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CROP WATCH

University of Nebraska Cooperative Extension
Institute of Agriculture and Natural Resources

No. 2002-1
March 1, 2002

Select crops based on available water

Crop producers in some areas of Nebraska may be facing limited water for irrigation in 2002. In addition, the timing of water deliveries may not work well for some crops, making crop selection even more important. For example, soybeans need most of their water during pod fill; if water is not available then, yields are greatly affected.

To operate efficiently, many irrigation districts plan to deliver a minimum of 1 inch of water per week. For example, if 6 inches of irrigation water is available for the summer, the maximum length of the irrigation season would be six weeks – less if water demands are greater than one inch per week.

The Bureau of Reclamation has estimated that the amounts of water listed in *Table 1* will be available for 2002. The district uses these esimates to estimate how much to supply water users. In districts where water is expected to be short, the estimates would need to be adjusted if the district does not plan to deliver one inch of water each six to seven days.

As of February 7, snow pack in the North Platte Valley drainage area is approximately 60% of normal. As a result, water supplies are forecast to be near 75% of normal. This forecast assumes that

(Continued on page 3)

Table 1. Estimated water availability for 2002 (as of Jan. 14, 2002, Bureau of Reclamation)

District	*Estimated Farm Delivery (inches)*
Mirage Flats	6.0
Ainsworth	Full Supply
Sargent	Usual Supply (13 - 14)
Farwell	Usual Supply (13 - 14)
Twin Loups	Full Supply
Frenchman Valley and H&RW	1.5 - 2.0
Frenchman-Cambridge	
Meeker, Red Willow & Bartley	6.0
Cambridge Canal	9.0
Almena	6.5
Bostwick in Nebraska	11.0
Kansas-Bostwick	13.0
Kirwin	Full Supply
Webster	Full Supply
Glen Elder	Full Supply

Inside

Time to resubscribe

Welcome to another publication season of *CropWatch*, the University of Nebraska Cooperative Extension newsletter on crop production and pest management. Extension specialists and NU researchers from across the state will be contributing stories throughout the 26-issue production season, from March 1 through Nov. 15.

Our records indicate that you haven't renewed your subscription for 2002. Please accept this sample issue as a gentle reminder that it's time to resubscribe. A form is available on page 8 or credit card orders can be phoned in to (402) 472-7981.

Updates

Management tips

March 1-15

♦ If you're planting BT corn, plan to plant a refuge of at least 20% non-Bt corn that may be treated with non-BT insecticides as needed to control lepidopteran (caterpillar) stalk-boring and other pests. See the Nov. 19, 2001 CropWatch for the 2002 refuge requirements.

♦ Avoid overapplying nitrogen. Test soils now for residual nitrogen by sampling down to four feet, unless crop-rooting depth is limited due to soil conditions such as coarse sand or a high water table. In these cases a minimum depth of two feet may be appropriate. See story on page 6 and the latest NU recommendations in *the NebGuide, Fertilizer Suggestions for Corn.*

♦ March 1 or April 15: Which date should you use to file your taxes? How can you use the Deemed Sale Election when computing taxes? To learn more check out these *NU Market Journal* video interviews on "Tax Planning for 2002" with Gary Bredensteiner, director of the Nebraska Farm Business Assn. The archived Feb. 14 show features information on weed management strategies for 2002.

♦ Seconds are critical when someone is sprayed with liquid ammonia. Immediately flush the exposed body areas with water. Keep five gallons of fresh water in the vehicle carrying the NH_3 and another five gallons in the tractor. Carry a six- to eight-ounce eye wash bottle in your pocket to be used in the first few seconds after exposure.

A new web site offers information for students interested in attending UNL's College of Agricultural Sciences and Natural Resources. See what current students have to say about the value of their experiences at *http://grow.unl.edu.*

Hot off the press

The following publications were recently released by UNL Cooperative Extension and are available from your local Cooperative Extension office.

Atrazine and Non-Atrazine Herbicide Comparisons in Conventional Till Corn (NF02-503): Research report: Sequential herbicide applications (preemergence followed by postemergence) were more consistent in weed control across four environments because the postemergence treatments controlled weed escapes and second flushes. Singular herbicide treatments were less effective in that regard. Several single applications gave good control but not the excellent control of the sequential treatments. Atrazine in the preemergence application failed to control velvetleaf, but provided good control when used postemergence. The non-atrazine herbicides were at least as effective as the atrazine herbicides. *(Free)*

Atrazine and Non-Atrazine Herbicide Comparisons in No-Till Corn *(NF02-504):* Research report: Although not all herbicides were completely effective in this study, various ones performed well, including atrazine and non-atrazine treatments. The atrazine treatments cost less than most other treatments. The sequential application strategy was consistently better than a single application because the postemergence followup treatment controlled the escapes and second flushes. Single treatments were at a disadvantage in that regard; however, several preemergence, non-atrazine herbicide treatments were noteworthy in their performance. *(Free)*

CROP WATCH

cropwatch.unl.edu

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Lisa Jasa, Editor

For more information about a particular subject, write the authors at the addresses below:

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Crop selection *(Continued from page 1)*

average snow and rain occur this spring. Below normal precipitation will cause this forecast to be reduced even further. We hope that spring and summer moisture will help this situation, but of course we can't count on that.

What are a crop producer's best options? First, check with the appropriate Farm Service Agency, CRC coverage, etc. before making any cropping decisions. Second, when selecting crops, look at when they need water as well as how much water they need. If water is not expected to be available during a critical growth period, consider another crop.

Remember, most tillage operations reduce soil water by 1/3 to 1/2 inch. Reducing tillage operations conserves soil water and the crop residue on the soil surface can help suppress weed growth. Crop residues also will improve infiltration rates of the soil and reduce soil crusting from raindrop impact. Both are especially important when precipitation finally comes in torrents with summer thunderstorms. Also avoid soil moisture loss to weeds. Control weeds on a timely basis by selecting the right herbicide and applying it at the right time.

If corn is selected, stay away from full season hybrids if water is limited. Adjust fertility rates for a lower yield goal. Reducing plant population for corn can reduce water use, but populations must be planted below approximately 16,000 plants per acre before substantial water savings can be expected. Also, studies have shown that water stress early in corn has much less of an impact on yield than water stress during tasseling. If supplies are limited, you may want to delay water application until the crop begins to tassel.

For soybean, if there is a chance water may not be available at pod fill, consider planting the soybean earlier (although frost and some insects may increases risks). Planting early may not gain you a lot on maturity, but it can help some. Soybean flowering is more closely related to photo period (the length of the daily light and dark periods) than with this stage of either corn or sorghum. The shift in soybean from the vegetation to the flowering stage is caused mostly by changes in length of darkness. Soybean flowering is also influenced to some extent by temperature. High temperatures hasten flowering. Given a very warm vegetative period, flowering can start before the dark period begins to lengthen. Since flowering response of corn and sorghum is more temperature dependent than that of soybean, accumulated growing degree days are more reliable for estimating corn and sorghum growth stages than they are with soybean growth stages.

At the Rogers Memorial Farm, 10 miles east of Lincoln, Paul Jasa, Extension Engineer, no-till planted soybean on dryland to evaluate planting date and whether late planted soybean would have adequate rainfall or soil moisture during August for the important pod fill period, the main determinate of yield. In 2000 it rained in July but not in August during pod fill. *Table 2* lists planting dates and soybean yield for two maturity dates.

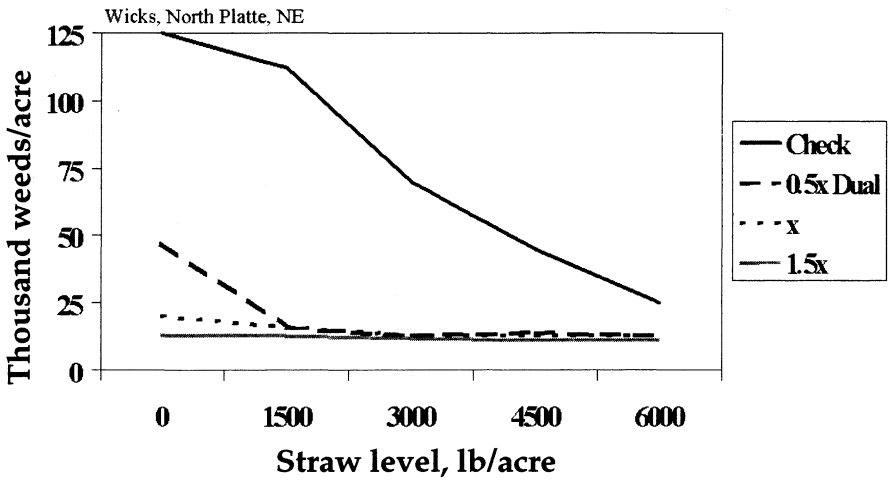

Figure 1. Suppression of weeds by winter wheat residues and Dual herbicide rates applied at corn planting. Atrazine at 2 lbs/acre was applied following wheat harvest.

Table 2. Soybean planting date and yield for two maturity dates.

Planting date	Soybean yield, bu/A	
	2.4 Maturity	3.2
March 6	42	38
March 29	43	35
April 19	38	37
May 10	39	37
May 31	36	37
June 21	28	27

Seed coated with Rival™ and Allegiance™

In western Nebraska, dry bean is another good crop choice when facing limited supplies of water. Dry bean needs about 16 inches of water. Early water stress on dry bean has been shown to depress yields somewhat; however, maintaining soil water during flowering can still produce respectable yields.

Most areas of the state have the

(Continued on page 4)

Water levels likely low after warmer, drier winter

As the 2002 production season edges closer, it's time to evaluate factors which may affect planting decisions. A multitude of potential problems exist, including a lack of precipitation, low reservoir levels, high wind events, above normal winter temperatures, and the looming El Nino event predicted to mature by the end of this year.

After analyzing precipitation trends across the state from Sept. 1, 2001 to now, it is evident that considerable variability exists from west to east. In general most of the eastern half of the state remains in the normal range (80-120% of normal), while the western half appears to be much drier (less than 80% of normal). The worst hit areas are the northern two-thirds of the Panhandle and western half of the Sandhills.

Crop selection

(Continued from page 3)

greatest potential for precipitation in early spring. Even though conditions are dry, excess rain during the spring can result in water loss to deep percolation. Planting a crop such as spring wheat or having winter wheat planted may allow irrigators to take better advantage of the spring rains. The crop is actively growing in the spring and can use the water before being lost.

Conditions may change, but it looks more and more likely that at least some areas will face a shortage of irrigation water. Again, always check with the appropriate agency before selecting crop, planting dates, and other production practices which may affect eligibility for programs.

Robert Klein, Extension Cropping Systems Specialist
West Central REC
Dean Yonts, Extension Irrigation Specialist, Panhandle REC

One and two month precipitation trends are even more ominous as many areas of western Nebraska have failed to receive 30% of normal precipitation since the beginning of January. Exceptionally dry areas include the Panhandle, most of the Sandhills, the southwestern corner of the state, and much of central Nebraska.

In addition to the lack of precipitation, temperatures have been exceptionally warm. Unless the recent infiltration of arctic air continues through March, Winter 2002 will probably rank as one of the five warmest in the last 100 years. Because of the unusual warmth, frost depths have been virtually nonexistent and surface drying has been a persistent problem, with little in the way of moisture replenishment.

The upper air pattern for most of the winter caused low pressure systems to come ashore in the Pacific Northwest and move into the northern Great Plains. We have seen a persistent lack of low pressure systems emanating from the four corners region. It is these types of systems that give us the Colorado lows that produce widespread heavy precipitation events in winter.

Almost all areas of the state have received less than 50% of their seasonal snowfall. In fact, if it wasn't for the late January snow, most of the state would have received less that 20% of the snowfall it typically receives. The lack of major snowstorms across western Nebraska indicates stream flow rates are likely to be lower than normal this spring. Based on US Geological Survey stream flow projections, flow rates on the northern and southern branches of the Platte River are expected to be about 50% of normal this spring. These projections are based upon the idea of receiving normal precipitation through the end of April.

Snowfall along the front range of the Rocky Mountains has been miserable. In fact, most of Wyoming has moderate to severe drought conditions. If moisture doesn't materialize soon, all of Wyoming may be upgraded to a severe drought status.

The lack of snows along the front range also means that reservoir recharge will likely be poor for Lake McConaughy. Projections indicate ample water supplies for two seasons of irrigation from Lake McConaughy, however water level declines through summer may force a reevaluation of allocations.

Enders and Swanson reservoirs face a greater problem. These systems can recharge more quickly than McConaughy, but would require several extreme snow events within their watersheds this spring to make up for the past several years of drought conditions. There is a high probability that irrigation water restrictions will continue through 2002.

Long-lead model outlooks don't offer much in the way of help for the upcoming growing season, especially for western Nebraska. The models show a bias to warmer than normal conditions through the first half of the winter.

Although no precipitation tendencies are projected for the Central Plains during the growing season, above normal temperatures would indicate that crop water demands should be higher than normal. In addition, a building El Nino may add additional problems as we progress through summer. There has been a consistent trend toward drier conditions during the late summer and early fall during the last few El Nino events.

The State Climate Assessment Response Committee was to meet Thursday (Feb. 28) to discuss many of these issues. I'll provide an update in the next *CropWatch*.

Al Dutcher, State Meteorologist
Agricultural Meteorology

NU research: Adoption of GMO soybeans grows quickly, secondary system changes lag

Since Roundup Ready ® soybeans were first introduced in 1996, their adoption in Nebraska has been quick and widespread. It's estimated that 75% or more of the state's soybeans are grown from genetically modified seed. How did this change develop so quickly and has it affected other agricultural practices? A survey of farmers in southeast Nebraska provides some insight into this.

University researchers conducted an exploratory study in a 21-county area of southeast Nebraska in 1997-1998 to determine why farmers had adopted the new technology and whether they were taking full advantage of the potential crop management benefits that could result from using transgenic soybeans. They surveyed producers identified by their local Extension educators as likely to have planted Roundup Ready ® soybeans.

In an article to be published in this month's Journal of Extension, the findings were described by the authors: Jim Peterson, Extension educator in Washington County; Ken Cassman, head of the UNL Agronomy and Horticulture Department, and Randy Cantrell, then director of the Southeast Research and Extension Center. Of those responding to the survey, in 1997 65% were using Roundup Ready® soybeans and 52% were using Bt corn. In 1998 92% of the respondents were using Roundup Ready® soybeans and 78% were using Bt corn. Respondents could be typified as full-time, experienced farmers -- average time farming ranged from 22 (1997) to 24 (1998) years. The average farm size of respondents –1311 acres (1997) and 1411 (1998) – is three times the average farm size of 414 acres for southeast Nebraska. (The average farm size for southeast Nebraska as reported by Nebraska Ag Statistics is likely relatively small due to the number of acreages and small farms near the metropolitan areas.)

Check the *Journal of Extension* for the report by Peterson, et al, at *http://www.JOE.org/joe/2002february/*

Not surprisingly, more than half of the respondents said they had switched to Roundup Ready® soybeans because of the expected benefits of better weed control, reduced weed control costs, reduced crop injury and ease of application. In 1997 almost half (49%) tried the new transgenic seed out of curiosity, while by 1998 only 31% cited curiosity as a factor. In the first year of the study 89% eliminated preplant and pre-emergence or post emergence herbicides. In 1998 respondents were less apt to eliminate (69% did) preplant and preemergence herbicides and slightly fewer (76%) eliminated postemergence herbicides.

When respondents were asked about disadvantages of using GMO soybeans, they cited expense, expected yield reduction, not being able to use bin run seed and fear of a foreign government ban.

While using the glyphosate-based system does provide the opportunity for changing practices, more than 90% of the respondents said they had not changed planting practices.

Peterson, et al., concluded that the producers who were early adopters of the new technologies were conservative in making changes in management that would allow them to take full advantage of the benefits from planting transgenic crops. Although those responding to the survey indicated that they had eliminated most preplant and postemergent herbicides on Roundup Ready ® soybean, tillage and planting practices basically remained unchanged in 1997 and 1998.

The authors were surprised that "relatively few producers switched to no-till or narrow row practices as they adopted RR soybeans. Because weed control is clearly much easier with the RR soybeans, a greater shift to some form of conservation tillage and narrow row production systems may occur in the future as equipment changes occur on the farm."

Since Peterson's original surveys, producers may have become more comfortable making major changes in their tillage or planting systems. They may've needed to buy new planting equipment, making possible the adoption of a different tillage or planting system. Gradually, as new equipment is purchased, there may be a shift to no-till, narrow row (15-inch) or drilled (7-inch) soybeans.

Survey

There have been five production season since transgenic soybeans were first introduced and it seems like a good time to poll our readers on whether using a glyphosate-based weed management system has affected their tillage or planting system. While our survey is much more informal than that used in the study reported here, it would be interesting to hear from readers on this question.

Please take a few moments to answer the survey questions on page 10 or go on-line at *http://cropwatch.unl.edu* and answer them. (Web responses automatically go through a filter and are anonymous unless you include your name purposely.)

Lisa Jasa, Crop Watch Editor, with Jim Peterson Extension Educator

Avoid paying for nitrogen your crop won't use

While you can't lower the price of anhydrous ammonia, you can manage your fertilizer application to avoid paying for nitrogen the crop won't use. The University of Nebraska has an extensive database of nitrogen field research and demonstrations where various nitrogen rates have been applied to corn and the yields have been measured. These studies can help producers make more informed decisions on nitrogen application. Through 20 years of on-farm testing, NU Institute of Agriculture and Natural Resources scientists have developed a specific method for determining optimum nitrogen rates for corn. There always is some yield variation, but the data is fairly consistent throughout Nebraska.

The NU recommendations put producers very close to maximum yields. At today's prices, the savings easily could add up to more than $10 per acre. Using a realistic yield goal is part of the recommendations. Use a five-year average plus 5%. Our research shows that many farmers use a yield goal higher than that, but fail to reach the yield goal 50% of the time.

NU recommendations indicate that applying 75% to 80% of what was previously applied may actually be the most profitable option, especially at today's nitrogen prices.

When fertilizer prices fluctuate, nitrogen use can be increased or reduced accordingly. Research shows that when corn is $2 per bushel and nitrogen is less than 13 cents per pound or $210 per ton of anhydrous ammonia, it is profitable to add 50 pounds of nitrogen to NU's recommended rate. However, when anhydrous ammonia prices rise above 22 cents per pound of nitrogen or $364 per ton, it is profitable to reduce the recommended rate by 50 pounds. This analysis doesn't include application costs.

Using data from 35 nitrogen demonstrations on sandy soils, average yields were 156 bushels per acre when the total nitrogen applied was 50 pounds less per acre than the NU recommended rate. At the recommended rate, yields were 162 bushels, and at 50 pounds more than recommended, the yields were 165 bushels. Other researchers have found similar results in other areas of the state. (Many of these demonstration sites were on irrigated fields which may have had high nitrate levels. If your field situation is different, adjust the recommended rate accordingly.)

Reports indicate anhydrous ammonia supplies are limited and the cost of nitrogen, if available, will be near the point where reducing nitrogen by 50 pounds per acre from the recommended rate will be profitable. If prices rise to 30 cents per pound of nitrogen, use 75% of the university's recommendation for nitrogen, then monitor the crop and add more nitrogen by side-dressing if deficiency symptoms appear.

Charles Shapiro
Extension Soils Specialist
Northeast REC

Taking quality soil samples

Soil tests are only as good as the sample. Following are a few tips for getting the most accurate results.

1. Take a sample from a depth of two to preferably four feet.
2. Composite five to ten soil cores when testing for nitrate. The sample should not represent more than 20 acres.
3. Separately sample dead furrows, alkali spots, terraces, fertilizer bands or fields that have been limed or managed differently.
4. Air dry samples for at least 24 hours before sending them to the lab. (Spread the soil out in a thin layer on a piece of paper or plastic, being careful not to contaminate the sample.)
5. Wrap the sample securely for mailing and place it in a sealed box available from your local Cooperative Extension Office. Be sure to include an envelope with the fee and completed sample information sheet.

Check alfalfa early for army cutworms

Last year army cutworms caught many alfalfa growers by surprise, delaying green-up in many fields. This year's fall and winter conditions were good for cutworms, so be on the alert -- it could happen again.

Cutworms feed on newly emerging leaves near the crown of alfalfa. This often slows or delays alfalfa green-up. If your alfalfa seems slow to get started, examine fields closely for cutworms. During daylight they often are found in the loose soil surrounding the plant. If you don't seem them right away, scratch around a little to find them.

Count the number of cutworm larvae per square foot in several areas. The economic threshold for spraying is four or more army cutworms per square foot on established alfalfa, but just two larvae in fields seeded last year. Once alfalfa is four to six inches tall, spraying won't be beneficial unless there's a lot of active leaf feeding.

The best insecticides for controlling army cutworms in alfalfa are the synthetic pyrethroids. These include Ambush, Pounce, Baythroid, and Warrior. Lorsban also works well. Before spraying, read and follow label directions to safely apply the correct rate.

Bruce Anderson
Extension Forage Specialist

Giving credit where credit's's due -- consider all sources of nitrogen

To determine the most efficient fertilizer nitrogen rate for your field:

1. Calculate the total amount of nitrogen needed, based on a five-year average yield.
2. Take full credit for available nitrogen. Evaluate and subtract nitrogen available from the soil, irrigation water, manure, and legumes from total amount needed.
3. Use NU worksheets to estimate actual amount of purchased nitrogen needed. (See *Fertilizer Suggestions for Corn*, NebGuide G74-174, which was revised in Fall 2001 to include the latest UNL recommendations. It is available from your local Cooperative Extension office or online at *http://www.ianr.unl.edu/pubs/fieldcrops/g174.htm*

Soil

Soil nitrogen is available to the crop as residual soil nitrate and nitrogen mineralized from organic matter. Residual nitrate will remain in the soil from previous years' fertilization as well as from mineralized soil organic matter. Nitrate is soluble and mobile in soil and will be distributed throughout the root zone. Sample to a depth of four feet. Since nitrate is mobile, excessive precipitation after the soil sample can reduce the amount of nitrate available. Nitrogen also will be mineralized from soil organic matter. Mineralization rates are influenced primarily by temperature, moisture and the amount of organic matter.

Irrigation water

Sample and test groundwater samples for nitrogen. The amount of nitrogen available depends on the nitrate concentration in the water and the amount of irrigation water expected to be applied by mid season or later.

Manure

Livestock manure can be a major source of nitrogen; however, the nitrogen content of manure is highly variable and can deviate widely from book values. To estimate the amount of nitrogen actually being applied, have a representative manure sample analyzed for ammonium and total nitrogen, and calibrate the applicator accordingly.

TIP: To avoid over-crediting soil nitrate when samples are taken only 2 feet deep, use 3 ppm nitrate (medium and fine soils) in the unsampled depths when calculating the weighted average.

To get complete use of the manure nitrogen, it's necessary to incorporate the manure during application. Ammonium is readily lost when exposed to air. If incorporated two days after application, 50-75% of the ammonium-N is lost. If the manure is not incorporated, ammonium nitrogen losses may be 80-95%.

Manure will continue to contribute nutrients for several years. Organic nitrogen becomes available as manure decomposes. The residual supply of manure nitrogen is estimated to be 12-15% at one year and 5% two years after application. For more information on estimating the value of manure, see the following NebGuides: *Determining Crop Available Nutrients from Manure*, G97-1335, and *Estimating Manure Nutrients from Livestock and Poultry*, G97-1334.

Legumes

If the previous crop was a legume, NU recommends that fertilizer nitrogen can be reduced by 45 lb/A for corn and sorghum. This is a conservative estimate -- generally the soybean nitrogen benefit to a subsequent grain sorghum crop is more than 70 lb/A. If the previous crop was a good stand of alfalfa, plan for 150 lb residual nitrogen per acre.

Charles Wortmann
Extension Soils Specialist

Controlling winter annuals in alfalfa

Timing is everything when controlling winter annual weeds in alfalfa. The brief interludes of warmer weather typical in March may provide just the right opportunities to tackle weed control.

Weeds like pennycress, downy brome, mustards, cheatgrass, and shepherd's purse are common in first cut alfalfa. They lower yields, reduce quality, lessen palatability, and slow hay drydown. If you walk over your fields today, you probably will be able to see their small, green, over-wintering growth.

You can't do much to control these weeds once alfalfa starts growing; however, if you treat your alfalfa as soon as possible during the next burst of spring-like weather, you can have cleaner, healthier alfalfa at first cutting.

Several herbicides can help control winter annual grasses and weeds in alfalfa. They include Karmex, Sencor, Velpar, Sinbar, and Pursuit. They all control mustard and pennycress. Karmex and Pursuit do not control downy brome very well, but Karmex has some residual soil activity that helps control a few summer annual grasses like foxtail and barnyardgrass.

To be successful, though, you must apply these herbicides soon – before alfalfa shoots green-up this spring — to avoid much injury to your alfalfa. If you wait and alfalfa shoots are green when you spray, your alfalfa growth might be set back two or three weeks.

Bruce Anderson
Extension Forage Specialist

Focus on nitrogen Web site

Reports of on-farm nitrogen research, on-line worksheets and info on NU nitrogen recommendations are available at the **CropWatch Focus: Nitrogen Web** site at *cropwatch.unl.edu/focusnitrogen*

Crop insurance for 2002

Producers need to buy crop insurance for 2002 spring-planted crops by March 15. While there are no major changes this year, producers should be aware of a few small changes, a University of Nebraska farm management specialist said.

This year, the October average daily closing price for December Chicago Board of Trade futures contracts will determine the harvest price for corn crop revenue coverage. In the past, for corn crop revenue coverage, the U.S. Department of Agriculture Risk Management Agency used the November average daily closing for harvest price, said Doug Jose, NU farm management specialist. This change makes corn crop revenue coverage consistent with soybean crop revenue coverage, which already uses October for the harvest price discovery month.

The reason for the change is that, in the cornbelt, corn and soybean yields often are influenced by the same weather events. Under the previous approach, loss adjusters often had to settle soybean losses at one time and corn losses at a later date, Jose said. Under the new plan, both harvest prices will be known by Nov. 1 and loss adjusters can settle claims for corn and soybeans during the same trip to the farm.

In some years this change may help farmers and in others it may not, Jose said.

"Mostly it's just something to be aware of. It probably will not affect producers significantly."

The planting price determination process will remain the same. For corn, that is the average of the December futures contract price during February. The harvest price is used to calculate the actual revenue and to calculate the revenue guarantee in the event that harvest price is higher than planting price.

Deadline March 15

The same price calculations apply to the grain sorghum insurance contract for this year, except grain sorghum prices are 95% of the respective corn prices.

In addition to the market-based prices for crop revenue coverage policies, the Risk Management Agency (RMA) establishes prices for the multiple peril crop insurance program. The prices, as announced on Nov. 30, 2001, are $2 for corn, $4.92 for soybeans and $1.85 for grain sorghum.

"This year, RMA did not announce additional price elections by the usual Jan.15 deadline," Jose said. "This is due to the potential changes on 2002 commodity prices caused by Congressional deliberations on a new farm bill. The farm bill is currently being negotiated in a Congressional conference committee."

The agency has yet to announce additional price elections this year. That will happen when RMA has sufficient information and no later than July 1. Producers will be notified of any additional price elections by their insurance provider. They then will have 10 business days to notify the provider if they want to change their price.

"Producers may be concerned over the late announcement of price selections, because the sales deadline is March 15," Jose said. "Producers may select an additional price provided they have not suffered a loss, were not prevented from planting before the additional prices were announced or do not suffer a loss within 10 days of the announcement."

Heather Corley
IANR Newswriter

Weed Management Guide expanded

The *2002 Guide for Weed Management in Nebraska*, EC-130, features several new sections as well as the latest research-based updates to the information on weed control and herbicide efficacy. Demand has been strong and 8000 copies are already in use; a second printing is underway.

As more people begin to adopt integrated weed management practices, the Guide has begun to reflect these practices. Improvements include:

- A color map showing groundwater vulnerability to pesticides in Nebraska.
- A commercial turfgrass weed management section has been added for turf professionals.
- A much expanded and improved Replant Option Section.
- A special page focusing on 2,4-D Dicamba, and other growth regulator herbicides.
- A table comparing many of the common glyphosate herbicides registered for Roundup Ready ® corn and soybeans.
- A new and expanded list of NU weed science contacts.
- New information on the environmental aspects of herbicides and exposure to pesticides.
- An expanded herbicide dictionary, including an annotated example for better understanding.
- Restricted use pesticides listed together and with each herbicide entry in the dictionary.

The Guide also includes an evaluation so you can provide feedback for improving the 2003 and future guides.

Corrections

As with any publication of this size, a few errors turn up and we would like to correct those here.

Page 2 – Drs. Pat Shea and Steve Comfort are with the School of Natural Resources.

Page 39 – The rate for Roundup

(Continued on page 9)

Tailored to Nebraska

WeedSOFT updated, improved for 2002

Decision making for weed management continues to be challenging because the selection of control tactics must combine economic, regulatory, and environmental considerations with relevant biological information about the weeds and the crop.

WeedSOFT is a decision support system designed to help growers, consultants, and extension educators make both proactive and reactive weed management decisions. This comprehensive and ecologically sound tool will help farmers in every step of their weed management decision. WeedSOFT provides the treatment information you need for your specific field conditions while factoring in economic and environmental principles. Whether you are considering early season soil-applied treatments or control of mid-season infestations or comparing treatments requiring additional costs for herbicide resistant crops, WeedSOFT provides a powerful tool for your weed management decisions.

WeedSOFT treatment data is maintained through annual database updates. Periodic updates also are provided through this Web site to keep the program interface and data as up-to-date as possible. WeedSOFT consists of four modules; Advisor, EnvirFX, MapView, and WeedView.

ADVISOR is the heart of the WeedSOFT suite of decision-support tools. ADVISOR provides information to help growers better manage weeds by providing a bioeconomical analysis based on weed biology, weed management efficacy, and production costs. Through query statements, the program generates a list of allowable treatments from an extensive database of possible treatments and control practices. The gain in expected yield resulting from applying a particular treatment is determined and becomes the criteria used to rank the allowable treatments. Treatments may be ranked by expectations of percent maximum yield or "net gain".

EnviroFX is intended to provide information on the potential environmental impact of specific herbicide treatments. EnviroFX estimates relative herbicide leaching and potential for groundwater contamination based on soil and herbicide properties and water table depth. The user may input site-specific values for organic matter content, pH, and cation exchange capacity (CEC) or select default values from one of 17 soil series.

MapVIEW provides a first step in the process of evaluating the risk of groundwater contamination by herbicides. This module is a collection of digitized Nebraska county maps (1:20000) that are color coded to display the vulnerability of certain sites to groundwater contamination from herbicides. Once wite vulnerability is determined, EnviroFX may be used to determine the relative potential of a specific herbicide to reach groundwater. These tools allow the user to make informed management decisions based on soil properties and depth to ground water.

WeedVIEW is a visual library containing color images and line drawings for each of 46 common weed species found in Nebraska. This module facilitates the correct identification of weed species. Images represent a portion of the photographs contained in the book "Weeds of Nebraska and the Great Plains" (Stubbendieck et al. 1994).

WeedSOFT 2002 incorporates:

- New yield loss algorithm based on field validation research at Nebraska and other states
- WeedSOFT now estimates the weed seedbank
- Other state-specific versions of WeedSOFT also are available for Illinois, Kansas, Missouri and Wisconsin
- This version is Windows XP compatible.

WeedSOFT costs $195. For more information or an order form, visit the web site at *http://weedsoft.unl.edu* or call (402) 472-1544.

Brady Kappler
Weed Science Educator

Weed Guide *(Continued from page 8)*

UltraMax postemergence in corn is 26 oz not 25.6 oz.

Page 40 – Paramount and atrazine rate a 5 on triazine-resistant kochia and waterhemp.

Page 77 – Reglone should replace Diquat; use the same rates

Page 102 -- The footnotes are missing for the replant table in the first printing run and can be printed from the web site

Page 113 – In the box, the reference to the list of restricted use herbicides should be to page 133.

Page 119 – Extreme CP is registered only for use in RR soybean not conventional soybean

For those individuals interested in buying the *2002 Guide For Weed Management in Nebraska,* please contact your local University of Nebraska Cooperative Extension office. The cost is a very affordable $3/copy.

The Guide is also on the Web at *http://www.ianr.unl.edu/pubs/fieldcrops/ec130.htm* The web version reflects all updates.

Brady Kappler
Weed Science Educator

Reader survey: GMOs and changes

Please clip and mail to *CropWatch*, Box 830918, University of Nebraska, Lincoln, NE 68583-0918. Return it anonymously or include your name if you like. A drawing for a selection of NU Cooperative Extension publications.will be held from respondents who include their names.

1. Do you regularly plant Roundup Ready® soybeans? _____ yes _____ no
2. If so, on what percentage of your operation? _____
3. Have you eliminated _____ a preplant or preemergence herbicide application?
4. Have you changed planting practices because of using these transgenic seeds? _____ yes _____ no
5. If yes, have you
   - A. _____ begun using no-till?
   - B. _____ changed to narrow row soybeans?
   - C. _____ increased your conservation tillage use?
   - D. _____ changed to drilled soybeans?
6. If yes, did you change practices after buying a different planter or piece of equipment? _____ yes _____ no
7. If you answered *no* to Question 3, what factors affected your decision not to change tillage or planting practices?

_____

8. Do you expect to change your tillage or planting practices in the future due to your use of transgenic soybeans?
_____ yes _____ no If so, how _____

9. Please add any further comments about how your farming may have changed when you adopted a glyphosate-based weed control system.

_____

_____

_____

Thanks for taking time to complete this survey. Results will be reported in an upcoming issue. If you would like to be included in the drawing for Extension publications, please include your name and mail address below.

_____

_____

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