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Watch for spider mites in corn and soybeans

Twospotted spider mite populations have been abundant in yards and gardens in eastern Nebraska this summer. Last week, I saw spider mites in some corn fields, particularly on water-stressed plants in south central Nebraska. With the possibility of hot dry weather in August, they also may begin to build up in corn or soybeans, so watch fields carefully to determine the need for treatment. Spider mites are reported to be damaging soybeans in northeastern Kansas.

Two species of spider mites, the Banks grass mite and twospotted spider mite, commonly feed on Nebraska corn. Banks grass mites feed almost exclusively on grasses, including corn and sorghum. Twospotted spider mites not only feed on many species of grasses, but also on soybeans, fruit trees and a variety of vegetables and ornamental plants. Although these two species are somewhat similar in appearance, they differ in several biological characteristics and in their susceptibility to pesticides.

Banks grass mites usually appear earlier in the season, feed mostly on the lower leaves of the corn plant, and in Nebraska are moderately susceptible to many of the commonly used miticides. On the other hand, twospotted spider mites tend to appear in mid to late season, increase rapidly, feed over the entire plant, and often are not consistently controlled by available pesticides.

The most useful characteristics for identification are the overall shape of the body and the pattern of pigmentation spots on the back (see figure, page 169). The dark green

(Continued on page 169)

Disease attacks thistle caterpillars

An abundance of thistle caterpillars in your fields may not necessarily warrant chemical treatment. Caterpillar numbers appear to be decreasing due to two expected factors: the end of their feeding cycle and a disease spreading through populations of thistle caterpillars. Before treating a field, examine it carefully to determine if caterpillars may be diseased (see photo).

I received several reports Monday and Tuesday describing 25% to 75% mortality of thistle caterpillars in soybean fields in northeast Nebraska, likely due to the disease.

Eventually all that remains of the infected insect is a shell sticking to the leaf. In general, if 10% or more of the caterpillars in a field are dead or dying, the vast majority will fall victim within a few days and insecticide treatment would be unnecessary.

Keith Jarvi, IPM Extension Assistant, Northeast REC

Disease appears to be decimating some thistle caterpillar populations in northeast Nebraska, as shown in this photo from a soybean field. (Photo by Keith Jarvi)
Keith Jarvi, Extension IPM assistant, Northeast REC: Many alfalfa fields in southeast Nebraska have been infested with alfalfa webworm. These webworms behave a lot like thistle caterpillars in soybeans. They will web up a few leaves together, feed and leave black fecal pellets, and then move to a new set of leaves and start over. Alfalfa webworms are light green and will turn dark green to almost black. They have black dots on their body segments. Kansas thresholds indicate problems if 25% to 30% of the tips are webbed up.

If the alfalfa is blooming, cutting it is probably the best solution. Low rates of Pounce, Warrior, Lorsban, or Baythroid should take out these webworms if farmers want to treat. Check labels for harvest restrictions, but lower rates generally have short or no harvest restrictions.

Gary Hall, Extension educator in Phelps and Gosper counties: Rains this last week have provided some relief for irrigators in a large portion of Phelps and Gosper counties. Insecticide applications to thistle caterpillars in soybeans continues through the air and on the ground. Many acres has been treated during the last two weeks. Bacterial top rot has been more severe this year under pivot irrigated fields. Information is being gathered and best management practices are being formulated. The crops look surprisingly good in spite of past drought conditions and we are expecting a good crop at this time.

Terry Gompert, Extension educator in Knox County: Insect and weed populations are building and causing concern. Grasshoppers are everywhere and beginning to cause problems. In newly seeded alfalfa water hemp has been extremely vigorous. The newly seeded alfalfa has plant bugs and potato leafhoppers and established alfalfa has army worms, alfalfa loopers, thistle caterpillars, and variegated cut worms. All are nipping off regrowth. Second and third cuttings will be short mostly due to insect problems. In sudex, greenbug damage has been significant.

Western ragweed and hemp have exploded in pastures. These weeds often increase with wet springs after years where pastures were over grazed.

In soybeans thistle caterpillars and bean leaf beetles are approaching treatment levels.

Gary Zoubek, Extension educator in York County: Overall, things are looking good here, although with only 1.5 inches of moisture this month, dryland crops could use a good rain. Thistle caterpillars, grasshoppers and other larva are in soybean fields, so producers need to continue to monitor their fields.

Jennifer Chaky, coordinator of the NU Plant and Pest Diagnostic Clinic: The following diseases were diagnosed July 16 - July 27:

Corn - Goss's bacterial wilt (Kearney County), magnesium deficiency (Custer and Madison counties), sunscald (Dodge and Phelps counties).

Soybean - Bean pod mottle virus (Red Willow County), fusarium (Cedar, Hamilton, Lancaster, Pierce, and Red Willow counties), iron chlorosis (Kearney County), pythium (Pierce County).

Wheat - Common bunt (Harlan and Red Willow counties), and head mold (Harlan County).
Mites (Continued from page 167)

spots on both species are caused by food particles that accumulate in their gut. Because of differences in gut structure, these pigment spots accumulate in slightly different patterns. In Banks grass mites the pigments accumulate along both edges of the body near the rear and along the sides of the body. In twospotted spider mites, the pigments accumulate along the sides of the body in two distinct spots and do not extend back more than halfway on the body. The Banks grass mite is also slightly less robust than the twospotted spider mite and is slightly flatter from top to bottom.

Mites damage crops by piercing plant cells with their mouthparts and sucking the plant juices. The first evidence of mite feeding, which can usually be seen on the top of the leaf, is a yellow or whitish spotting of the leaf tissues in areas where the mites are feeding on the lower leaf surface. Because many other things can cause similar discoloration, it is important to check leaves closely to make sure mites are actually causing the damage. Leaf discoloration caused by mite feeding can be easily identified by checking the undersurface of leaves for the presence of mites, eggs and webbing. Both Banks grass mites and twospotted spider mites produce webbing, and a fine network of silken webs will likely be associated with mite colonies. A magnifying glass or 10X hand lens is helpful in examining plants for mites.

The economic injury level indicated in the table provides a method for deciding when to treat, taking into account the value of corn. This table works for both twospotted spider mites and Banks grass mites.

The first row refers to the expected value of the crop ($/acre), determined by multiplying the expected yield (bu/acre), by the expected crop price ($/bu). For example, if the expected yield is 200 bu/acre and the expected price is $1.50/bu, then the value per acre is $300.

Deciding whether to treat involves two steps. First, determine the percentage of leaves infested with mites (an infested leaf has one or more live mites). Compare that number with the first number in the table. If the field average is less than the table value, you don’t need to treat, but do continue to monitor the field. If the field average exceeds the table value, then estimate the percentage of total leaf area damaged by mites. If the field average exceeds the table value, it is likely that treating for spider mites will increase yield above the cost of treatment.

Also, note that control costs are a factor in this table. Depending on the product chosen, the critical values may change greatly. For example, under the column $300 market value, the critical value for percent infested leaves varies from 20%, if control costs are $10, to 49% if control costs are $25.

Labeled products for spider mite control on corn include dimethoate (several formulations), Comite 6.55EC and Capture 2EC. Dimethoate has performed reasonably well in Nebraska against Banks grass mites, but not twospotted spider mites. If twospotted spider mites are present, either Comite or Capture would provide better control. See http://www.ianr.unl.edu/ianr/entomol/instabls/spmitcon.htm or product labels for specific rates and restrictions. With the exception of Comite, pesticides do not kill mite

(Continued on page 170)

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<th>250</th>
<th>300</th>
<th>350</th>
<th>400</th>
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<td>$5</td>
<td>15/8</td>
<td>12/6</td>
<td>10/5</td>
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Economic injury level for the Banks grass mite or twospotted spider mite on corn, based on the percentage of infested leaves per plant and percentage of total leaf area damaged.
Caterpillars feeding in alfalfa and dry beans; scout sunflowers for head moths and seed weevils

The onslaught of larvae is continuing in western Nebraska this summer. We are seeing continued activity of the variegated cutworm on alfalfa, now through a new generation of larvae. This insect has been causing problems in alfalfa through much of the summer. Dry bean growers also should be alert to them since the variegated cutworm also will feed on dry beans. Late season dry bean feeding will result in ‘worm chewed’ beans -- identical damage to that of the western bean cutworm. This type of feeding damage can significantly reduce bean quality so growers should try to minimize this damage.

It appears that western bean cutworm activity in pheromone traps peaked last week. So egg laying in dry beans will be tapering off this week. We have seen a significant problem this year with our pheromone trapping of western bean cutworm. The pheromone sources were defective and few moths were caught. We replaced a few sources with left over sources from last year and immediately started catching hundreds of moths per night. If anyone else has been using these pheromones and had very low catches this year, please contact me about this situation. I have contacted the company in an effort to find out what happened.

We have seen a substantial flight of sunflower head moth in sunflower fields that began to bloom this past week. Pheromone trap catches have picked up this activity in these early fields, and this raises concern for those fields that will be blooming soon. Most fields are expected to begin blooming over the next week or two. Scouting for head moths should begin just before the flowers bloom so that treatments can be timed very early during the bloom because treatments are targeted to control the adults before they lay their eggs. Growers also must watch for red sunflower seed weevils during the early heading periods so timely treatments can be applied if threshold levels are reached. This is of particular concern in confection sunflowers.

Gary L. Hein
Extension Entomologist
Panhandle REC

Field Day Aug. 29

The NU Gudmundsen Sandhills Laboratory Open House Aug. 29 will feature a variety of University activities and commercial exhibits geared toward rangeland management and the beef cattle industry. Gudmundsen is two miles north and five miles east of Whitman. For more information see the Crop Watch web site under “Events.”

Registration will begin at 9:15 a.m. MDT, with activities scheduled through 4 p.m. There is no charge to attend the open house, but an RSVP is requested for a complimentary lunch. To RSVP, please call (308) 532-3611, ext. 124, or e-mail at eheil1@unl.edu.

Mites (Continued from page 167)

eggs, and there is a possibility of re-infestation of the fields as eggs hatch out. Since many of their natural enemies were probably killed by the initial pesticide application, these populations may build up rather quickly and should be monitored carefully. Corn is unlikely to benefit from treatment for spider mites after the dent stage.

Twospotted spider mites also may develop on soybeans. No research has been conducted that would allow calculation of an economic injury level for twospotted spider mites on soybeans.

Iowa State University Extension specialists have suggested that control may be warranted when infested plants have substantial spotting or leaf yellowing and live mites, but before mites cause browning and leaf drop. Damage from mites may be confused with that caused by drought and several foliar diseases, so be sure to base treatment decisions on the presence of mites, rather than just apparent injury symptoms. Fields may be spot treated if the infestation is localized, but check other areas for mites (especially downwind of infestation) and extend treatments into these areas if large numbers of mites are found. Although late season infestations may accelerate soybean senescence and increase pod shattering, use caution when evaluating whether to treat with pesticides because many of the pesticides used for mite control have 21-28 day preharvest intervals. Products to use in soybeans include dimethoate (several formulations) and Lorsban 4E at 1/2 to 1 pt per acre. See http://entomology.unl.edu/instabs/soymites.htm or product labels for specific rates and restrictions.

For more information see the UNL Cooperative Extension publication, Spider Mite Management in Corn and Soybeans, NebGuide G1167, which is available from your local Cooperative Extension office or on the web at http://www.ianr.unl.edu/pubs/insects/g1167.htm

Bob Wright
Extension Entomologist
South Central REC
Wheat yields better than expected

Dry conditions last summer, a cold, windy winter, and dry, hot conditions during grain fill this past spring all suggested that winter wheat harvest would be disappointing in the Panhandle this summer. However, winter wheat demonstrated its adaptability and toughness once again by surprising many people and coming through with near average yields and grain quality.

Grain yields throughout the southern Panhandle averaged between 30 and 35 bushels per acre, while in the northern Panhandle average yields were slightly better, in the 35 to 37 bushels per acre range. Test weights were averaging about 59 to 60 pounds per bushel in most of the Panhandle, although rain during harvest in Deuel County did lower the test weight by a pound or two. Grain protein contents averaged around 12% to 12.5%, slightly above average; however, the range of grain protein contents varied widely from as low as 9% to as much as 15%. Although wheat yields and grain quality were near average values in Kimball and Banner counties, wheat acreage was down significantly because of winter kill and a switch to more acres of summer crops.

In the West Central District wheat yields and test weights ranged from poor to good. In many areas of the district soil moisture was short and the lack of soil moisture and the high temperatures during the filling period reduced yields and tests weights. Because of conditions last fall stands were only fair and tilling in the fall and spring was below normal. Wheat fields not treated for weed control had high weed populations at harvest. Controlling these large broadleaf weeds with post harvest treatments will be a challenge.

Drew Lyon, Extension Dryland Crops Specialist
Panhandle REC

Bob Klein, Extension Cropping Systems Specialist
West Central REC

Plan now to prevent wheat diseases in 2002

It's that time of year when wheat growers need to take steps to prevent disease losses in the 2002 crop. First, let's examine what diseases were production factors in 2001.

From southeast Nebraska to southwest Nebraska, stripe rust was a dominant factor in the disease picture. The last major stripe rust epidemic in the central Great Plains occurred in the late 1950s. Stripe rust is endemic in the Pacific Northwest, but is rarely seen in the Great Plains. So why was it the most prevalent disease from Texas to South Dakota in 2001? As occurred in 1957 and 1958, unusually cool weather prevailed in the Plains states during April, May and early June. The disease built up rapidly in Texas in April and rust spores moved northward with the wind in May. Large acreages of susceptible varieties in Kansas and Nebraska along with extended periods of cool, wet weather were ideal for its development.

My crystal ball isn't good enough to predict if stripe rust will be as serious in 2002, but here are some steps growers can take to reduce potential losses:

- Select your varieties carefully. Lakin and 2137 were the most susceptible in the Perkins and Keith county variety trials. Arapahoe, Vista, Alliance, Pronghorn, Millennium, Wesley and Waho showed little stripe rust.
- Irrigated wheat producers should have a source of fungicide identified as a precaution. Stratego (Bayer) and Tilt (Syngenta) must be applied by Feekes Stage 8 (flag leaf emergence) while Quadris (Syngenta) can be applied as late as Stage 10.1 (boot). It is important that the application be made while the flag leaf is still free of rust.

In recent weeks we have heard a lot about karnal bunt because of its occurrence this year in Texas. As of now karnal bunt has only been found in Texas, New Mexico, Arizona and California. The central and northern plains states are taking steps to prevent this disease from being introduced north of Texas. The Nebraska Director of Agriculture placed a quarantine in early July on all seed and custom combines coming into Nebraska from areas, primarily Texas, known to have karnal bunt. In addition to the quarantine, Nebraska growers can further protect themselves by buying and planting certified seed produced in Nebraska. Although karnal bunt spores can survive in the soil, they probably would not survive our Nebraska winters.

Nebraska growers have more pressing diseases than karnal bunt, i.e. wheat streak mosaic, soil-borne wheat mosaic and crown and root rot to be concerned with. Preventive measures for these three begin in August with the control of volunteer wheat and other grass weeds in stubble fields to reduce populations of the wheat curl mite, vector of the wheat streak mosaic virus. Watch those planting dates. They range from early September in the Panhandle to early October in the southeast. Planting too early is in invitation to disease problems. If you plant wheat after soybeans in late October or early November, be

(Continued on page 172)
Bacterial stalk rot injuring sprinkler irrigated corn

In Gosper and Phelps counties at least 13 fields have had incidences of bacterial stalk and top rot in the range of 2% to 25%; however, due to a combination of high temperatures and the tasseling of the crop, spread of the disease appears to have slowed, except in seed corn fields. If the pivot passes over the recently detasseled plants within a few days, new infections may occur. Most affected plants will die.

The disease has been observed in fields that are pivot/sprinkler irrigated and were planted to corn or soybean in 2000. Field corn hybrids and seed corn inbreds from at least three companies are affected so genetics do not appear to be a primary determinant. Fields with the same hybrids planted on the same date but gravity irrigated are not showing symptoms.

We have initiated an investigation into the cause of the outbreak, the source of inoculum, and possible management practices to prevent a recurrence.

Preventing diseases
(Continued from page 171)

sure to plant into a firm, mellow seedbed to prevent crown and root rot and winter injury. In dry years seedbeds are hard to firm up especially in late plantings.

When planting into corn residue, use equipment that will cut through the residue and place the seed at least one inch into the soil. Don’t plant varieties with short coleoptiles too deep because this can reduce the stand. Finally, the $2 per hundredweight invested in a broad spectrum seed treatment such as Raxil XT (Gustafson), Dividend (Syngenta) or Vitavax 200 (Gustafson/UniRoyal) is worth it. Seed treatments improve root health and prevent seedborne loose smut and common bunt.

Wheat diseases are always easier to prevent than they are to cure. Implementing preventive measures the next two months may pay big dividends next year.

John E. Watkins
Extension Plant Pathologist

Northeast crop nutrient tour Aug. 14

Learn more about the latest research on potassium fertilization and nitrogen timing on corn at the Aug. 14 Pierce-Antelope County Crop Nutrient Tour. The tour will be from 3 p.m. to 6 p.m. and be followed by a light supper and social hour.

Participants should gather at 2:45 p.m. at the Eugene Carpenter farm at the corner of the Pierce-Neligh Road (854 Rd) and 535 Avenue. The tour will include:

Potassium research plots and往往是与这种疾病有关的细菌

Bacterial top rot can be caused by different species of bacteria. Erwinia chrysanthemi pv. zeae is most often associated with this disease although Erwinia carotovora, Enterobacter dissolvens, and Pseudomonas avenae also have been reported as causal agents. These bacteria survive in corn and sorghum stalks and residue. The bacteria enter the plants through natural openings; wounds from hail, high winds, or insect feeding (e.g., stalk borers) can provide additional entry sites into the plant.

Management of bacterial stalk and top rot includes fall cultivation to incorporate residue and avoiding excessive irrigation or flooding. Hybrid resistance has been reported but because this disease occurs so infrequently, resistance genes are not routinely bred into hybrids and resistance ratings are not usually reported. We have initiated an investigation into the cause of the outbreak, the source of inoculum, and possible management practices to prevent a recurrence.

Jim Stack
Extension Plant Pathologist
South Central REC

Potassium research plots and

discussion, 3:30 to 4:15, Doug Hall, cooperator, and Mark Pavlik, consultant.

Small plot nitrogen demonstrations and discussion, 4:15 to 5:30, Heath Zuelke, cooperator, and Mark Pavlik, consultant.

For more information about the tour contact: Dewey Teel, Antelope County Extension educator, at 402-887-5414, or Charles Shapiro, Extension Soils Specialist at the Haskell Ag Lab, Northeast Research and Extension, at 402-584-2803.
Soybean Management Field Days Aug. 14-18

The Aug. 14-18 Soybean Management Field Days will provide targeted, producer-oriented information to achieve timely and more profitable soybean marketing and crop production.

Are you watching for the dead cat bounce or the frost scare market rally to get the best price for your soybeans? How much is tillage costing you in fuel, labor and machine costs as well as erosion of valuable soil? When are Roundup Ready soybeans profitable and when are they not?

The Nebraska Soybean Management Field Days, Aug. 14 to 17 at four locations, will provide producers with valuable tips for competing in today’s challenging market and updates on the latest research.

NU specialists, educators and industry consultants will provide unbiased, research-based demonstrations and information, said Keith Glewen, event co-coordinator and University of Nebraska Cooperative Extension educator. Topics include: reducing weed control costs and eliminating yield loss from weed competition; applying precision agriculture and technology to improve management; managing production practices to maximize profitability; and marketing, risk management and global competition.

The Nebraska Soybean Board is sponsoring the event in cooperation with the United Soybean Board and NU Cooperative Extension.

“This is very good opportunity for soybean producers to get something tangible back from their soybean checkoff dollars,” said Nebraska Soybean Board Chairman Norm Husa of Barneston. “We see advances in biodiesel and other new use and marketing projects, but this is something the individual producers can take back and use in their own farming operations.”

The field days run from 9 a.m. to 2:30 p.m. No preregistration is necessary and lunch is free.

Dates and locations are:
- Aug. 14, NU Agricultural Research and Development Center near Mead
- Aug. 15, Northeast Community College in Norfolk
- Aug. 16, the Kenny Dorsey farm near Ord
- Aug. 17 at the Steve Petersen farm near Minden

For more information, contact the Nebraska Soybean Board at 800-852-BEAN or NU Cooperative Extension at 1-800-529-8030 or visit the web site at http://ardc.unl.edu/soydays.htm

Soybean topics, presenters

Global Economy: Plan Marketing, Manage Risk
Steve Johnson, field specialist at Iowa State University
Roy Smith, farmer and educator, Plattsmouth, NE

Learn about the importance of local, national and global supply/demand in determining futures and cash prices and how to follow key market trends and implement successful selling strategies, as well as managing risks and competing globally. The risks and rewards of two historically successful strategies based on the frost scare rally and the dead cat bounce will be explained so they can be implemented with this crop.

With the frost scare rally, growers are urged to follow the market in late August and early September. “If the soybean price is going up during the first week of September, forward contracting beans that are to be delivered to the elevator at harvest will result in a better price more than 80% of the time....In 1999 and 2000 many farmers who used this technique netted more than $5.50 per bushel with this very simple process,” writes one of the presenters. While it may be more difficult to discern the sales window for the dead cat bounce, it is the surest of all the seasonal moves and the best opportunity for sales until the following summer.

Precision Technology: Apply Tools, Improve Management
Paul Jasa, NU Extension engineer
Dave Varner, NU Extension educator

While “precision agriculture” is thought to be one of the latest revolutions in agriculture, in fact it simply represents an age old tenant of successful farming: doing the right thing in the right place at the right time. Today’s technologies and computers can provide layers of information to subdivide the whole field into smaller units for site specific management. Learn what technologies are most useful and how to analyze and interpret the data from these technologies for your operation. Field data and actual maps will provide valuable hands-on information and guides will help you develop a calendar for gathering data.

Soybean Weed Control: Reduce Costs, Minimize Yield Loss
Alex Martin, Extension Weeds Specialist
Bob Klein, Extension Cropping Systems Specialist

This presentation examines a variety of ways to limit costs while providing successful weed management, including improving sprayer performance, improving weed control timing, conditions affecting weed control, customizing your weed management plans and understanding the econom-
2nd flight European corn borers

The second flight of European corn borer (ECB) moths is occurring in much of Nebraska. Moth counts have been relatively low, but in some areas traps have caught over 100 per night (Hamilton and Buffalo counties). Second flight in northeast and western Nebraska has just started. Current information on light trap catches can be found through the NU Entomology Department website at http://entomology.unl.edu or directly at http://www.ianr.unl.edu/ianr/entomol/fldcrops/fldcrops.htm

Timely and accurate scouting is the key to managing European corn borer in standard (non-Bt) corn hybrids. Remember that conditions are localized and fields must be scouted individually to make accurate decisions. Begin scouting fields soon to determine when egg laying begins in your area. If treatment is needed, time insecticide applications to coincide with the beginning of egg hatch to achieve acceptable control.

Many insecticides are registered for control of second generation European corn borers and most will do a good job if applied properly at the right time. Generally, liquid and granular formulations of the same insecticide are equally effective against corn borer larvae. However, in considering other pests that may need to be controlled at this time of year (western bean cutworms, rootworm beetles, grasshoppers, spider mites), liquids may be preferred.

More information on European corn borer biology and management, scouting, suggested insecticides, and an interactive decision worksheet can be found at the websites listed. Or, ask your local Cooperative Extension educator for NebFact NF98-365, Second Generation European Corn Borer Scouting and Treatment Decisions.

Tom Hunt, Extension Entomologist, Northeast REC
Keith Jarvi, IPM Assistant Northeast REC

Soybean field days (Continued from page 173)

ics of weed management. Learn how to select the correct nozzle for the herbicide and to control drift management; the advantages and disadvantages of various spraying and guidance and marking systems and how to customize your weed management plan. Presenters also will address how to target weed management efforts to the critical period of production so as to get the most return for the dollar.

Soybean Production: Manage Practices, Maximize Profits

Dale Flowerday, private consultant
Roger Selley, Extension agricultural economist

This presentation addresses advantages to including soybeans in rotations, costs of tillage, cost-effective tillage management and how to make the most of planting time. Careful attention to production strategies and limiting input costs are keys to competing in the global soybean market. Starting with planting, producers can address a variety of issues to improve production performance, including planting date, row spacing and planting rate, variety and herbicide selection, inoculation, seed treatments, and use of a starter fertilizer.

Planting alfalfa in August

August is an excellent time to plant alfalfa, if you have moisture and you do it right. Be sure to plant early enough so alfalfa has six to eight weeks between emergence and freeze back to develop good cold tolerance. If you are in northern Nebraska or southern South Dakota, you need to plant in the next week or so. But only if you also have moisture for seeds to germinate. Any delay is likely to cause poorer stands. In southern Nebraska you can plant a little later. Mid-August is ideal while planting after August 31st becomes risky. In central Kansas alfalfa can be planted as late as mid-September.

Seedbed preparation is crucial for late summer plantings. Good seed-to-soil contact and weed control are critical, both when seeding into prepared seedbeds or into wheat stubble. Conserve soil moisture whenever possible, and put extra effort into ensuring a firm seedbed.

When seeding alfalfa in August, be especially wary of grasshoppers which love to graze on new seedlings. If necessary spray field margins with insecticides before planting.

One important caution — never plant into dry soil. August plantings into dry soil may lie dormant for several weeks. Too little time will remain for seedlings to develop good cold tolerance. Many failures occurred in recent years when there was too little fall moisture.

Bruce Anderson
Extension Forage Specialist

See more of CropWatch on the Web at cropwatch.unl.edu
Deadline Aug. 31 for terminating oral farm leases

Many farm leases, especially those between family members, are not written but are verbal "handshake" agreements. Because nothing is in writing, the parties may have different recollections of their agreement, making lease disputes more difficult to resolve. The most common legal issue associated with verbal farm leases is how a lease may legally be terminated. For both year-to-year leases and holdover leases, six months advance notice must be given to legally terminate the lease; however, the lease date (the date from which the six months is counted) is different. In contrast, the termination of a written lease is determined by the terms of the written lease.

Oral (Unwritten) Year to Year Leases

Oral (i.e. unwritten) leases are legally presumed to be year-to-year leases. A year-to-year lease has no fixed time period and is automatically renewed for another year until proper notice has been given to the tenant by the landowner (or vice versa) that the lease is terminated. Most farm leases in Nebraska are unwritten year-to-year leases.

Terminating oral leases

For year-to-year leases, the Nebraska Supreme Court has ruled that the lease year begins March 1. Notice to a tenant to vacate under an oral year-to-year lease (legally referred to as a "notice to quit") must be given six months in advance of the end of the lease, or no later than August 31. For example, for the lease year beginning March 1, 2001 and ending February 29, 2002, notice from the landlord that the lease will be terminated would have to be given to (and received by) the tenant no later than August 31, 2001. The lease would then expire February 29, 2002 with the new tenant (or new buyer) able to take over the lease March 1, 2002. If, however, the notice to quit were given (or received) after August 31, 2001, the existing tenant would have the lease until February 28, 2003.

Written leases

Written leases are in effect only for the period specified in the lease, which could be one year, five years, etc. For written leases, no notice is required from the landlord to the tenant that the lease will not be renewed unless the lease specifically states that notice of termination is required. Unless it contains a renewal clause, the lease automatically terminates at the end of the lease period. The tenant generally has no right to have a written lease renewed unless the lease contains a renewal clause.

For example, if a written lease stated nothing at all regarding renewal, the lease would automatically terminate at the end of the lease period and would not be renewed. A written lease could, however, state that the lease was automatically renewed unless either party notified the other (usually by a certain date) that the lease would not be renewed.

Holdover leases

If a tenant "holds over" by not leaving after a written lease has ended, the tenant is legally considered to be a trespasser whom the landlord may remove by going to court. If the landowner does not remove the tenant, however, a year-to-year lease is automatically established by implication. If a holdover tenant begins work and incurs expenses for the next year's crop, the courts generally have ruled that the landowner has agreed by implication to the tenant's holding over.

Holdover lease termination

On holdover leases, the lease date is established by when the lease began in the original written lease rather than automatically being March 1. If the original written lease began January 1, the notice to quit from the landlord to the holdover tenant would have to be given at least six months in advance of the end of the lease, or no later than June 30. For example, if the written lease ran from January 1, 1999 to December 31, 1999 and the tenant held over for 2000 and 2001, the landlord would have to give the tenant notice by June 30, 2001 in order to lease the land to a new tenant beginning January 1, 2002. If no notice to quit were given by June 30, 2001, however, the existing tenant would automatically have the lease through December 31, 2002.

Conclusion

A written lease generally is preferable to a verbal lease because it provides a written record of the lease provisions. In addition, the March-to-February lease year for year-to-year leases may not be appropriate for fall-planted crops. However, written leases for farmland under Nebraska law are not required to contain advance notice of termination, as is required in some midwestern states. Because a verbal lease does require six months advance notice of lease termination, it may provide somewhat more legal protection for the tenant than a written lease, at least for one additional crop year.

For more information see NU Extension publications: NF 91-42, Farm Lease Termination and NF01-453, Written Cropland Lease Checklist. If you have legal questions regarding a farm lease, contact an attorney.

J. David Aiken, Extension Water and Ag Law Specialist
Pest resistance part of Wright's corn and soybean insect research

This is the seventh in a series of stories on the research pursuits of our contributing authors. Most NU Extension specialists also have major appointments in the NU Institute of Agriculture and Natural Resources' Research Division.

Bob Wright is a professor of entomology and Extension entomology specialist with responsibilities for field crops. He is based at UNL's South Central Research and Extension Center near Clay Center.

Wright received a B.A. in zoology from the University of California, Santa Barbara, an M.S. in entomology from the University of Arizona and a Ph.D. in entomology from North Carolina State University. He worked at Cornell University as a postdoctoral entomologist before coming to Nebraska in 1988. Initially he was based on campus as an extension entomology specialist, but transferred to Clay Center in 1992. His recent research and extension projects focus primarily on corn and sorghum insect management.

Some of his 2001 research projects include:

- Western corn rootworm insecticide resistance (with NU faculty Lance Meinke, Blair Siegfried)
- Monitoring for distribution of resistance
- On farm tests of soil insecticide performance in areas with resistance
- Performance of transgenic Bt corn hybrids
- Monsanto corn rootworm resistant hybrids
- Cry1F hybrids against European corn borer and western bean cutworm

Forage options for damaged corn

The most common salvage operation for corn damaged by hail, wind, drought, or other calamities is to chop it for silage, but be careful not to begin this operation too quickly.

Fresh chopped corn currently could be over 80% moisture. The easiest way, and maybe the best way, to lower moisture content is simply to wait until some stalks start to turn brown and die. Waiting also allows surviving corn to continue to add tonnage.

If waiting isn’t desirable, windrow the crop and allowing it to wilt one-half to one full day before chopping will reduce moisture. Grain or chopped hay can be mixed with freshly chopped corn to lower the moisture content. It takes quite a bit of material for mixing though — about 10 bushels of grain or 500 pounds of hay to lower each ton of silage from 85% to 70% moisture. Another option is to allow the windrowed corn to dry completely and bale it as hay. Be sure to test it for nitrates before feeding.

Many times grazing may be the best way to use damaged corn, especially this year when pastures may be short. Be sure to introduce livestock slowly to this new feed by feeding them grain before turning in to reduce the chances of digestive problems. Also, strip graze the field to reduce trampling losses and get more grazing from the corn.

Bruce Anderson
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