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Managing fertilizer use in dry soils

With below-normal soil moisture prevalent in much of Nebraska, producers may consider changing how they use fertilizer this spring. Dry soil influences how fertilizer can be applied and what happens to it after application.

Application rates

Producers should carefully consider application rates this spring, particularly for nitrogen, which is usually based on expected yield. With low subsoil moisture in much of the state, the yield potential for dryland crops will be reduced compared to recent years. Farmers should be realistic when setting yield expectations, and consider fertilizing for lower yields than last year on dryland fields.

Anhydrous ammonia

The primary concern with anhydrous ammonia application into dry soil is retention of the fertilizer. Silt loam and heavier textured soils in Nebraska generally contain adequate moisture to react with and retain ammonia, even when seemingly very dry, as long as the injection depth is 5-6 inches below the soil surface and application rates are not excessive.

Of greater concern is the ability to seal the injection slot. If the soil is very dry and cloddy, the farmer may observe white "smoke" behind the applicator. This "smoke" is actually water vapor condensed from the air by escaping ammonia. Although it takes a lot of "smoke" to add up to any significant fertilizer loss, it's still best to try to minimize fertilizer loss. If vapor loss cannot be minimized by 1) going to a deeper injection depth, 2) slowing down, or 3) reducing the application rate, it may be advisable to wait for better soil conditions or switch to a different form of nitrogen fertilizer.

The amount of ammonia applied last fall for spring row crops was significantly reduced from normal levels – producers were concerned about the effects of dry soil on fertilizer retention as well as excessive wear on application equipment. Fall ammonia application is an acceptable practice on heavier-textured soils, if applied late enough that soil temperatures are cool and the likelihood of significant nitrification is low. Due to the warmer than normal winter, ammonia applied last fall may have

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Short-term moisture expected with longer term dry spell

Recent storm activity has brought temporary relief to many within the state who have been suffering through an extremely dry five-month pattern. The last two weeks have been very active, with a major snow storm and isolated thunderstorm activity. Conditions indicate this may continue for another two weeks.

Precipitation from these events has added an additional 1-1.5 inches of available water into soil profiles. Enough precipitation has fallen across southwest Nebraska to move it from a severe to a moderate drought classification. The eastern two-thirds of the state still remains under severe drought conditions, but will likely be moved into the moderate category if current short-term forecasts prove true.

The long-term outlook has not changed dramatically. The Climate Prediction Center continues to call for drier and hotter than normal conditions for Nebraska during March. In addition, the long lead outlooks call for below normal precipitation from March to September.

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Welcome back to Crop Watch!

This is the first issue of the 2000 publication season for Crop Watch, the NU Cooperative Extension newsletter for crop production and pest management. Readers who subscribed in 1999, but not for 2000, will receive this issue free. An order form is available on page 10 so you can resubscribe now and avoid missing future issues.

The faculty and staff at the Institute of Agriculture and Natural Resources who contribute stories and information have targeted several special issues as well as planning for the core of the newsletter — timely information on crop production and crop protection issues in Nebraska.

For more information about the newsletter, contact me by phone at (402) 472-7981 or by Email at ljasa1@unl.edu.

Lisa Jasa, Editor

Fertilizer (Continued from page 1)

Resources who contribute stories and information have targeted partially nitrified and could be leached; however, dry soil conditions have generally minimized any nitrate leaching from fall-applied ammonia. Continued dry conditions will insure that fall-applied nitrogen will be in the root zone when the crop needs it this spring.

Broadcast fertilizers

Both dry and liquid fertilizers broadcast on the soil surface will be influenced by large amounts of residue, which may not have decomposed significantly due to the dry winter. Urea and nitrogen solutions can lose nitrogen to the atmosphere through ammonia volatilization when surface-applied to high residue soils. If incorporated with residue, the nitrogen in broadcast fertilizers can be immobilized in decomposing residue, resulting in delayed availability to the crop.

Starter fertilizers

Producers should be cautious about applying starter fertilizer with the seed this spring. Starter fertilizers which contain nitrogen and potassium are particularly hygroscopic – they will draw moisture away from the seed, resulting in germination damage and loss of stand. This effect will be accentuated with dry soils. Placing starter fertilizer in a band a couple of inches away from the seed will minimize the potential for germination damage.

Richard B. Ferguson
Extension Soils Specialist
South Central REC

Karen DeBoer, Extension educator in Cheyenne County: The wheat is starting to green up with these warm days and the recent moisture. Some producers have asked about wheat streak mosaic disease symptoms that may be visible this spring; however, the symptoms won't appear in wheat until late April or early May.

Ray Weed, Extension educator in Kimball/Banner counties: Our actual precipitation this winter has been about .70 inches which is ahead of last year at this time. Wheat here is in fair to good condi-

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Reduce tillage and conserve soil moisture

Using no-till or ridge-till can save you far more than fuel, labor, and equipment costs. The savings in soil moisture can be just as important, especially in a year when soil moisture and precipitation is limited.

Too often the soil will dry to the depth of tillage. An average silt loam soil can hold about 2 inches of available soil moisture per foot of soil. Tilling 6 inches deep and allowing the soil to dry to the depth of tillage could result in a loss of up to 1 inch of soil moisture. Shallow tillage, even row crop cultivation, can still result in moisture losses of about ½ inch. By not tilling or cultivating, you can minimize these moisture losses.

Some say the soil needs to be tilled to “open it up to let water in”. Unfortunately it dries to the depth of tillage so the initial water let into the soil just replaces what was lost rather than adding to the soil moisture reserve. Tillage breaks up and pulverizes the soil surface, making the soil prone to crusting from raindrop impact. Tillage actually creates a condition that seals the soil, resulting in more runoff.

Tillage destroys the residue cover that protects the soil from raindrop impact, reducing erosion and crusting of the soil and allowing more rainfall to soak in. The residue also slows water runoff allowing time for infiltration and acts as a mulch to reduce moisture evaporation from the soil.

Some people recommend tillage for herbicide incorporation for better weed control. While very shallow tillage with good soil mixing may help weed control, it also dries the soil and “plants” weed seeds. Deeper tillage dilutes the herbicide with more soil and dries the soil even more. Rainfall will incorporate herbicides more uniformly than a tillage operation, provided the herbicide label allows it and the herbicide is applied early enough to receive rainfall. Usually there is enough rain in early April to activate a preemergence herbicide; however the chances diminish by waiting until late April or until after planting when weeds may have already gotten a start.

Higher fuel costs — about 40% more this year — also are a factor when considering tillage. The diesel fuel requirements for the typical disk-disk-field cultivate tillage system is about 3.77 gallons per acre including knifing in fertilizer, planting, and one row crop cultivation. By switching to a no-till system, the fuel use decreases to about 1.43 gallons per acre including knifing in fertilizer, planting, and two sprayings. There is a corresponding decrease in labor requirements and an improvement in planting timeliness without preplant tillage.

Paul Jasa
Extension Engineer

Short-term moisture (Continued from page 1)

Southwest Nebraska has the highest probability of receiving below normal precipitation from March to May. The southern half of the state has the highest probability of receiving below normal precipitation during the April-June and May-July reporting periods. The eastern third of the state has the highest probability of receiving below normal precipitation from July to September.

Statistical analysis performed by the late Ralph Neild, NU professor of horticulture, during the 1980s indicates that the odds are remote that eastern Nebraska will make up the total precipitation deficit accumulated since September 1 before the average corn emergence date of May 15. There is only a 7-15% probability that eastern Nebraska will make up these precipitation deficits. (Local conditions may vary.)

Dr. Neild also found that fall and spring recharge were important components affecting non-irrigated corn yields. His analysis suggests that 12 inches of fall and spring moisture and normal growing season moisture are required to produce average yields. When accumulated moisture falls below 12 inches, below normal dryland yields are more likely.

As of February 28, the eastern third of Nebraska had accumulated 4-7 inches of precipitation since September 1. This indicates that 5-8 inches of moisture is needed in the next eight weeks to provide a 50-50 chance of receiving normal yields. This represents 125%-175% of normal precipitation for the period, and does not affect the need for normal growing season precipitation.

The long-lead outlooks don’t look promising, but they may not be totally accurate. These outlooks are incorporating the current La Nina event into the forecasts; however if La Nina dies suddenly, these forecasts will certainly be prone to error. Perhaps the recent stormy pattern is an indication that La Nina is beginning to wane.

Al Dutcher
State Climatologist
Start spring cleaning your sheds and garages; pesticide disposal sites open March 14-April 7

Unwanted or excess pesticides can be safely disposed of at 20 sites statewide between March 14 and April 7.

Agricultural, home, structural, lawn and garden pesticides will be accepted for disposal; however, those in pressurized containers will not be accepted.

In the past three years, this cooperative venture between the Nebraska Department of Agriculture and NU's Cooperative Extension Division has disposed of more than 1.1 million pounds of pesticides through incineration. Local businesses and government agency staff also provide assistance at individual sites.

Preregistration isn't necessary to deliver pesticides to any of the sites and there are no fees for up to 1,000 pounds of pesticides. If products total more than 1,000 pounds, the Nebraska Department of Agriculture will charge $1 per pound for each pound over 1,000. To make arrangements to dispose of more than a half ton of pesticides, contact Rich Reiman at the Nebraska Department of Agriculture at (402) 471-2394. This provides advance notice to the disposal subcontractor if special handling is needed.

The subcontractor receiving, handling and disposing of the collected materials is NSE Environmental of Lincolnshire, Ill. They will take the pesticides to El Dorado, Ark., for incineration.

The program accepts waste pesticides only. Oil and oil filters, antifreeze, paint, varnishes, thinners, cleaners and solvents will not be accepted.

Collection dates and sites, all of which are open from 8 a.m. to noon, are:

March 14: ABK Fencing, Tecumseh
March 15: Papio Missouri River NRD, Omaha
March 16: Wal-Mart parking lot, Fremont
March 17: Farmers Co-op elevator, Plymouth
March 20: Farmers Co-op, York
March 21: Aurora Co-op, Aurora
March 22: Fairfield Non-Stock Co-op, Fairfield
March 23: Ord Airport, Ord
March 24: Custer County Weed Control, Broken Bow
March 25: Kearney Recycling Center, Kearney
March 27: Agri Co-op, Holdrege
March 28: Red Willow County Fairgrounds, McCook
March 29: Grant Co-op, Grant
March 30: WESTCO, Alliance
March 31: Swann Transfer Station, Chadron
April 3: Helena Chemical Co., Bassett
April 4: Central Farmers Co-op, O'Neill
April 5: Cedar Valley Ag Services, Albion
April 6: Madison County Weed Control, Norfolk
April 7: NU Haskell Ag Laboratory, Concord

The pesticide disposal project is funded by a Nebraska Environmental Trust Fund grant to the Nebraska Fertilizer and Ag Chemical Institute and a U.S. Environmental Protection Agency grant to the Nebraska Department of Environmental Quality.

For more information, contact your local NU Cooperative Extension office, the Nebraska Department of Agriculture at (402)471-2394 or UNL Water Center Environmental Programs at (402) 472-1632. More information is also available on-line at http://www.ianr.unl.edu/ianr/pat/pestprog.htm.

Steve Ress, Communications Associate
Larry Schulze, Extension Pesticide Coordinator
Managing Bt resistance development

Designing a Bt refuge for your field

One of the issues concerning the use of Bt transgenic corn hybrids is resistance management. European corn borer (ECB) larvae that feed on Bt corn are exposed to much higher levels of the Bt toxin over a much longer time than with the use of foliar Bt insecticides, such as Dipel or M-Peril. Under this high level of selection pressure, the potential for resistance developing is high. Resistance management strategies have been designed to prevent or at least delay this.

An important principle of resistance management for European corn borers and Bt corn is the use of refuge plantings. A refuge is any ECB host plant (e.g. non-Bt corn, potatoes, and some weeds) not producing Bt proteins or not being treated with conventional Bt formulations. The purpose of the refuge is to supply a source of Bt-susceptible ECB that could mate with resistant ECB potentially emerging from nearby Bt corn. In current resistance management strategies the refuge must be non-Bt corn because other ECB host plants do not produce enough moths. Specific resistance management information will be a part of each com seed bag label. Be sure and discuss resistance management with your seed dealer.

The EPA has established the following resistance management requirements for 2000.

1. On each farm, growers may plant up to 80% of their com acres with Bt com. At least 20% of their com acres must be planted with non-Bt com and treated only as needed with insecticides. Decisions to treat the refuge should be based on economic thresholds. Conventional Bt products (liquids or granules) must not be used on the non-Bt refuge.

2. Plant non-Bt com refuge within, adjacent to, or near to the Bt comfields. If the grower intends to treat the refuge it should be placed within 1/4 mile of the Bt field, if at all possible. In any case, the refuge must be placed within 1/2 mile of the Bt field.

3. If refuge is established as strips within a field (Figure IE), the strips should be no narrower than six rows.

4. If possible, locate refuge plantings to protect potentially vulnerable non-host insects (e.g. Monarch butterfly). Refuge plantings can serve as buffer zones between the Bt comfield and the habitat of non-target insects.

Figure 1 presents some general refuge configurations for use within fields.

Refuge Considerations

Linear blocks, brackets, or border refuge plantings (Figs. 1A, B, and C) are relatively easy to plant, treat, monitor, and harvest. They have the added advantage of acting as buffer areas between the Bt com and non-target habitat or non-GMO comfields.

Strips (Fig. 1E) have the advantage of providing susceptible ECB to all parts of the Bt field, but they also have several drawbacks. Strips cannot be treated separately from the Bt com.

Harvest may be difficult if non-Bt strips dry down differently than the Bt com. Also, it is difficult to keep track of where the strip rows begin and end, so monitoring is more difficult.

Do not plant strips narrower than six rows or mix seed. This increases the risk of resistance occurring because ECB larvae often move from plant to plant. Corn borer larvae that can survive eating small amounts of Bt (low level resistance or tolerance) can end up on a non-Bt plant and survive.

The design for planting strips will depend on your planter. For

Figure 1. General types of within-field refuge configurations.

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Refuge design  (Continued from page 5)

example, dedicating three end row units of a 12-row planter will effectively give you a 25% refuge and maintain the six-row strip size. If you have a six-row planter you can achieve the 25%, six-row refuge by splitting the planter into three units of Bt and three units of non-Bt. Only strip half of the cornfield. Four-row or single-hopper planters are not suitable for this refuge option.

The European corn borer that is susceptible to Bt from the refuge must be present at the same time as possible Bt-resistant ECB from the Bt corn. To achieve this the corn hybrid in the refuge should be agronomically similar (e.g. similar days to maturity) to the Bt hybrid, planted at the same time as the Bt field, and managed in the same manner as the Bt field. In this way the ECB moths will be equally attracted to the refuge and Bt cornfield. Larvae also will develop at the same rates and emerge as adults at the same time.

Using a neighbor’s cornfield as a refuge is not allowed because the hybrid selection, planting time, pest control, and other production activities are not under the control of the grower planting the Bt corn.

Planting only non-irrigated pivot corners as refuge is not recommended because the corn plants in these areas are significantly different and less attractive to ECB moths than the corn under irrigation. Remember, the idea is to produce some Bt-susceptible ECB moths.

The closer the refuge is to the Bt field the better. This brings Bt-susceptible ECB in close proximity to any Bt-resistant ECB that may survive in the Bt cornfield. Female ECB generally mate close to where they emerge as adults, so having nearby refuge increases the chances that susceptible ECB will mate with a resistant ECB.

You can use a combination of refuge configurations to meet the required 20% refuge.

Figure 2 presents two examples of how you might establish a refuge for a Bt cornfield.

Additional information on ECB management, resistance management, and Bt corn hybrids is available through your local County Extension Office. This information also is available through the UNL Entomology Department Web site located at http://www.ianr.unl.edu/ianr/entomol/entdept.htm

Tom Hunt, Extension Entomology Specialist, Northeast REC
Jerry Echtenkamp, Extension Technologist, Northeast REC

NebGuide, Blue Mustard Control (G95-1272), for more information.

Dryland corn is gaining popularity here because of the favorable conditions the past few years and there has been considerable interest in growing field peas for food or forage. Field peas must be planted early in the season (March), relatively deep, and seem to do best in cool, high residue environments.

Briefs  (Continued from page 2)
New herbicides for 2000

Fewer herbicides than usual are being introduced to the ag market this year as many companies seem to be reacting cautiously to volatility in the ag market and uncertainty about marketing GMOs.

We expect to see combinations of several currently labeled herbicides as well as an influx of glyphosate products into the market.

Jeff Rawlinson
Extension Technologist Weed Science

Achieve 40DF
Zeneca
Mode of action: ACC-ase inhibitor
Tralkoxydim (40%)
POST in spring wheat and barley
Achieve is similar to Poast herbicide in activity for control of wild oats, foxtail, and ryegrass. Antagonism in tank mixes with sulfonylureas.

Aquire
BASF
Mode of action: Amino acid synthesis inhibitor
Glyphosate
POST in RR crops
Acquire is a generic glyphosate, the same active ingredient in Roundup.

Axiom AT 75DF (labeled)
Bayer
Mode of action: Shoot inhibitor + Photosynthetic inhibitor
Flufenacet (19.6%) + metribuzin (4.9%) + atrazine (50.5%)
PP, PPI, or PRE in corn
Application rate and timing: 1.75 to 3.75 lb/a depending on soil type
Provides enhanced broadleaf control
Axiom with atrazine added for additional residual control.

Balance 75 WDG (labeled)
Rhone-Poulenc
Mode of action: Pigment synthesis inhibitor
Isoxaflutole
SPP, PPI, or PRE in corn
Application rate and timing:

Coarse soils > 1.5% O.M.
(Not recommended for coarse soils < 1.5% O.M.)
EPP (8-30 days) 1.5 to 2.0 oz/a
PP, PPI (0-7 days) 1.0 to 1.25 oz/a

When Balance is applied preemergence to medium soils with pH greater than 7.5, reduce rate by 0.25 oz/a from recommended rate.

Bicep Magnum TR (labeled)
Novartis
Mode of action: shoot inhibitor + photosynthetic inhibitor + ALS inhibitor
S-metolachlor (29.1%) + atrazine (22.1%) + flumetsulam (1.0%)
PP, PRE, or EPOST in corn
Application rate and timing: 1.6 to 2.2 qt/a depending on soil type and application timing
Bicep Magnum TR is mixed with flumetsulam, the active ingredient in Python and Broadstrike, for control of triazine resistant weeds such as lambsquarters, waterhemp, and pigweed while combating resistance.

Boundary 7.8 EC
Novartis
Mode of action: shoot inhibitor + photosynthetic inhibitor
'S-metolachlor (78.8%) + metribuzin (18.8%)
PP, PRE in soybeans
Application rate and timing: 1.25 to 3.0 pt/a depending on soil type
Boundary is a mixture with the same active ingredient found in Turbo for grass and broadleaf control in soybeans.

Celebrity Plus DF (labeled)
BASF
Mode of action: ALS inhibitor + growth regulator + shootinhibitor
Nicosulfuron + dicamba + diflufenzopyr
POST in corn
Application rate and timing: 4.7 oz/a in corn 4-24 inches
Celebrity Plus offers both annual grass and broadleaf weed control with the same active ingredients found in Accent and Distinct.

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New herbicides (Continued from page 7)

Connect 20WSP (labeled)
Rhone-Poulenc
Mode of action: Photo synthetic inhibitor
Bromoxynil (29.2%)
POST in corn, sorghum, alfalfa, small grains
Rate and timing: 1.25–2.25 lb/a depending on crop growth stage
Adjuvant: 1% COC
Connect is a contact herbicide for broadleaf control in many crops. Connect has little to no residual activity and can occasionally cause temporary leaf burn on crop.

Degree 3.8E
Monsanto
Mode of action: shoot inhibitor
Encapsulated acetochlor
PP, PPI, or PRE for annual grass control and some broadleaf control in corn.
Degree contains a temperature activated encapsulated acetochlor that is released when temperatures exceed 50 °F. The process allows the safener to be released first.

Degree Xtra
Monsanto
Mode of action: shoot inhibitor + photosynthetic inhibitor
Encapsulated acetochlor + atrazine
PP, PPI, or PRE for annual grass control and some broadleaf control in corn.
Degree Xtra contains the same encapsulated acetochlor, released when temperatures exceed 50 °F.

Domain 60DF (labeled)
Bayer
Mode of action: shoot inhibitor + photosynthetic inhibitor
flufenacet (24%) + metribuzin (36%)
PPS, PPI, or PRE in soybeans
Application rate and timing: 9 to 16 oz/a (10oz optimum for most soils)
Domain is a mixture of the same active ingredients found in Axiom. Domain has a greater concentration of metribuzin and reduced rate of flufenacet, enhancing broadleaf control. This rate is too high for corn.

Extreme (labeled)
American Cyanamid
Mode of action: amino acid synthesis inhibitor
imazethapyr (35%) + IPA-glyphosate(20.5%)
POST in RR soybeans
Application rate and timing: 3 pts/a of Extreme provides equivalent of 1.44 oz of Pursuit + 24 oz Roundup Ultra Extreme is a co-pack of Pursuit and Roundup. It’s offered as a premix in 2000. Extreme will be targeted as an early postemergence herbicide with residual activity. Extreme offers two modes of action to combat resistance.

Epic 58 DG (labeled)
Bayer
Mode of action: shoot inhibitor + pigment inhibitor
Flufenacet (48%) + isoxaflutole (10%)
PP, PPI, PRE in corn
Application rate and timing:
DO NOT use on coarse soil with pH 7.5 or on coarse and medium soils with <1.5% O.M.
Not recommended on medium soils if pH > 7.5 and O.M. is < 2.5%

Coarse soils - pH < 7.5
1.5 – 2% O.M. 2 – 3% O.M. >3% O.M.
EPP (8-21 days) 7-9 oz/a 9-10 oz/a 9-11 oz/a
PP, PRE (0-7 days) 6-8 oz/a 8-9 oz/a 8-10 oz/a

Medium soils 1.5 – 2% O.M. 2 to > 3% O.M.
EPP (8-21 days) 9-11 oz/a 11-15 oz/a
PP, PRE (0-7 days) 7-10 oz/a 9-13 oz/a

Fine soils < 1.5% O.M. 1.5 to > 3% O.M.
EPP (8-21 days) 11-13 oz/a 12-17 oz/a
PP, PRE (0-7 days) 10-11 oz/a 11-15 oz/a
Consult seed corn dealer or Bayer representative for sensitive varieties

Glyphomax (labeled)
Dow AgroSciences
Mode of action: EPSP synthetase inhibitor
IPA glyphosate (41%)
POST in RR crops
Glyphomax is a formulation of glyphosate (the same active ingredient in Roundup). Glyphomax does not contain a surfactant.

Glyphomax Plus (labeled)
Dow AgroSciences
Mode of action: EPSP synthetase inhibitor
IPA glyphosate (41%)
POST in RR crops
Glyphomax Plus is a formulation of glyphosate + surfactant.

Maverick 75DG (labeled)
Monsanto
Mode of action: ALS inhibitor
Sulfsulfuron (75%)
PRE and POST in winter and spring wheat
Use rate and timing: 0.67 oz/a preemergence to prior to jointing
Maverick controls winter annual bromes with good activity on most mustards.

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Crop insurance deadline March 15

With commodity prices and soil moisture conditions at less than favorable positions, producers may want to carefully examine their crop insurance options this year. The deadline for applying for multiple-peril and guaranteed revenue insurance for corn, grain sorghum, and soybeans is March 15.

While the forecasts for drought are a concern this year, a variety of factors can affect the crop, both positively and negatively, and reacting to weather predictions alone would not be good risk management. Base the amount of crop insurance you buy on your needs if a disaster does occur, rather than just on the possibility of adverse weather alone.

Determine your insurance needs based on your financial situation, your own risk tolerance, and your marketing plan, then decide what coverage you want. Also consider what low yields, low commodity prices or a devastating storm would do to your operation.

This year’s federal crop insurance program offers several new options and the opportunity for producers to guarantee revenue despite low commodity prices. In addition, the government is providing an additional 25 percent discount in 2000 for insurance premiums purchased above the minimum, allowing producers to

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New herbicides (Continued from page 8)

NorthStar 51.4 WDG (labeled)
Novartis
Mode of action: ALS inhibitor + Growth regulator
Primisulfuron (7.5%) + Dicamba (43.9%)
POST in corn
Use rate and timing: 5 oz/a when corn is 4–12 inches tall
NorthStar contains the same active ingredients found in Beacon and Banvel for annual broadleaf control with excellent shattercane activity.

Penidmax 3.3 EC (labeled)
Dow AgroSciences
Mode of action: Seedling growth inhibitor
Pendimethalin
PP, PPI in soybeans and pre in corn
Use rate: 1.2 – 3.0 pt/a depending on soil type
Contains pendimethalin, the same active ingredient found in Prowl

Ready Master ATZ (labeled)
Monsanto
Mode of action: EPSPS inhibitor + photosynthetic inhibitor
Atrazine (20.9%) + glyphosate (20.9%)
POST in RR corn
Rate and timing: 1.5-2 qt/a in corn up to 12 inches
Ready Master contains atrazine and glyphosate (active ingredient in Roundup) for postemergence applications in Roundup Ready corn. The atrazine will provide some residual for broadleaf weeds, allowing for early postemergence applications.

Valor 50WDG
Valent
Mode of action: PPO inhibitor
Flumioxazin
PRE in soybeans, sugar beets

Valor controls many common broadleaf weeds including kochia, lambsquarter, black nightshade, prickly sida, waterhemp, pigweed and morningglory
Expect label in 2001.

Reliance STS
DuPont
Will be phased out and replaced by Synchrony STS.

Bladex
DuPont
To be phased out. Use rate for 2000 will be 1 lb ai/a.
Production will cease in 2000.

Banvel
BASF
To be phased out and replaced with Clarity.

Herbicide Resistant/Tolerant Crops (Conventional)
Herbicide Resistant Crop
Pursuit, Contour, Resolve, Clearfield (formally designated as IMI, IR/IMR or IT)
Lightning
Poast Plus, Poast SR corn (formally Poast Protected)
Synchrony
STS varieties

Herbicide Resistant/Tolerant Crops (Genetically Engineered)
Herbicide Resistant Crop
Liberty, Liberty ATZ
Liberty Link corn or soybeans
Roundup Ultra, Ready Roundup Ready RR corn, soybean, cotton, sugar beets
Master ATZ, premixes containing glyphosate
Crop insurance (Continued from page 9)

obtain more insurance coverage without increasing costs.

Insurance agents will be able to provide information on the costs of various coverages, but you need to assess what’s cost efficient for your operation. There are two aspects to consider:

1) your cash flow needs to cover operating expenses, debt payments and family living costs and how much crop insurance you need to meet those needs; also consider the cost efficiency and whether the expense of high end coverage is worth the added expense for your operation.

2) your marketing plan and how you can use crop insurance as a base to do some forward pricing before harvest, and how it may affect how much insurance you need.

Insurance options

There is a minimum catastrophic coverage, for which the price election has been reduced from 60% to 55%. Several “additional” insurance options are also available under the Multiple-Peril Crop Insurance (MPCI) program.

1. Catastrophic Coverage (CAT) — Provides coverage at 50% of the Actual Production History (APH), yield with insurance payments based on 55% of the established price.

2. Additional APH Insurance — Up to 75% yield coverage and 100% price elections. The guarantee is based on producer records of actual yields for up to 10 consecutive years. If less than four years of records are provided, an FCIC transitional yield is used for the missing years. If a grower wishes to have insurance above the 50/55 catastrophic level, the APH program offers several alternatives

3. Group Risk Plan (GRP) coverage is based on county yields and is available in some counties. The maximum dollar protection under GRP is the expected county yield times the GRP price x 1.5. Indemnity payments are based on the percentage short fall of the NASS (Nebraska Agricultural Statistical Service) county yield compared to the trigger yield. The trigger yield is the coverage level chosen by the producer times the expected county yield.

4. Crop Revenue Coverage (CRC) provides a revenue guarantee and is available for com, grain sorghum, soybeans and winter wheat in Nebraska. In 2000 in Nebraska, 80-85% coverage is available for corn, soybeans and sugar beets.

Roger Selley and H. Douglas Jose
Extension Farm Management Specialists

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