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CROP WATCH

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No. 2001-20
August 17, 2001

Following stress, diseases now becoming more apparent

Rains, some heavy and some slow and steady, provided relief to the state's field crops this week, following weeks of above normal temperatures. Unfortunately the relief may have come too late for fields which became vulnerable to disease infection during the periods of high heat, high humidity, and high plant stress.

While individual pest outbreaks may not be enough to limit yields, often the plant becomes weakened and vulnerable to other challenges. Eventually, depending on the overall damage, harvest may be more difficult and yields may be affected.

Jim Stack, Extension plant pathologist at the South Central REC, has identified fusarium wilt in soybean fields in a widespread area of south central Nebraska, often in irrigated fields.

"When you look at the field it looks like moisture stress, but when you examine individual plants, their vascular systems are plugged. While there is no treatment at this point, it is important to have the problem correctly identified. If soybeans are to be planted to the same field next year, select a variety resistant to fusarium wilt."

The fungus which causes this disease will remain in the field and spread to new soybeans next year.

Stack said he also had received several calls by midweek about what likely is another disease developing in corn in south central Nebraska. Samples are expected to provide further information.

Check the Web version of *Crop Watch* (*cropwatch.unl.edu*) or Stack's Plant Disease Central Web site (*pdc.unl.edu*) for further updates.

Inside

Garden webworms damaging alfalfa

Garden webworm in newly seeded alfalfa.

Garden webworms (Achyra rantalis) have been reported in alfalfa and some soybean fields from eastern to central Nebraska, sometimes causing severe damage. One eastern Nebraska producer reported losing 10 acres in three to four days. The closely related alfalfa webworm has not been found.

The pests were mainly early instars mixed with some later instars. Several generations of garden webworms develop each season, the last of which may overwinter in the soil in the pupal stage. Larvae feed on a wide variety of low plants, including alfalfa, clover, beans, soybeans, sugarbeet, maize and cotton.

Garden webworms are pale green or yellow-green caterpillars with rows of strong, somewhat elongate, black spots on the upper half of the body, and rows of lighter (gray) spots on the lower half of the body (below the spiracles). The head is whitish-tan with brown speckles and has a distinctive black spot on each side near the thorax.

The best control method in alfalfa is to harvest the crop, if possible. Kansas State University entomologists suggest that treatment may be needed in alfalfa if significant defoliation involves 25% to 30% of terminals. A variety of foliar insecticides should provide good control of webworms. See http://entomology.unl.edu/instabls/alfweev1.htm for a list of insecticides labeled for use in alfalfa.

Bob Wright, Extension Entomologist, South Central REC
Keith Jarvi, Extension IPM Assistant, Northeast REC

Field updates

Paul Hay, Extension educator in Gage County: A Sunday afternoon storm damaged a mile wide swath across the county with mild to severe hail. We have had a significant hatch of wooly bear caterpillars in the past week, but they have largely been killed soon after emergence by a fungus disease. Devoured by hyphae, what a way to go!

Gary Hall, Extension educator in Phelps and Gosper counties: A major hail storm tore through central and southern Gosper County, destroying corn and soybean fields. Producers will probably harvest the crops for feed in that area. Recent rains will make irrigators consider when to schedule their last irrigation, if they haven't already done so.

Bob Wright, Extension entomologist at the South Central REC, Clay Center: Numbers of yellow wooly bear moths have increased greatly in our light trap since last weekend, with 244 found Aug. 13, and 247 over the weekend. I have received similar reports from other light traps in the area. We have the potential for large numbers of wooly bear caterpillars as we saw last year. On the bright side, the fungus disease which killed many caterpillars in soybeans the last few weeks also attacks wooly bears, and may help reduce numbers.

UNL light trap data is available at *http://entomology.unl.edu/fldcrops/*

We also are seeing high numbers of green cloverworm moths in our light trap. These dark moths often are found gathering around homes, especially in rural areas, and may be a nuisance if abundant. Monitor fields for possible development of caterpillars. On soybeans treatment would be recommended if defoliation reaches 20% and caterpillars are actively feeding.

Jim Stack, Extension plant pathologist at the South Central REC, Clay Center: Downy mildew has been identified in at least two pivots of a forage soybean (maturity group 6). Based on distribution of symptoms on the plant, infections probably occurred in mid July during a period of relatively cool (75 - 85°F) weather. The pivots provided the necessary moisture and humidity required for this disease to develop. The gray brown growth of the fungus often can be seen on the underside of the leaf lesion. The fungus can be identified microscopically by the production of its reproductive structures: the sporangiophores and sporangia.

Jennifer Chaky, coordinator of the UNL Pest and Plant Diagnostic Clinic: The following diseases were diagnosed July 30 - Aug 10:

Corn -- Bacterial leaf blight (Holt County), Bacterial stripe and leaf spot (Holt County), Northern corn leaf spot (Cuming, Dodge and Holt counties), Northern corn leaf blight (Holt County);

Soybean - Fusarium (Butler, Cedar, Holt, Lancaster, Madison, Pierce, Platte, and Saunders counties), Phytophthora (Cedar and Kearney counties), Pythium (Holt, Kearney, Pierce and Saunders counties), Rhizoctonia (Butler, Lancaster, and Pierce counties).

Nebraska Agricultural Statistics Service: As of Sunday, corn condition rated 4% very poor, 9% poor, 26% fair, 43% good, and 18% excellent. Irrigated corn was 75% good to excellent while dryland corn declined to 41% good to excellent. Sixty-nine percent of the fields had reached the dough stage, compared with 72% last year. Twenty percent had dented, which compared to 27% last year.

CROP WATCH

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Lisa Jasa, Editor

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Managing late season bean leaf beetles

So far this year our primary soybean insect pests have been defoliating caterpillars, but don't forget about the bean leaf beetle. We have gone through one generation of beetles and are currently experiencing renewed feeding as the true second generation of beetles is emerging and feeding on leaves and developing pods. Following is a review of the biology of the beetle and management suggestions.

Two generations of bean leaf beetles develop in Nebraska. The second generation overwinters as adults and are the beetles seen early in the year feeding on seedling soybeans. These beetles feed, mate, lay eggs and die in early-mid June. There is usually a distinct period from mid June to early July when few if any beetles are present in the field, before the first generation emerges.

Total developmental time from egg to adult can range from 25 to 40 days. Because of this range of development, it is common to see adults from the first generation and the second generation in the field at the same time. Because the generations can overlap beetles can be present at some level from mid-July until the end of the growing season. Because of this overlap it is important to monitor beetles regularly to determine shifts in population, which will aid in management decisions.

Bean leaf beetles will feed on soybean leaves throughout the season, but leaf feeding seldom causes yield loss. Most damage (economic yield loss) occurs when beetles feed on the developing pods. This yield loss can occur in several ways. Pods may be clipped from the plants, however this is not the primary cause of yield loss. Many flowers and pods are aborted naturally and to blame pod loss on bean leaf beetle feeding may be a costly mistake. There are no thresholds that consider pod-drop.

Beetles normally injure soybean pods by feeding on the outside layer of the pod, leaving a thin layer of tissue covering the seed. They do not usually eat into the developing seed, although this may occur on very small pods. Fungal pathogens may enter the pod from the feeding sites, causing seeds to appear shrunken, discolored, and moldy, which can result in dockage.

After full pods are formed and seeds begin developing, soybeans are most susceptible to yield loss from pod feeding.

The best time to sample is before significant pod feeding occurs, but after second generation beetles have emerged. Second generation bean leaf beetles are

(Continued on page 180)

Table 1. Economic thresholds in beetles per row foot for R5-R6 (beginning pod and full seed) soybeans in 30-inch rows.

Soybean value	pest management costs per acre					
	$7.00	$8.00	$9.00	$10.00	$11.00	$12.00
$4.50	7.1	8.1	9.1	10.1	11.1	12.1
$5.00	6.4	7.3	8.2	9.1	10.0	10.9
$5.50	5.8	6.6	7.4	8.3	9.1	9.9
$6.00	5.3	6.1	6.8	7.6	8.3	9.1

Table 2. Economic thresholds in beetles per row foot for R5-R6 (beginning pod and full seed) soybeans in 7 inch rows.

Soybean value	pest management costs per acre					
	$7.00	$8.00	$9.00	$10.00	$11.00	$12.00
$4.50	1.7	1.9	2.1	2.4	2.6	2.8
$5.00	1.5	1.7	1.9	2.1	2.3	2.5
$5.50	1.4	1.5	1.7	1.9	2.1	2.3
$6.00	1.2	1.4	1.6	1.8	1.9	2.1

Table 3. Economic thresholds in beetles per sweep for bean leaf beetles on stage R6 soybeans in 30-inch rows. Numbers in parenthesis are for beans drilled in 7-inch rows. (R6 is defined as a green seed filling the pod cavity in one of the four uppermost nodes with a fully developed leaf (seeds touching.) **Note:** Because the price of beans is so low, you may need to raise the thresholds by one beetle per sweep. For example if management costs are $10 an acre, it would take seven beetles per sweep in 30-inch rows or six per sweep for 7-inch rows.

Soybean value	pest management costs per acre			
	$6.00	$8.00	$10.00	$12.00
$5.00	4 (3)	5 (4)	6 (5)	8 (5)
$6.00	3 (2)	4 (3)	5 (4)	6 (5)
$7.00	3 (2)	4 (3)	4 (3)	5 (4)

Bean leaf beetles *(Continued from page 179)*

emerging now and beetles numbers will be approaching their highest levels for the summer. Beetle numbers will slowly decline as beans continue to mature and move to overwintering sites.

Economic thresholds have been developed for two sampling methods: drop cloth (beetles per foot of row) or sweep net (beetles per sweep).

Sampling methods

Perhaps the most accurate way to sample beetles is with a drop (or shake) cloth. A drop cloth is a 3 x 3 ft piece of muslin or plastic attached on each side to dowel rods. Hold one rod against the base of the plants and lay the cloth between the rows. Shake the plants against the cloth to knock off the insects, and count the beetles. Remember to estimate the number per row foot, so if you use a three-foot cloth divide your total by three. Also, sample through the field in several areas to get a good estimate of the population. In narrow row beans you can still sample with a drop cloth, but the procedure is slightly different. Set the rod at the base of the row of plants you want to sample and lay part of the cloth on the ground and hold the rest of the cloth upright or over the opposite row to be sampled. Shake the soybeans against the upright cloth, and then count the beetles knocked down on the bottom of the cloth.

If the beetle counts are below the economic threshold, scout the field again about five days later. Stop scouting when the beetle counts begin to decline, the soybean pods begin to yellow (R7), or the field is sprayed.

Thresholds are based on the number of beetles per foot of row, which varies according to total management cost and the crop value per bushel.

The tables on page 179 show economic thresholds for beans in 30-inch and 7-inch rows. To use the tables find the number that fits both crop value and application costs. For example, if you set the value of your soybeans at $6.00 per bushel and your application costs at $9.00, you would need 6.8 or more beetles per foot of row to justify an application in 30-inch row beans, or 1.6 or more beetles per foot of row in 7-inch row beans.

Bean leaf beetle

Sweep at least five randomly selected sites. Walk through the field at an even pace, performing about 25 sweeping arcs. The best sweeping action for bean leaf beetle is a consistent upward motion through the foliage, using as much force as needed to move the net smoothly through the foliage. Bean leaf beetle activity varies during the day. Activity patterns suggest the best times to sample are around mid-morning or in the afternoon. Try to maintain a similar sampling time in each field to eliminate variability.

Economic thresholds for reproductive stage soybeans other than R6 are probably higher (more beetles are needed to justify a treatment). This is because pods on plants past R6 are maturing and there is less green pod tissue available for beetle feeding, and plants in earlier reproductive stages have greater yield compensation potential than those in R6 or older.

Several insecticides can be used to control bean leaf beetles. Be aware that most have pre-harvest intervals of 14 or more days. Information on insecticide selection and use can be found at *http://entomology.unl.edu/instabls/beanlfbt.htm*

Tom Hunt
Extension Entomology Specialist
Haskell Ag Lab, Northeast REC
Keith Jarvi, Integrated Pest Management Assistant
Northeast REC

Irrigating alfalfa for root development

Hot, windy days cause alfalfa fields to dry up quickly. Irrigation helps, but it can stimulate weeds and actually weaken alfalfa stands if not done properly.

Alfalfa uses a lot of water — up to 40 inches a year and sometimes over .33 inch a day. To keep up with this need, sometimes producers irrigate from the moment hay is removed from the field until the next cutting starts. Constant watering, however, has costs besides fuel and depreciation.

Constant watering encourages grassy weeds like foxtail and perennial grasses like bluegrass to invade alfalfa. Constant watering also weakens alfalfa plants by encouraging root diseases and by reducing oxygen content of the soil.

Irrigation management in alfalfa should encourage deep rooting of alfalfa and dry surface soils during harvest.

Stop irrigating a couple days before harvest to allow the surface to dry out and become firm. Heavy wheel traffic on soft, moist ground can severely damage alfalfa crowns. After harvest, don't irrigate until alfalfa regrowth is three to four inches tall. That way, shallow rooted weeds like foxtail and bluegrass will be unable to grow until the alfalfa has a head start. To be sure the alfalfa regrows rapidly, irrigate so that deep water will be available to alfalfa roots rather than the shallower weeds.

By putting on a little more water a little less frequently, your alfalfa can be cleaner, healthier, and more productive.

Bruce Anderson
Extension Forage Specialist

Entomologist's research addresses corn, soybean issues

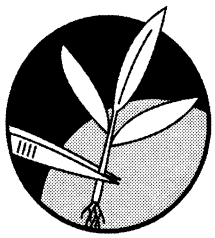
This is the eighth in a series of articles on the research pursuits of our contributing authors. Most NU Extension specialists also have major appointments in the NU Institute of Agriculture and Natural Resources Research Division.

Tom Hunt is an assistant professor of entomology and Extension entomology specialist based at UNL's Haskell Agricultural Laboratory near Concord. The lab is part of the Northeast Research and Extension Center. He received his B.S. in horticulture, M.S in entomology, and Ph.D. in entomology at UNL. He worked as UNL sorghum entomology technologist in southeast Nebraska in the mid 90s and joined the faculty at Concord in 1999.

Hunt's research and extension projects focus on corn and soybeans, but also include some alfalfa and potato projects. His work falls in the general categories of economic threshold development, resistance management, insect pest biology and behavior, emerging problems, and product efficacy. Collaborators or cooperators are included on most of the projects and include farmers, industry, commodity groups, and researchers and extension personnel from UNL, other universities, and the USDA. Some of his current projects are:

Corn related research

1. Density-dependent dispersal of adult European corn borer in irrigated corn.
2. Male to female movement of adult European corn borer.
3. Rubidium labeling of plant tissues and insects for dispersal studies.
4. Adult emergence patterns of the sand chafer in Nebraska and northeast Colorado.
5. Effects of sand chafer larval feeding on corn root structure.
6. Effects of manure, hybrid root strength, and reduced insecticide rates on corn rootworm.
7. Efficacy of transgenic corn resistant to corn rootworm larvae.
8. Performance of Bt corn hybrids (commercial events and those in development).
9. Pesticide efficacy trials.



Soybean related research

1. Long-term bean leaf beetle sampling program.
2. Effects of temperature on bean leaf beetle consumption of soybean leaf tissue.
3. Effects on early and mid-season defoliation on conventional soybean yield.
4. Effects on early and mid-season defoliation on high sucrose soybean yield and quality.
5. Bean leaf beetle overwintering habitat selection and survival.
6. Control of bean pod mottle virus (BPMV) through spring treatment of bean leaf beetle.
7. Pesticide efficacy trials

Alfalfa related research

1. Effects on clover leaf weevil defoliation on alfalfa yield, quality, and regrowth.
2. Pesticide efficacy trials.

Potato related research

1. The effects of European corn borer on potato in Nebraska.
2. Sand chafer monitoring near potato fields in Central Nebraska.

Hunt participates in a variety of extension programs including Crop Protection Clinics, Crop Management and Diagnostic Clinics, and various other workshops. He contributes to the *Crop Watch* and *NEREC IPM and Crop Production* newsletters, and has authored/co-authored various NebGuides and NebFacts. He is a member and collaborator on several regional research committees related to pest management in corn, soybean and alfalfa.

"We have a solid entomology team at HAL/NEREC," Tom said. "I work closely with Keith Jarvi, the IPM assistant stationed at Norfolk, and I have an experienced technologist, Jerry Echtenkamp. Our goals are to develop and provide comprehensive insect management recommendations, be responsive to the current needs of our clientele, and anticipate new needs and problems that will be experienced by Nebraska farmers."

Hunt can be reached at the Haskell Agricultural Laboratory, NEREC, 57905 866 Road, Concord, NE 68728; by phone: (402) 584-2863 or email at thunt2@unl.edu.

Women in Agriculture: The Critical Difference Conference Sept. 13-14

The Women in Agriculture: The Critical Difference Conference will bring together women from across Nebraska and surrounding states to learn about their agricultural profession

The Sept. 13-14 conference will be held in Kearney and is sponsored by University of Nebraska Cooperative Extension It offers a "broad, broad spectrum of farm/ranch management education," said Deb Rood, NU agricultural economics programs coordinator.

Keynote speakers include Ruth Patterson, project officer for Tasmania (Australia) Women in Agriculture; motivational speaker Jolene Brown of West Branch, Iowa; cowboy poet R.P. Smith of Broken

(Continued on page 186)

Good seedbed preparation is crucial

Recommended best practices for wheat in 2002

The 2000-2001 winter wheat crop started with dry conditions last summer in most areas, then experienced a cold windy winter followed by below-normal tillering and then high temperatures during the grain fill period. In many areas the crop demonstrated its ability to cope with less than ideal conditions with average or above average yields. In some areas poor wheat stands were destroyed and planted to other crops.

As producers review this year and look forward to planting next year's wheat crop, consider how implementing some of the following Best Management Practices can affect your operation and potential yields and income in 2002.

Seedbed preparation

This is of utmost importance. Try to do everything possible to have a firm moist seed bed at planting. Disc drills used in a loose seed bed almost always guarantee root and ground rot problems. Hoe drills are better able to reach firm moist soil. Hoe drills with wider row spacing are preferred under dry conditions because they can build a bigger furrow and plant deeper. Remember that with wider row spacings you'll give up crop competitiveness and have more weed problems.

Planting date

Try to plant your wheat as close to the suggested planting date for your area as possible (*see Figure 1*). Earlier seedings are more subject to root and crown rot and many other diseases and insects, for example wheat streak mosaic and Hessian fly. If you seed more than a week or 10 days after the recommended seeding date, it is important to use row-applied starter fertilizer. This is important even if your soil tests high in phosphorus. Also with later plantings, since less tillering occurs it is usually desirable to increase seeding rates. Seeding rates should be increased to about 1.4 million seeds dryland and 2.0 million seeds irrigated because of reduced tillering. With late seeding also adjust row widths -- narrow rows of 7 ½ inches for dryland and 6 inches or less for irrigated are preferred.

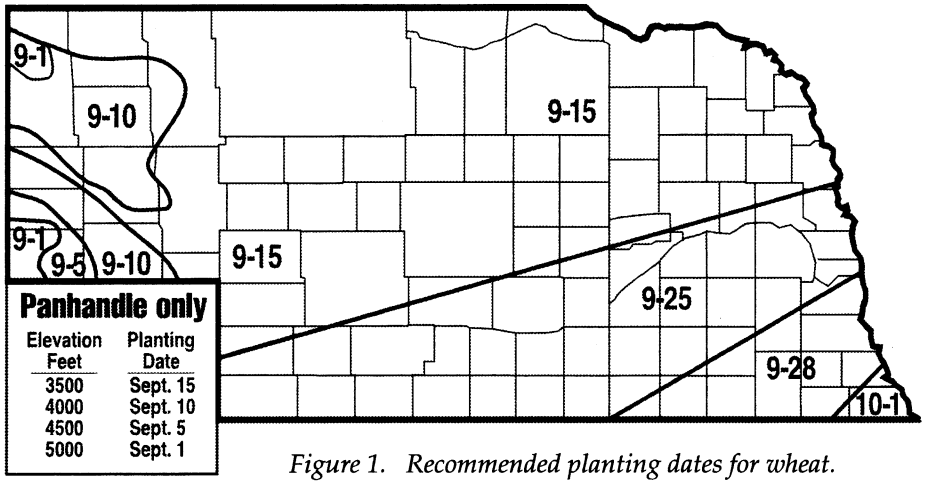


Figure 1. Recommended planting dates for wheat.

Dry soil

When the soil's dry, should producers seed or wait? Most recommend that once you get close to or just past the suggested seeding date (e.g. when seeding after another crop), the crop should be seeded as soon as possible. There are several reasons for this:

1) There's some truth in the old saying that plants won't grow when the seed's still in the bag or bin;

2) If it starts raining on top of a late start, seeding will be delayed even more;

3) Even under dry conditions, you'll usually get a partial stand which can help with soil erosion; and

4) For crop insurance you must seed by the date established for your area.

As with all situations there are exceptions to the rule. If your seed bed is very loose and you cannot do a good job of placing the seed in the soil, your best option is to wait until after a rain to get firmer soil. Good judgment can help guide your assessment of your field.

Variety selection

Selecting a variety is one of your most important decisions and, if not well made, can negate all the other right decisions you make. Generally, seeding several varieties with different attributes is beneficial. No wheat variety is perfect and seeding several spreads the risk.

When selecting varieties make sure they have different pedigrees and are not too closely related. Also consider the variety's yield and resistance history in field conditions similar to yours. The University of Nebraska Variety Evaluation Program is a good source of information on how various varieties fared under recent conditions. Contact your local Cooperative Extension Office for variety results or check out the Web site at

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Watch soybean fields for charcoal rot

To correctly identify charcoal rot in soybeans, it is critical that plants be examined within a small window of time immediately after plant death.

With the current dry conditions in many parts of the state, charcoal rot may be developing in soybean fields. Charcoal rot is a fungal disease favored by hot, dry weather at this stage in crop development. This is why the disease is also known as "dry-weather wilt". Early symptoms are a wilting or flagging of soybean leaves during the midday heat with plants recovering in the evening. This wilt will eventually become permanent and plants will begin to turn yellow and die. After the plants die, small, black resistant fungal structures, known as microsclerotia, will form on the roots and in the pith and cortex of the lower stem. Caution should be taken in jumping to the conclusion that the problem in your field is charcoal rot, however, as this fungus is present in many soils and will move into dead plants. By the end of the season, the microsclerotia can be found in many plants that were not killed by this disease. To correctly identify this disease, it is critical that the diagnosis be done within a small window of time immediately after plant death.

With wet conditions in much of the state earlier in the season, wet spots in fields may now appear to have Charcoal rot symptoms. In some cases, the distribution can help differentiate these problems. Charcoal rot symptoms usually begin in the driest areas of the field. Look in sandy or compacted areas, terrace tops, or along tree lines where moisture is generally less abundant. Charcoal rot also can appear in lower, wetter field areas, but in these instances, plants usually have symptoms of root rot from a previous infection of *Pythium*, *Phytophthora* or *Rhizoctonia*. The root system damage, which resulted from early season seedling disease fungi, places added stress on the plant, putting it under moisture stress. In these situations the charcoal rot fungus is a secondary invader that finishes killing the plant, in some cases. In other cases the wilt and death can be due to early season root injury which has compromised the plant so that it cannot gather enough moisture to survive the hot, dry conditions.

Cultural practices that conserve soil moisture are the main management tool for charcoal rot. As the fungus forms microsclerotia, tillage will have no effect on disease levels with this pathogen. Conservation tillage methods, which conserve moisture, will benefit production in fields with this problem. Other cultural practices which can reduce losses to charcoal rot include earlier planting to provide canopy cover of soil and avoiding high plant populations.

Loren J. Giesler
Extension Plant Pathologist

As a last option: Applying manure safely to alfalfa

If you have manure to spread during summer, sometimes the only place available is an alfalfa field, however this can cause problems for the alfalfa.

Liquid manure can burn leaves due to salt injury, and dry manure can smother plants if it is applied too heavily or in large chunks. Manure can spread weed seeds, and the nitrogen in manure can stimulate grasses already in the alfalfa to become more competitive. Also, manure application equipment can damage alfalfa crowns and compact soil.

If you have other fields where the manure could be applied, do. If it is you only option, follow these suggestions:

1. Apply less than 3,000 gallons of liquid manure or 10 tons of solid manure per acre to minimize salt burn or smothering. If manure is dry, adjust the spreader to break up large chunks that can smother growth.
2. Spread manure immediately after removing a cutting to minimize direct contact with foliage.
3. Only spread manure when fields are dry and firm to limit soil compaction and avoid wheel traffic damaging plant crowns.
4. Apply manure to fields with lots of grass if you want to stimulate grass yield, or select fields with little grass if you want to minimize grass competition.

Manure is an excellent source of nutrients and can enhance biological activity and soil physical properties. But be careful when applying it to alfalfa so you don't do more harm than good.

Bruce Anderson
Extension Forage Specialist

The Aug. 23 *Market Journal* will address livestock permits. View it at **marketjournal.unl.edu**

Don't delay making silage from injured corn

Heat and drought have caused dryland corn to mature or dry up very rapidly the past couple weeks. Many fields are now ready to chop.

As I noted in the story two weeks ago, moisture content at chopping is the most critical factor influencing corn silage fermentation. Wet silage will run or seep, carrying away valuable nutrients. Often it will have a sour, smelly, unpalatable fermentation. Dry silage is difficult to pack and allows more oxygen to remain embedded in the silage. Often this will heat and mold, lowering energy value and protein digestibility.

Adding water to dry silage is impractical. It takes about seven gallons of water for each ton of silage to raise moisture content just one point. It would take 700 gallons of water to increase 10 tons of chopped corn from 55% moisture to a more desirable 65% moisture level. A more practical solution is to blend a wetter feed, like fresh alfalfa, forage sorghum, or green soybeans with dry corn. If you get the right combination it can produce excellent silage.

Most importantly, you need to minimize oxygen in your silage. As silage gets dry, adjust knives to cut finer. This makes it easier to pack tightly. Be sure to do some extra packing even if it seems to spring right back up at you. Putting a foot or two of really wet silage on top also will help. The extra weight aids packing and the wetter silage seals out air better. Always cover dry silage with plastic.

To get the best silage: harvest at the right moisture level, chop fine, pack well, and cover with plastic.

Bruce Anderson
Extension Forage Specialist

Women in agriculture *(Continued from page 181)*

Bow, Neb.; and humorist Lynette Brown of Oxford, Neb.

The conference offers 17 workshops, designed to fit different types of agriculture.

Topics include major tax law revisions, income tax management, using new technologies such as handheld computers and cellular telephones, identity theft, labor issues, contract farming, water law, estate and retirement planning, rental contracts, computerized financial record-keeping, basic and advanced marketing, Initiative 300, value-adding products, livestock diseases, and marriage and family communications.

Presenters include specialists in NU's Institute of Agriculture and Natural Resources, consultants, farm and ranch women, and individuals from the private sector and industry.

One of the conference's biggest assets, Rood said, is in providing a support network for participants and recognizing the critical role they play in Nebraska agriculture.

"Women need to understand the value they bring to the operation. Many times the family recognizes the role but does not always express their appreciation for the many things women do to make the business and family work," Rood said.

"If you don't love the way of life, the business will fail," Rood said, "but you can't stay (in the business) just because you love the way of life -- it has to make a profit, too. They're so intertwined you can't pull them apart."

Women, Rood added, "are the critical difference in many families" because they play a major role in providing a foundation for both the way of life and the business.

The cost for registration, meals and materials for the two-day conference is $65 before Sept. 7 and $75 after. To register or for more information, contact Rood at (800)535-3456 or check *http://wia.unl.edu* on the Web.

Lodging reservations may be made by calling the Kearney Holiday Inn at (800)248-4460.

IANR News Release

Federal aid release outlined

The following is excerpted from a column by NU Public Policy Specialist Roy Frederick. The entire column is available in AgNews at *cropwatch.unl.edu*

The check is in the mail. While that may not be literally true, an electronic transfer from the U.S. Treasury to Nebraska farmers' bank accounts is expected soon.

In early August, the U.S. Senate approved a farm aid package that had passed the House earlier this summer. When President Bush signs the legislation, distribution of the money can begin. It should move along rapidly because the distribution method will be similar to that used the previous three years.

Nebraska farmers are expected to receive just under $350 million as their share of the $5.5 billion national total. About $325 million will go to producers of traditional program crops, including corn, wheat and sorghum. The remainder will be reserved for those who produce soybeans and other oilseeds. Because less money is appropriated this year, individual producers will receive only about 85 percent of the amount received in 2000.