage and susceptible to disease, but recent research indicates growers may want to reconsider when planning their acreages for next year. Nebraska, in particular, may offer conditions favorable for its growth.

White corn is genetically similar to yellow corn. The difference between the two is that the endosperm of white corn is white, making it a more valuable product for human consumption. Because of the speciality market, white corn commands a premium price but also requires special care in growing and harvesting. Processors are exacting about the hybrid, testweight, dryness and quality of corn.

In 1988, fewer than 20,000 acres of white corn were planted in Nebraska, while in 1996, more than 100,000 acres were planted. This increase was driven by two factors:

1. With irrigation, Nebraska white corn producers can consistently deliver a relatively stable supply of white corn — more stable than other states that formerly produced more bushels of white corn annually.
2. Alfatoxin, the fungal infection that results in metabolic products toxic to humans and animals, is typically not a problem in Nebraska, but it is in other states where the temperatures and relative humidities are higher.

Generally, white corn yields are 5-10% less than the highest yielding yellow dent hybrids, however prices usually range from $.50-$1.00 more than yellow corn. Improved genetics make white corn easier to manage with disease resistance now almost equal to that available with yellow corn hybrids. In addition, the fertility, herbicides, disease control, irrigation and planting date are similar to yellow corn. The thresholds for pest control are lower, however, because it's a higher value crop.

If you’re considering planting some acres to white corn, field placement is important since processors accept little contamination from yellow corn — usually just 0.5% to 2%. To minimize contamination, plant the southern edge of the field more than 200 feet from yellow corn and the north, east, and west sides more than 50 feet from the yellow corn. Then remember to harvest the outside rows separately to reduce contamination of the bulk of the harvest.

This year about 70 white corn hybrids were planted at the South Central Research and Extension Center and in Dawson County. Widely grown yellow hybrids are included in these trials for comparison. Yield results will be available later this fall in a publication, The Nebraska Corn Hybrid Tests —1996, available in hard copy and on the World Wide Web at http://ianrwww.unl.edu/ianr/agronomy/varist.htm.

When you weigh the advantages and disadvantages of growing white corn, the net result is a crop that may be a little more challenging to grow, but one that may be very profitable.

Roger Elmore, Extension Crops Specialist, South Central District

Fall herbicide applications most efficient for killing established alfalfa

As an alfalfa stand ages, it becomes less productive and eventually must be replaced. Two to three alfalfa plants per square foot will produce maximum yields in older stands on dryland. Stands thicker than this will not produce more forage because the lack of moisture limits production. It is usually best to rotate to another crop for several years before reseeding alfalfa.

Fall is an excellent time to kill alfalfa with herbicides in preparation for next year’s row crop. The increased use of no-till treatments make this a popular alternative to plowing. Plowing is an age-old process in which the alfalfa is not always completely killed. Herbicides are more economical than plowing, very effective, and will leave the soil in a condition which is less susceptible to erosion. Applying herbicides in the fall will eliminate hurried applications in the spring and possible planting delays due to product label restrictions.

An economical, consistent alfalfa control treatment is a combination of 1 qt 2,4-D (4 lb/gal) + 0.5 pt of Banvel per acre. If the stand includes perennial cool season grasses, a Roundup + Banvel treatment is effective. Make sure that the alfalfa has at least 4" of top growth so there is sufficient plant surface for herbicide uptake. October applications made before a hard freeze will produce the best results.

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