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Recent rains likely caused little loss of nitrogen

With rains of 4-5 inches last week in part of Nebraska, some producers are questioning whether previously applied nitrogen might be lost to leaching or denitrification. Other producers are questioning whether nitrogen applications should be increased for non-irrigated corn due to increased yield potential with the recent moisture?

Leaching losses due to recent rains should be little on heavier soils, especially if most of the applied nitrogen was not yet in nitrate form. If you're planning to apply additional nitrogen this season, consider increasing the rate by 10-15 lb to compensate for leaching loss.

In cases where the soil was waterlogged for one or more days, some nitrate-nitrogen was lost to denitrification. This is difficult to estimate and depends on the amount of soil nitrate-nitrogen, soil temperature and the degree and duration of soil saturation by water. Soil temperatures were low during the wet period and much of the applied nitrogen had not been converted to nitrate yet. Losses probably did not exceed 5 lb/A nitrogen for each day that the soil was waterlogged.

The greatest consideration to adjusting nitrogen rates may be due to increased potential for non-irrigated corn production. While the soil moisture status is much better than it was two weeks ago, the season is far from over. If you can sidedress nitrogen, observe the weather and early crop growth for a couple of weeks before revising your yield goal. The additional nitrogen required due to increased yield goal can be easily calculated using the interactive calculator available in the Focus Nitrogen section of the Crop Watch web site at http://cropwatch.unl.edu/. Roughly, you will want to increase nitrogen applied by 0.9 to 1.1 lb/A for each bushel increase in corn yield goal; the lesser amount should be applied if soil organic matter is more than 3% and the greater amount if soil organic matter is 1% or less.

Charlie Wortmann
Extension Soils Specialist

Recent field survey

Wheat crop “poor to fair”

Recent moisture throughout the state has benefitted the Nebraska winter wheat crop. In some areas, the crop has been struggling due to dry conditions at seeding last fall, limited fall growth due to unusually cold conditions last November, and a windy, cold winter.

In western Nebraska, winter wheat stands range from fair to excellent. Dry conditions last fall made for difficult seeding conditions. Some of those who planted early planted deep to place the seed into moisture. The rains washed soil over the seed, resulting in the seed being too deep and leading to poor emergence and stand development. Growers who planted early also had difficulty firming the seedbed because of dry soil conditions. These stands emerged erratically and were prone to winter kill and crown and root rot infection. For others who waited for moisture to seed wheat, planting was late and there was little growth or tillering in the fall. These stands were susceptible to winds

(Continued on page 79)
Irrigated pasture may be a viable option

Irrigated pasture is a viable consideration in Nebraska. That's partly because of the high input costs and low returns of row crops for the last several years. Given the right doses of conditions and management, those same irrigated fields could be more profitable for grazing, two University of Nebraska faculty members said.

"There's no doubt that's a very viable consideration," said Bruce Anderson, NU forage specialist. The basic idea is that the acres are converted from a mechanical harvest to an animal harvest.

Terry Gompert, NU Cooperative Extension educator in Knox County, said the opportunity to increase profits per acre from developing a well-managed grazing system are great and should be studied. Gompert said some producers have reported yearling cattle gains of up to 1,600 pounds per acre. But it's not a decision to be taken lightly.

"You don't casually buy into it," Gompert acknowledged. As much or more management is required for grasslands than for cropland, he said. In addition to planting, fertilizing and irrigating, pasture management includes rotational grazing to prevent overgrazing.

It takes top management, top quality land and livestock, and experience to achieve top production levels, Anderson added. Still, irrigated pasture can be a good option for sites with less than optimum resources and lower production potential if producers learn to manage those limitations.

Good irrigated pasture grazing in Nebraska includes a variety of cool-season grasses and legumes, Anderson said. The most common cool-season grasses are orchard grass, smooth brome, meadow brome and creeping foxtail. The most common legumes are alfalfa, red clover and birdsfoot trefoil.

The advantage of having land in grass instead of grain, Gompert said, is that grass has about half the input costs of grain in the first year alone. After that, input costs are reduced even more. In addition, there's less risk: cropland can be devastated after a hailstorm, but grasslands can be salvaged, Gompert said.

One key point to consider when contemplating a switch is that the best land produces the best results, whether for crops or pasture. Often, people convert their poorest cropland into pasture.

Upcoming, in-depth grazing retreats sponsored by the University of Nebraska will be June 6-7 at Kearney, June 11-13 at Madison, June 27-29 at Center and Aug. 29-30 at Franklin. For more information contact Gompert at (402) 288-4224 or Bob Scriven at (308) 236-1235.

Cheryl Alberts
IANR News Service

Field updates

Ralph Anderson, Extension Educator in Buffalo County: Planting really kicked into gear with some producers finishing before the rains started. More has been planted in the Platte and Loup valleys with less up in the clay hills. Overall planting was probably 25% completed as of Monday.

We received about three inches of precipitation over the past week, so it will likely be late this week before planters return to the fields. Some of the early planted corn emerged by May 1, but emergence is spread out after that and a lot of corn won't be planted until after May 10. Soil temperatures are in the 60s so emergence should be rapid once corn is planted. Winter annual weeds and early annuals are developing.

(Continued on page 892)
Manure values added to on-line nitrogen calculator

An updated, fully interactive version of the Corn Nitrogen Needs Calculator for Nebraska can now be downloaded free from the Focus on Nitrogen section of the Crop Watch web site at http://cropwatch.unl.edu/focusnitrorgen.htm#Worksheets. This Microsoft Excel file (Version 1.1, 187 kb) replaces the previous version at this site.

This spreadsheet was developed to make it easier to calculate nitrogen needs using the University of Nebraska procedure. The formula is also available in the revised NebGuide G74-174, “Fertilizer Suggestions for Corn”, available on the web at http://www.ianr.unl.edu/pubs/fieldcrops/g174.htm.

This revised version will automatically calculate nitrogen credits for each field from a current manure application and up to three past applications, soil organic matter, previous legumes, as well as soil test and irrigation water nitrates. Up to 10 fields or management areas can be entered on one page, with the nitrogen recommendation printed on a second page.

Separate, linked sheets are used for entering the data from manure applications, and, if needed, for deriving a weighted average soil nitrate value. Manure nutrient ‘book’ values are provided if a current manure analysis is not available. An information page, footnotes, and pop-up messages provide instructions on using this spreadsheet.

This Corn Nitrogen Needs Calculator for Nebraska includes a revised worksheet that can be printed from the web page and used as a guide for manual calculation. This page is available in an Adobe Acrobat (PDF) format for easy downloading and printing.

If you download these, be sure to check back or watch Crop Watch for future updates.

Richard DeLoughery
Extension Water Quality Educator
Charles Shapiro, Extension Soil Scientist, Crop Nutrition

Wheat (Continued from page 77)

and cold temperatures. Wheat no-till into good crop residues appears to have fared better than wheat seeded into bare soil conditions. This is probably because of the firmer seedbed conditions found in no-till, increased wind protection, and greater snow catch.

Thin wheat stands this spring may cause harvest problems this summer because summer annual weeds will not face the level of competition from wheat that they normally do. Fields that have not yet jointed should be sprayed immediately if stands are thin and weeds are present. Spraying for weeds after the wheat has jointed increases the risk of crop injury from herbicides such as Banvel/Clarity or 2,4-D.

Another concern in the west is that wheat development is later than normal and high temperatures during seed fill, if they occur, will reduce yields.

In eastern Nebraska, varieties not adapted to Nebraska winters have been thinned out due to winter kill. Wheat seeded into soybean stubble last fall looks thin because of late planting into dry conditions. Current moisture conditions in eastern Nebraska are very good and wheat is generally all jointed and in good condition.

On a recent two-day tour across the state, Nebraska Wheat Growers Association representatives attempted to assess the potential of the 2001 wheat crop. Eighty-nine fields were visited and the main consensus made was that the wheat was ten days to two weeks behind normal growing rates. Many weeds were found including mustard, jointed goatgrass, and downy brome. Approximately 50% of the fields surveyed had been sprayed. In many unsprayed fields the weeds had outgrown the wheat. No disease or insect problems were noted. It was agreed that winter wheat in Nebraska was in poor to fair condition, with very few fields being rated in the very good category.

Drew Lyon, Extension Dryland Crops Specialist
Robert Klein, Extension Dryland Crops Specialist
Lenis Nelson
Extension Variety Specialist
Roger Elmore
Extension Crops Specialist

Adjusting for postemergence nitrogen application

When much of the state’s corn crop was planted, producers intended to immediately apply nitrogen. Recent rains have upset these plans and now the corn is emerging. Will seedlings be damaged by applying 100 lb/A nitrogen?

Leaves of recently emerged corn tolerate nitrogen fertilizer burn well. Since the growing point is still below ground and unexposed, young corn plants are likely to recover quickly if the leaves do suffer burn. Using UAN as a carrier with herbicides can increase the potential for leaf burn. Dry fertilizer sources, which adhere less to the leaf, are less likely to cause leaf burn than liquid sources.

Fertilizing when temperatures are
Scout emerging corn for cutworms

If corn has emerged in good shape, the next insect pest to look for is the cutworm. It’s important to scout early emerging fields for damage now since cutworms begin causing serious damage during the first few weeks after emergence. Each year in Nebraska cutworms cause damage.

Several species of cutworms can attack corn. The severity and the area affected will vary greatly, depending on species involved, previous crop history, and weather conditions.

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

**Black cutworms**

Since black cutworms do not overwinter in Nebraska, they are dependent on spring weather conditions, primarily prevailing southerly winds, to bring them into our state. Nebraska is on the western edge of the black cutworm’s area of influence, and they are rarely found west of the 100th meridian. Because of their cutting habits and the possibility that large numbers can be transported to Nebraska if favorable weather conditions occur, they have the greatest potential for causing (Continued on page 81)

### Comparison of characteristics of dingy and black cutworms

<table>
<thead>
<tr>
<th>Dingy cutworm</th>
<th>Black cutworm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overwinters as small larva.</td>
<td>Doesn’t overwinter in Nebraska; migrates.</td>
</tr>
<tr>
<td>Associated with legumes</td>
<td>Found on many crops, particularly in flooded or weedy areas.</td>
</tr>
<tr>
<td>Pale gray to reddish brown with mottled pigmentation.</td>
<td>Light gray to nearly black with skin granulations.</td>
</tr>
<tr>
<td>Light gray V-shaped markings on back.</td>
<td>Indistinct pale stripe on back.</td>
</tr>
<tr>
<td>Tubercles A and B of about equal size.</td>
<td>Tubercle A much smaller than tubercle B.</td>
</tr>
</tbody>
</table>
Cutworms (Continued from page 80)

widespread damage. Light traps and pheromone traps have been used to monitor the flight patterns and populations of black cutworms. Remember, the presence of moths in a trap only indicates potential problems and is no guarantee that extensive damage will occur. Trap counts are more useful in alerting growers and consultants as to when to begin scouting. Recent weather fronts moving rain up from the south also may have brought up some black cutworm moths. Corn planted after the rain delay into residue or fields with winter annuals (that may attract egg-laying moths) may have a slightly higher potential for cutworms. Because most damage from cutworms occurs roughly in the first two weeks after emergence, growers should be on the lookout now.

Black cutworm moths prefer to lay eggs in green vegetation or heavy surface residue, particularly soybean stubble or alfalfa residue. When weeds are destroyed mechanically or by herbicides, cutworms will feed on the newly emerging corn.

Dingy, claybacked, darksided, sandhills, pale western cutworms

Cutworms that overwinter as larvae generally prefer to lay eggs in the fall in green vegetation such as small grain stubble, legumes, rye, and pasture. The eggs hatch and the larvae feed on the vegetation present before overwintering. In spring, after the previous crop is removed and the corn emerges, the cutworms will transfer their feeding activity to the corn. Recent experience has been that corn planted into alfalfa that has been killed in the spring has a greater potential for cutworm problems.

You cannot be sure that tillage will have a significant effect on cutworm populations. If fields are tilled before black cutworm migration, it may limit egg laying in those fields.

Cutworms already in the field may suffer some mortality by mechanical action, but there is no guarantee that tillage by itself will eliminate cutworm problems. Many cutworm problems have occurred in tilled fields. Previous vegetation is probably the most important factor in cutworm potential.

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

Managing cutworms in corn

Several options exist for the grower who wants to manage cutworms in corn. Since a vast majority of corn acreage is not affected by cutworms, the most economically sound practice is to scout for cutworm damage as soon as the corn emerges and apply a rescue treatment if necessary.

Early detection is essential because most of the cutting occurs within seven days of plant emergence. Generally, a rescue treatment should be considered if cutting is observed on 5% or more of the plants (1 plant in 20) and the worms are 1 inch or less long.

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

Keith Jarvi
Integrated Pest Management
Northeast REC

For color photos of this week's pests or to check stories in previous issues, be sure to check the web edition of Crop Watch at:
cropwatch.unl.edu
Last year reports of injury to seedling corn in southeastern Nebraska counties were found to be caused by the southern corn leaf beetle. This insect has been reported to damage corn periodically in northeast and north central Kansas over the last few years, and was also reported from Missouri, Iowa and Illinois in 2000. Field damage is beginning to show up again in parts of Missouri, but it is too early to know whether populations will be as high as they were last year. Be alert for potential damage here in emerging corn.

The adult corn leaf beetle overwinters in sheltered areas and becomes active in April. In addition to corn it may feed on weeds, including cocklebur. The adults are 3/16 inch long, dark brown and often covered with soil particles, making them difficult to see. They hide in the soil during the day and are difficult to find. They feed on the stems of corn seedlings and the edges of leaves, producing a notched appearance. If abundant they may cause severe damage to seedling corn.

There has been very little biological research on this insect since the early 1900s. The southern corn leaf beetle has one generation a year. The beetle lays eggs in the soil around the base of corn plants. The larvae hatch out in 6-10 days and feed on corn roots for about 10 weeks. Larvae pupate in the soil and adults emerge from mid-July to August. Adults feed for a short while and then seek overwintering sites in late summer.

Economic thresholds have not been established for this insect, but would be similar to those for cutworm injury (3-5% cut plants). The same insecticides labeled for postemergence use against cutworms would be appropriate for use on the southern corn leaf beetles. (See http://entomology.unl.edu/instabls/cutworms.htm for rates and details.)

Bob Wright
Extension Entomologist

Field updates (Continued from page 78)

3-4.5 inches of rain last week and planting will be delayed for a few more days, putting farmers even further behind schedule.

Terry Gompert, Extension Educator in Knox County: The soil’s wet and ready to warm up. Winterkill damaged 10-15% of the alfalfa. The oats that were planted before the rains look good. There are more calls than normal from producers interested in planting their cropland back to pasture.

Jennifer Chaky, coordinator of the NU Plant and Pest Diagnostic Clinic: The following diseases were diagnosed April 23 - May 4: alfalfa anthracnose (Hall County), wheat soil-borne wheat mosaic virus (Frontier County).
Count costs of ownership and operation toward irrigation system feasibility

Following a dry year like 2000, there is increased interest in developing irrigation. With the increase in energy prices in 2001, many producers may be considering changing to alternative energy sources for irrigation. When considering irrigation development or when making major design changes, the question becomes one of feasibility.

When conducting an economic feasibility study, consider both the cost of ownership and the cost of operation. Place a value on the capital invested, the labor for operation and maintenance, repair costs, expected fuel costs, and other cost factors.

Comparing Choices

The annualized cost of an irrigation system depends on the design. Different systems have different costs. For example, a center pivot sprinkler system likely will have a higher initial cost and a higher cost per inch of water delivered to the field than a gated pipe system (because of higher system pressure); however, due to improved irrigation efficiencies, it probably will require less gross water and fewer hours of operation to meet crop needs. The question is, will the savings in labor and inches of water pumped offset the higher ownership costs over the life of the system?

Energy consumption is always a major component of the overall cost, but has taken on even greater importance with the recent rise in energy prices. The energy required for irrigation pumping depends on both the quantity of water pumped (acre-inches) and the total head (lift plus pressure) the pump is working against. In a given situation, the lift component of the head probably cannot be changed, but the system pressure does change from one type of system to another, resulting in different fuel costs per acre-inch delivered.

Four energy sources are typically used for pumping irrigation water in Nebraska: electricity, natural gas, liquid propane (LP) and diesel fuel. Using the Nebraska Performance Criteria for Deep-well Pumping Plants as a guide, the expected energy consumption for each potential fuel source can be estimated.

When fuel prices change relative to one another, the most economical energy source also may change. (See the April 27 Crop Watch.)

A thorough economic comparison goes beyond merely computing the price of the energy consumed. The energy source selected dictates the type of power unit needed (and energy delivery or fuel storage).
Alfalfa weevil predictor

Accumulated growing degree days, base 48, as of May 6, to help predict alfalfa weevil development. Larvae usually begin causing noticeable damage between 300 and 350 GDD. Research suggests that scouting should begin at 250 GDD in southern Nebraska and at 300 GDD in northern Nebraska. Scouting should be underway.

Alfalfa weevil damaging stands in southeast Nebraska

Alfalfa weevil activity has been reported near Springfield, south of Omaha. This is a critical time for scouting for alfalfa weevil in the southern half of the state (see map). Damage should also be visible in northern Nebraska, although it won’t be as far along. Damage will increase as larvae get larger over the next two weeks. Now is the time to decide whether an insecticide treatment is necessary (see last week’s decision making charts).

If you have not reached the threshold level, there are several reasons why you should wait to resample. With the rainfall and favorable growing conditions, alfalfa may be able to “outgrow” damage. Also, alfalfa weevils are susceptible to a fungus disease, which can decrease populations rapidly. Heavy rainfall and moderate temperatures over much of southern and eastern Nebraska this past week will favor onset of the disease. Populations can crash within a week’s time. Fungal diseases cause infected larvae to crawl to the tops of the plants where the dead weevils will be easy to see.

Recently we received several questions as to whether lady beetles (also known as ladybugs) will feed on alfalfa weevil larvae. Lady beetles will feed on smaller weevils, but prefer aphids. If weevil populations have reached threshold levels and no fungal disease is visible, it is unlikely natural enemies will control them. Another alternative to chemical treatment is an early cutting of the alfalfa. In general, if threshold levels are reached and the chemical selected has a short enough harvest interval, it will pay to treat for alfalfa weevil.

Keith Jarvi
Integrated Pest Management

Nitrogen

(Continued from page 79)

cool will further reduce potential for leaf burn although burn will be more likely with higher nitrogen rates.

Once plants have reached the 4-5 leaf stage, leaf area will have significantly increased and the growing point will have emerged, increasing the potential for crop damage. Fertilizer application should preferably occur between rows rather than be broadcast. Nitrogen also can be applied as anhydrous ammonia if the injection knife passes 12 or more inches from the row.

Consider a split application, especially if you can incorporate the fertilizer with a later application. This allows time for revising your yield goal and detecting field areas where the supply of nitrogen is likely to be inadequate.

Charlie Wortmann
Extension Soils Specialist

Irrigation

(Continued from page 83)

components that must be purchased. Different types of power units (e.g. propane vs. diesel) vary greatly in price and estimated useful service lives. These differences affect the ownership costs and should be considered in the analysis before deciding to change from one energy source to another.

A user friendly electronic worksheet has been developed to help prepare a feasibility analysis comparing different irrigation system types and energy sources. The worksheet calculates energy costs and estimates labor, repairs, depreciation, insurance and taxes, and reports opportunity cost of the capital invested. The user needs to know lift, pressure, depth of water applied, fuel price, and cost of components.

Tom Dorn, Extension Educator
Lancaster County
Optimizing critical period of weed control offers cost and environmental benefits

As the season progresses, the weeds grow as fast as the corn, competing with the crop for light, water and nutrients. The longer the weeds compete with the corn, the greater the yield loss you can expect. The level of yield loss will depend on environmental variables and a) weed species composition within a given field, b) weed density, and c) time of weed emergence relative to the crop growth stage.

In addition, to decide whether weed control is economically worthwhile, there is a need to understand whether a given weed infestation is likely to reduce yield if left uncontrolled. This establishes the rationale for the concept of critical period of weed control. This is a period in the crop growth cycle when weeds must be controlled to prevent yield losses. Weeds that emerge before or after this period may not present a threat to crop yield. This information is essential in making decisions on the need for and timing of weed control and in achieving an efficient use of herbicides.

Research at the University of Nebraska has shown that each crop has a critical period of weed control when weeds must be controlled to maintain maximum yields. The length of this period can change as a result of cropping practices, for example, the nitrogen level in corn can influence the period.

Critical period of weed control in dry-land corn as affected by nitrogen

Research results showed that this period in corn was affected by the level of nitrogen fertilizer. Generally, a reduction in nitrogen fertilizer resulted in a longer critical period, thus corn was less tolerant to weeds. For example, at zero nitrogen level, the critical period of weed control ranged from approximately to take. In our study, an arbitrary level of 5% yield loss was used to determine the beginning of the critical period of weed control (see the 5% yield-loss-line in Figure 1).

In order to determine the cost of delaying weed control, use the curve above the arbitrarily selected point (the beginning of CPWC). For example, if an arbitrarily selected point of CPWC is 5%, the 5% yield loss will occur if the weeds are removed at the 2nd leaf stage in 0-N-level (Figure 1). Delaying weed control to the 3rd leaf stage will cause about 7% yield loss, in essence costing producer a 2% of yield loss. A similar trend is observed for the later leaf stages at each of the four curves (Figure 1).

This research found that delaying the time of weed removal after the starting point of the critical period of weed control would cost a producer an average of 2% in yield loss per every leaf stage of delay. This is applicable up to canopy closure in corn (about 11 fully developed leaves).

To determine the actual economics of the cost of delayed control, the producer will have to convert the percentage yield loss of the actual target yield on his farm. For example, if a target yield for corn is 100 bushels per acre, for every crop leaf stage delaying weed control will cost producers about two bushels per

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<table>
<thead>
<tr>
<th>Nitrogen-level (lbs/acre)</th>
<th>Time to control weeds (Corn leaf stage)</th>
<th>Time to control weeds (Approximate days after crop emergence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 0</td>
<td>V1 - V11</td>
<td>8-45</td>
</tr>
<tr>
<td>N = 55</td>
<td>V3 - V10</td>
<td>10-42</td>
</tr>
<tr>
<td>N = 110</td>
<td>V4 - V9</td>
<td>15-39</td>
</tr>
<tr>
<td>N = 210</td>
<td>V6 - V9</td>
<td>20-39</td>
</tr>
</tbody>
</table>
Critical period of weed control

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acre of yield (2% of 100 bushels per acre). In terms of actual economic loss, it will be about $4 per acre for every crop leaf stage of delay, assuming a price of $2 bushel for corn.

Weed size

Weed size, as compared to crop size, influences the start of the critical period of weed control. If the weeds are taller than corn, they will shade the crop; control should be initiated four to five days (one to two leaves) prior to the beginning of the critical control period. If the weeds emerge five to eight days after the crop, they will not shade the crop at the early growth stage and control can be initiated 5-10 days (two to three leaves) after the beginning of critical period of weed control.

Stevan Knezevic
Extension Weeds Specialist
Haskell Agricultural Lab
Alex Martin
Extension Weeds Specialist

Many factors influence farmers' crop decisions

A combination of economic considerations and family and community commitments influences farmers' decisions about crop diversity and rotation, University of Nebraska research shows.

For 15 years, Agricultural Economist Gary Lynne has studied farmers' crop planting decisions, observing what motivates them to adopt conservation practices and how they balance commitments to the environment with their need for profit.

"It's a very complex decision," the Institute of Agriculture and Natural Resources researcher said.

Earlier, Lynne observed the decision-making patterns of Florida tomato and strawberry growers. These two groups displayed markedly different commitments to conservation, with the strawberry growers adopting more conservation methods than the tomato growers.

In 1999, Lynne and an IANR graduate student studied cropping decisions of 201 farmers in Nebraska's Saunders County, where corn and soybeans are the dominant crops. Using crop rotation as a measure of willingness to diversify farms, they found little interest among farmers in planting more diverse crops. More than one-third of farmers planned no changes in the next five years and more than three-fourths weren't likely to diversify their plantings.

The study found most farmers consider family members' and outside groups' opinions, as well as profits, when making decisions, Lynne said. The results suggest that commitments to others and the environment influence profit-making decisions.

Lynne's research suggests farmers might adopt or plan to adopt more crop rotations and other environmentally friendly practices if family members and others around them favored such an adoption.

The Nebraska findings enhance understanding of farmers' motivations for decision-making, he said.

Molly Klocksin
IANR Newswriter

This story was originally published in Research Nebraska, a publication of the NU IANR Research Division. The entire magazine is available on the web at:

ard.unl.edu/nebraska.shtml