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## CropWatch No. 2002-26, Nov. 15, 2002

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# CROP WATCH

University of Nebraska Cooperative Extension  
Institute of Agriculture and Natural Resources

No. 2002-26  
Nov. 15, 2002

## Developments in Bt corn for 2003

Transgenic corn hybrids that are resistant to insects (Bt corn) are no longer new, and most Nebraska corn producers have grown some of these hybrids, or at least are familiar with them. There are, however, new Bt field corn events in development or that will be available soon. I would like to briefly discuss what events are available for 2003, what events have been discontinued, and what events are to become available shortly. Hopefully this will aid in hybrid selection for the 2003 growing season.

First, what is an "event" with respect to Bt corn? An event is the successful insertion of a gene encoding a Bt protein into corn plant DNA. Different events vary in the type of Bt protein produced, the

expression of the protein, and the target insect pests. Expression refers to where, how much, and at what plant stages the Bt protein is produced in the corn plant.

In October 2001, EPA finished a review of three Bt field corn events and approved registration of the events through October 15, 2008 (*see table, page 239*). These events will be

in a variety of corn hybrids and offered through several seed companies. All are very efficacious against European corn borer. Two, Bt-11 and Mon810 (both under the trade name YieldGard), have been around for several years. The Cry1F event (Herculex I), however, is new for

*(Continued on page 239)*

## Options for drought year taxes

Farmers and ranchers who received insurance or disaster payments or who were forced to sell livestock due to this year's drought have options for income tax planning this fall, a University of Nebraska farm business associate said.

Farmers are allowed to postpone reporting insurance and disaster payments on crop losses by one year under the U.S. Internal Revenue Service tax code Section 451(d), said Tina Barrett, interim director of the Nebraska Farm Business Association at the University of Nebraska-Lincoln.

Likewise, producers who had to sell their livestock due to lack of pasture or water can postpone reporting that income for as long as two years.

The drought wiped out many dryland crops and forced growers to irrigate more than normal, which sent irrigation costs skyrocketing, Barrett said. With these factors

reducing incomes, it may be beneficial for farmers and ranchers to defer paying taxes on a portion of their income.

"The major thing most farmers and ranchers will be dealing with this year is the income they received from having to sell their livestock," she said. "To qualify, the producer's county must be declared as a disaster area, which won't be a problem this year because the entire state was declared."

There are two tax options farmers and ranchers can apply to weather-related livestock sales, Barrett said.

One is to defer the income to the next year and not recognize the gain until then. This allows the taxpayer to postpone reporting the income for one year if the taxpayer's principal business is farming or ranching, the taxpayer uses the cash method of

*(Continued on page 239)*

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## Mark your calendars

### Aurora Ag Day Jan. 23

This year's **Ag Day** will be held 9 a.m. to 2:30 p.m. Jan. 23 in Aurora at the Hamilton County Fairgrounds. The focus will be on no-till production systems and integrating genetically engineered crops into a pest management plan.

Speakers will include: Paul Jasa, extension engineer; Fred Roeth, extension weed specialist, Andrew Christiansen, extension educator. For further information, contact Andrew Christiansen at the Hamilton County Extension Office at (402) 694-6174.

### Nebraska No-till Feb. 13

The Nebraska No-till Conference will be Thursday, Feb. 13 at the NU Agricultural Research and Development Center near Mead. Watch the *CropWatch* Web site *Events* page at [cropwatch.unl.edu/events.htm](http://cropwatch.unl.edu/events.htm) for details. The program will be from 9 a.m. to 4 p.m.

### Tech. meeting Feb. 3-4

Producers can learn about the how new technologies are changing agriculture at the **2003 Nebraska Agricultural Technologies Association (NeATA) Conference and Trade Show**. It will be Feb. 3-4 at the Midtown Holiday Inn in Grand Island.

"Conference participants can expect to see and experience the latest agricultural technologies," said Dave Varner, Extension Educator in Dodge County. For more information contact Varner at (402) 540-9315 or email [dvarner1@unl.edu](mailto:dvarner1@unl.edu)

### Soybean update March 6

The **Nebraska Soybean and Feed Grains Profitability Project** meeting will be March 6 at the NU Agricultural Research and Development Center near Mead. Individuals don't have to be participating in the project to attend and learn about the results from on-farm producer

research projects on soil quality, weed control, and various cultural practices.

The cost is \$10 and includes reference materials, a copy of the research results, and lunch. For more information contact Keith Glewen, extension educator, at (402) 624-8030.

### Manure use workshops

This winter several Extension programs will target manure utilization planning. All-day training programs will be provided for crop consultants and advisors and three-afternoon sessions will be provided for producers.

For consultants, the basic concepts and requirements of Comprehensive Nutrient Management Planning will be presented and manure utilization planning will be covered in detail in **Manure Utilization Planner for Technical Service Providers (TSP's): Education Program in Support of MUP Certification**. (This is part of the extension curriculum described on page 245. Cost is \$95 when registering seven

days before the meeting or \$120 for registering after that date.)

Participants will receive and learn to use software and worksheets for plan development. Eight credits are expected for this course -- two in soil and water management and six in soil fertility and nutrient management. Workshops will be held at the Seward Extension Office Feb 7 from 9 a.m. to 5 p.m. and at the West Central REC in North Platte Feb 24 from 9 a.m. to 5 p.m.

For producers, the training will be conducted over three days. Producers will develop a manure utilization plan for their individual animal feeding operations. They should bring information about their operation to be used in developing a plan. Producers will receive and learn to use software and worksheet tools. The workshop schedule is:

Cozad, Feb 11, 18, 25, 1 to 4 p.m.

Beatrice, Feb 12, 19, 26, 1 to 4 p.m.

Grand Island, Feb 13, 20, 27, 1 to 4 p.m.

Contact: Charles Wortmann, soils specialist, at (402) 472-2909.



[cropwatch.unl.edu](http://cropwatch.unl.edu)

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With all pesticide recommendations, carefully read and understand label instructions. Any reference to commercial products is made with the understanding that no discrimination is intended and no endorsement by Nebraska Cooperative Extension is implied.

Lisa Jasa, Editor; Email: [ljasa1@unl.edu](mailto:ljasa1@unl.edu)

For more information about a particular subject, contact the departments:  
 NU Department of Entomology, 202 Plant Industry Bldg., Lincoln, NE 68583-0816  
 NU Department of Agronomy, 279 Plant Science Bldg., Lincoln, NE 68583-0918  
 NU Department of Plant Pathology, 406 Plant Science Bldg., Lincoln, NE 68583-0722

## Tax options

(Continued from page 237)

accounting and shows that the livestock would normally have been sold in a subsequent year, she said.

"The other allows the farmer or rancher not to report the income, but the proceeds must be used to purchase replacement breeding livestock within two years," Barrett said.

This second option only applies to livestock other than poultry held for any length of time for draft, breeding or dairy. The new livestock must be used for the same purposes as the livestock that was sold. For example, dairy cows must be replaced with dairy cows, she said.

Also, the taxpayer must show that the weather caused the sale of more livestock than would have been sold without the weather-related conditions.

For example, if the farmer normally sells one-fifth of the herd each year, only the sales in excess of one-fifth will qualify for the provision, Barrett said.

Crop insurance payments also can be deferred on crop losses by one year, Barrett said. Generally this rule applies when crops can't be planted or are damaged or destroyed by a natural disaster, such as a drought or flood. Farmers must be able to show that, under normal business practice, the crop would have been sold in the following year. Also, losses due to revenue coverage may not be deferred.

Every farm and ranch operation is different and has varied needs at tax time, Barrett said. For more information on how to make these tax elections and for the best advice, farmers and ranchers need to see their tax practitioner or contact the Nebraska Farm Business Association at (402)472-1399.

The Nebraska Farm Business Association is part of Cooperative Extension in NU's Institute of Agriculture and Natural Resources.  
**Sandi Alswager**  
**IANR News**

## Characteristics of currently available Bt field corn

<i>Bt Event and/or Cry-Protein</i>	<i>Registrant Company</i>	<i>Trade Name</i>	<i>Efficacy</i>
Bt-11, Cry1Ab	Syngenta Seeds, Inc.	YieldGard	Control of European corn borer, southwestern corn borer, and southern cornstalk borer. Suppression of corn earworm, fall armyworm and common stalk borer.
Mon810, Cry1Ab	Monsanto Co.	YieldGard	Control of European corn borer, southwestern corn borer, and southern cornstalk borer. Suppression of corn earworm, fall armyworm and common stalk borer.
Cry1F	Mycogen Seeds c/o Dow Agrosiences LLC; Pioneer Hi-Bred International Inc./DuPont	Herculex I	Control of European corn borer, southwestern corn borer, fall armyworm, and black cutworm. Suppression of corn earworm.

## Bt corn (Continued from page 237)

2003 and also is efficacious against fall armyworm and black cutworm. Note that the events "suppress" some other caterpillars. If these other pests are your primary concern, the Bt hybrids may not satisfactorily control them.

Several commercial products have been discontinued. Their registrations have either expired or been cancelled. They include KnockOut and NaturGard (event E-176, Cry1Ab), Bt-Xtra (event DBT-418, Cry1Ac), and StarLink (event CBH-351, Cry9C). Although the EPA has allowed existing stocks of the E-176 products to be used through the 2003 growing season, I do not expect to see much of this seed sold. Bt corn hybrids with E-176 events are efficacious against first generation corn borer, but decrease in efficacy as the plant matures.

The newest Bt corn hybrids on the block, or soon to be on the block, contain a Bt protein (Cry3Bb) that is

toxic to corn rootworm. They have no effect on corn borers or any other caterpillars. This event is not currently registered for commercial use, but may be by the beginning of the 2003 growing season. Depending on when it receives registration, growers may be able to take advantage of these hybrids or at least see them on a field level.

Of course, all of these Bt corn hybrids require certain resistance management practices. For more information on resistance management requirements for 2003, see NebFact NF00-425, "Resistance Management for European Corn Borer and Bt Transgenic Corn: Refuge Design and Placement". For more information on a host of topics concerning Bt corn and biotechnology, visit the UNL AgBiosafety Webpage at <http://agbiosafety.unl.edu/>

**Tom Hunt**  
**Extension entomologist**  
**Haskell Ag Lab, Northeast REC**

# Consider fungicide seed treatments for soybeans

Even though this year was dry over most of Nebraska, we did have our share of seedling disease problems in soybean in some parts of the state. While nearly all corn seed is treated with a fungicide, soybean seed is not routinely treated. It has to be ordered treated or arrangements have to be made to have seed treated with a fungicide after it is purchased. This is due to the loss in germination if soybean seed is held from one season to the next.

The best fungicide treatment is a commercial treatment either at the seed handling facility prior to bulk or bag sectioning or at a bulk treatment facility. Treatments applied after this point often do not result in uniform seed coverage, affecting product performance. (No coverage = No protection.) Therefore, it is beneficial to have a plan if you want to plant fungicide treated soybean seed next year. The price for these treatments typically is \$2– \$3 per unit.

## Disease history

Knowing the field's history is a vital part of efficient disease management. If you have fields with a history of seedling emergence or post-emergence seedling problems, use a seed-applied fungicide. While these problems don't occur consistently, the field history can indicate how frequently they occur and suggest how likely they are to reoccur. This critical history data set should be used when deciding whether the seed should be treated. The most common fungi involved in seedling diseases in Nebraska are species of *Fusarium*, *Phytophthora*, *Pythium*, and *Rhizoctonia*. All four are capable of killing soybean seedlings or at least causing damage sufficient enough to affect the plant's ability to achieve full yield potential.

Note that fields with a history of *Phytophthora* should be planted into a resistant variety. Fields with a long-term history of *Phytophthora* may require a different resistance

gene if you are noticing *Phytophthora*-killed plants when you grow resistant varieties. Fields with a history of *Phytophthora* also will require additional levels of mefenoxam or metalaxyl fungicide above the standard rate. See the extension publication, "Management of *Phytophthora* Diseases of Soybean" (NF02-518), for further information.

## Formulations

Seed treatment fungicides are available in a variety of formulations. Some products are labeled for commercial use in slurry- and mist-type seed treaters. Other products are labeled for on-farm application and are commonly referred to as hopper-box or planter-box treatments. With any seed treatment product, good seed coverage is required for the maximum benefit. The best treatment is going to be a commercial treatment, which results in uniform seed coverage. This is particularly true with many of the newer products that have very low

use rates (e.g.- 5 oz per 100 lb of seed). That's why you should buy commercially treated seed if you have fields with a history of seedling disease problems or are considering early planting when soil temperatures are cooler than optimum.

Many compounds are available to use as seed treatment fungicides. For a list of the many seed-applied fungicides, active ingredients, and fungi they are effective against see the extension publication, "Seed Treatments Fungicides for Soybeans" (NF00-411).

Some seed treatment fungicides are not compatible with *Rhizobium* inoculants. Always check the label for compatibility and unless otherwise labeled, if seed is treated with a fungicide, apply inoculants in-furrow rather than on the seed. Many products require that seed be planted within four hours of inoculation with liquid based *Rhizobium* inoculants.

**Loren J. Giesler**  
Extension Plant Pathologist

## Using NU Variety Trial results

How do you select superior performing hybrids based on variety tests? Use results from the **NU Variety Trials**.

Lenis Nelson, extension crop variety and seed production specialist, suggests a few steps to using the range of information published annually.

This year's results are available on-line at <http://varietytest.unl.edu> and will be available in print in early December at local county extension offices. Many of the on-line results also are available in an Excel file format. Information categories vary with crop and site.

To use the trial results, identify the site(s) which most

represents your field and climate conditions, then:

1. Review the least significant difference (L.S. D.) in the tables of results to determine which hybrids are different.
2. Sort by the most important variable – often yield.
3. Sort by second most important variable.
4. Look for other variables which are different, such as grain moisture percentage, to assure genetic diversity
5. Look for another variable to further separate hybrids.

Carefully selecting a hybrid which will perform well under your conditions can contribute to improved yields next fall.

*From samples at the Plant & Pest Diagnostic Clinic*

## Hot plant problems in 2002

One of the major concerns of producers and farmers in Nebraska this growing season was definitely the heat and drought. In addition to problems associated with environmental stress, we did see some disease problems in the Plant & Pest Diagnostic Clinic worth noting during the 2002 growing season. Viruses were the most common disease problem observed in wheat. Most cases were of wheat streak mosaic virus and some fields also had problems with soil-borne wheat mosaic virus.

Wheat streak mosaic virus was also seen in some corn seed production fields. There were also a handful of corn samples with high plains virus infection. Some cornfields had the foliar phase of Stewart's Wilt occurring late in the season, although this disease was not seen earlier in the seedling phase. Very few foliar diseases of corn appeared until rather late in the season.

The weather was just too hot for much of the summer for foliar diseases to occur. Grey leaf spot, common rust and northern corn leaf spot were some of the foliar diseases that did come into some fields somewhat late. One disease that was more common than usual this year was common smut of corn. We see this every year, but the incidence of this disease was higher this year. The hot, dry weather probably contributed to the higher than usual amount of common smut. Stalk rot was common in some areas. The stalk rot diseases are more severe in areas under stress. Another item of concern for many farmers was the level of aflatoxin and other mycotoxins in their corn as a result of grain mold fungi infecting the corn.

Some problems also were seen in soybeans. Rhizoctonia was fairly common in soybean seedlings. Sometimes this disease occurred in fields where herbicide carryover may have been an issue. Phytophthora

was found to be a problem in some fields where seedlings or somewhat older plants were affected. Soybean cyst nematode caused stunting and yellowing of plants in some fields. Later in the season we saw some of the vascular diseases of soybean including brown stem rot and charcoal rot.

Viral infections were found in some soybean plants with symptoms including leaf distortion, stacking of nodes, and a proliferation of pods with aborted seed. Some of the viruses detected were bean pod mottle virus, tobacco streak virus, soybean mosaic virus, and tobacco ringspot virus. Plants with a proliferation of pods without seeds were infected with two different viruses in two separate fields that were tested. There may be more purple seed stain in harvested beans this season than usual, as conditions were conducive for infection by the fungus that causes this disease.

Pine wilt nematode continues to be a problem of concern in Scots and Austrian pine windbreaks and shelterbelts. No pesticides are recommended for control of the

nematode or the pine sawyer beetle that vectors it, so removal and destruction of infested trees is recommended to limit the spread of this disease. Sphaeropsis tip blight is another disease that can affect both of these pines.

Following this drought year, producers may want to consider crop rotation since residue may not break down very well due to dry conditions and pathogens can survive in the residue. Consider also that herbicides may not break down in dry soils and carry-over of herbicides could be an issue. With increased residue on fields, proper planting depth of seeds will need to be ensured. Fungicide seed treatments in soybean fields that have a history of poor emergence may help to increase the stand.

As always, proper diagnosis of a problem is one of the first steps in solving it. In the Plant and Pest Diagnostic Clinic we have enjoyed providing diagnostic services to Nebraskans this season and look forward to helping you next season.

**Jennifer Chaky**  
PPDC Educator

## Drought lingers; economic effects deep

Much of the state continues to be in some state of drought, with a significant portion of central and western Nebraska in an extreme to exceptional drought, according to the National Drought Monitor. (*View the monitor at [drought.unl.edu/dm](http://drought.unl.edu/dm)*)

Nebraska's soil moisture reserves are 3-8 inches short of where they need to be by spring, according to Ken Hubbard, extension climate resource specialist. While eastern Nebraska conditions have improved some with recent rains, areas of western Nebraska has not been so lucky with some areas only receiving 50%-60% of normal precipitation since Jan. 1.

"It will take some wet snows and spring rains to recharge soil moisture levels," Hubbard said, adding that it may take several years to recharge some western Nebraska reservoirs.

Long-term precipitation forecasts indicate above normal precipitation for the southern tier of counties this winter and above normal temperatures for the entire state, Hubbard said. (The forecasts do not indicate either above or below normal precipitation trends for the rest of the state.)

(Continued on page 244)

# NU Extension winter meetings

## Crop Protection Clinics in January

Herbicide carryover may be a particular problem for many Nebraska producers in 2003 due to the extensive dry conditions and drought across the state in 2002. This year's NU Cooperative Extension **Crop Protection Clinics** will help producers assess the potential for problems, manage the risk, and learn how to select hybrids for 2003 based on this information.

The meetings will be hosted at sites across the state in January and feature NU extension specialists presenting timely information on pest management and crop protection.

A Crop Protection Clinic workshop also will address issues related to the wide adoption of glyphosate as a management tool, including rotation with RR corn and RR soybean, potential for species shift/resistance; factors affecting glyphosate performance; and glyphosate additives.

Cultural and environmental causes for the crinkled soybean leaves which were widely reported in some areas this season also will be addressed.

Other program topics, which will vary with location, may include: new herbicides, microbiological soil management; IMI wheat, sunflower weed control, proso weed control, low cost herbicides for sugarbeet; and Brazilian agriculture.

### Schedule

Contact the extension educator hosting the meeting you're planning to attend for specific topics to be included at a specific site.

**Tuesday, Jan. 7**, Fremont, Holiday Lodge, 1220 East 23rd St.

**Wednesday, Jan. 8**, Norfolk, Life Long Learning Center, 601 East Benjamin St.

**Thursday, Jan. 9**, Auburn, Arbor Manor, 1617 Central Ave.

**Friday, Jan. 10**, Lincoln, Lancaster Extension Education Center, 444 Cherrycreek Road

**Monday, Jan. 13**, York, Chances "R", 124 West 5th St.

**Tuesday, January 14**, Fairbury, 4-H Building

**Wednesday, Jan. 15**, Hastings, Garden Cafe, Holiday Inn Convention Center, 2201 Osborne Drive East

**Thursday, Jan. 16**, O'Neill, Blarney Stone Restaurant, 5th and Douglas streets

**Tuesday, January 21**, Scottsbluff, Panhandle REC I

**Wednesday, Jan. 22**, Ogallala, Ramada Ltd., 201 Chuckwagon Road

**Thursday, Jan. 23**, Broken Bow, Elk's Lodge, 625 South 10th St.

**Friday, Jan. 24**, Holdrege, Ag Center, 1308 2nd St.

## Corn/Soybean Workshops Jan. 27-31

This year's **Corn/Soybean Workshops** will focus on the cropping systems decisions and production innovations that can help producers improve yields and profits in 2003. The workshops, sponsored by NU Cooperative Extension, will be held at five locations across the state in January. Topics and speakers, which may vary by site, include:

**Reducing Risk and Improving Yields by Better Variety and Hybrid Selection**, *Lenis Nelson, Extension crop variety and seed production specialist, or Roger Elmore, extension crops specialist.*

**Irrigation Management - Crop Needs and Timing, Limited Water, Pivot Corner Management**, *William Kranz or Joel Schneekloth, extension irrigation specialists*

**Pluses and Minuses of Combined Seed and Crop Protection Programs**, *Dale Flowerday, crop consultant*

**Doing the Right Things In the Corn/Soybean Rotation**, *Dale Flowerday, crop consultant*

**Nutrient Management - Reducing Groundwater Nitrates, Getting Maximum Benefit from Fertilizer Dollars, Low pH and Liming**, *Charles Shapiro, Richard Ferguson, and David Tarkalson, Extension soils specialists.*

**Making No-Till Systems Work in Corn/Soybean Rotation**, *Robert Klein, Extension cropping systems specialist*

### Schedule

**O'Neill, Monday, January 27**, Blarney Stone in O'Neill, 4th and Douglas streets; contact: Ralph Kulm, extension educator, at (402) 336-2760.

**Columbus, Tuesday, January 28**, Ag Park in Columbus, corner of 10th St. & 15th Ave; contact: Allan Vyhnaelek, extension educator, (402) 563-4901.

**Hastings, Wednesday, January 29**, Adams County Fairgrounds in Hastings, 947 South Baltimore Ave.; contact: Ron Seymour, extension educator, (402) 461-7209

**Cozad, Thursday, January 30**, Cozad Elks Club in Cozad, 820 "J" St.; contact: Dave Stenberg, extension educator, (308) 324-5501.

**Grant, Friday, January 31**, Midwest Electric in Grant, 1st and Washington streets; contact: Larry Peterson, extension educator, (309) 352-4340.

Contact the Extension office hosting a specific workshop concerning whether a registration fee may be charged to cover meals and seminar materials. The following CCA credits have been applied for: one for nutrient management, one for soil and water management, and two for crop management.



*Workshop explores alternatives to traditional cropping*

## Rural advantage: profit opportunities for Nebraska

Emerging income opportunities for agricultural producers and rural residents will be the focus of a January Cooperative Extension workshop – **The Rural Advantage: Profit Opportunities for Nebraska**. Speakers will address one of three themes: alternative crops, value-added products and tourism and entertainment farming.

"The number and types of agriculture enterprises of this type are tremendous," said Gary Zoubek, Extension educator in York County and program co-chair. Opportunities range from grape production for one of Nebraska's new wineries to raising shrubs for the floral trade or hosting hunting opportunities for in- and out-of-state visitors.

"This conference will provide information on a diverse range of agricultural enterprises available to farmers and small landowners in Nebraska," Zoubek said.

The workshop will be Jan. 17-18 at the Holiday Inn in York. Participants will be able to visit with resource providers and producers who have successfully developed value-added ag enterprises. The registration fee is \$50, with an additional \$22 for a wine and cheese hour and all-Nebraska banquet Friday night. A block of rooms is being held until Jan. 3 at the York Holiday Inn for \$55 a night. Send registrations to the York Extension Office, 2345 Nebraska Avenue, York 68467

### Speakers and topics

#### Friday, January 17

**9:30 - 9:45 Introductions and Challenges**, Randy Cantrell, Community Resource Development Specialist, NU Center for Applied Rural Innovation

**9:45 - 10:30 Keynote Speaker: New Vision for the Future of Agriculture**, John Ikerd, Professor Emeritus of Agricultural Economics, University of Missouri at Columbia.

**10:45 - 11:45 Opening the Doors to Tourism**, Cynthia Messer, Extension Educator and Associate Professor, Tourism Center, University of Minnesota Extension Service

**12:30 - 1:30 Panel Discussion** featuring representatives of agencies working with small farms: Janell Anderson Ehrke, GROW Nebraska Director; Susan Helmink, Promotion Coordinator, Diversified Agriculture, Nebraska Department of Agriculture; Arlis Burney, NU Food Processing Center's from Recipe to Reality; Paul Rohrbach, The Nebraska Sustainable Agriculture Society; Mike Holton, Rural Tourism Opportunities, Center For Rural Affairs.

### Concurrent sessions

#### Session 1, 1:30-2:15

**Alternative Enterprises: Grape and Wine Production**, James Ballerd, James Arthur Vineyard

**Value Added: A Proven Agricultural Cooperative - Farmers Choice**, Deb Heidzig, Farmer's Choice, Auburn

**Agro-Tourism: Controlled Shooting Areas in Nebraska**, Johnny Hemelstrand, Hunt Nebraska Inc., Arapahoe

#### Session 2, 2:15-3:00

**Alternative Enterprises, The New World of Goats**, Marlene Peters, Phillipsburg, Kansas

**Value Added, Working with Niobrara Valley Wood Products, LLC. to Market Your Woodworking Products**, Sheila Chance, Bassett, Nebraska

**Agro-Tourism, Vala's Pumpkin Patch**, Tim Vala

#### Session 3, 3:15- 4:00

**Alternative Enterprises Growing Money on Trees and Shrubs: Speciality Woody Crops for the Floral and Food Markets**, Scott Josiah, State Extension Forester and Assistant Professor, School of Natural Resource Sciences

**Value Added: Value Added Opportunities**, Mike Holton

**Agro-Tourism: Agri-tainment: A New Crop for Nebraska**, Kent

Gustafson, Extension Educator and Professor, Tourism, University of Minnesota Extension Service

#### Session 4, 4:00 - 4:45

**Alternative Enterprises: Alternative Enterprises Insurance**, John Hansen, District Director, Congressman Tom Osborne

**Value Added: Value Added Agriculture in Nebraska**, Jim Crandall, Outreach Coordinator, Cooperative Development Center, Center For Applied Rural Innovations

**Agro-Tourism: Developing Regional Tourism**, Todd Kirshenbauh, Central Regional Tourism Coordinator, Grand Island

**6:00 Wine and Cheese Tasting**

**7:00 All Nebraska Dinner**

#### Saturday, January 18

#### Session 5, 8:00 - 8:45

**Alternative Enterprises: CSA's and Year Around Farmers Markets**, John Elis, Libby Creek, York

**Value Added: The Trends That Move Your Business**, Ken Wurdeman, Initiative Coordinator, Center For Applied Rural Innovations, Small Farm Profitability

**Agro-Tourism: Connecting the Dots: Marketing What You Have**, Cynthia Messer

#### Session 6, 8:45 - 9:30

**Alternative Enterprises: From the Sandhills to the Market - Wagyu Cattle for the Japanese Market**, Dan Morgan, Burwell, Nebraska

**Value Added: Ag Opportunities**, John Ikerd

**Agro-Tourism: Brats, Balloons & the Blues: Festival and Event Opportunities**, Kent Gustafson, Extension Educator and Professor, Tourism, University of Minnesota Extension Service

**9:45 - 10:30 Planning Out Your Business Success**, Carol Thayer, Small Scale Entrepreneurship Extension Specialist

**10:30 - 12:00 Capnote Speaker: Turning the Vision into Reality**, John Ikerd



## Agronomy Highlights Dec. 10 in Lincoln

This year's **Agronomy Highlights** will feature presentations and posters involving research, teaching and extension activities in the NU Department of Agronomy and Horticulture. It will be held Tuesday, Dec. 10 from 8:30 a.m. to 3:00 p.m. at the Cornhusker Hotel in Lincoln. A complimentary noon meal will be provided for those who preregister by Nov. 29 with JoAnn Collins, NU Agronomy, at (402) 472-2811. Speakers are from the Department of Agronomy and Horticulture. Application has been submitted for this year's participants to receive continuing education credits.

### Program

**Sports Turf -- What We Can Learn From Our International Colleagues**, *Roch Gaussoin*

**Models Bring New Understanding to Crop Management Decisions**, *Drew Lyon*

**The Role of Public Variety Plant Breeding Programs**, *Stephen Baenziger*

**Changes in Nitrogen Fertilizer Use in Nebraska Over the Past Forty Years**, *Richard Ferguson*

**Range Management in a Drought**, *Jerry Volesky*

**Challenges of Drought Management in the Urban Landscape**, *Dale Lindgren*

**Plant and Soil Carbon Fluxes in Agricultural Systems**, *Tim Arkebauer*

## Program eases challenges of multi-generational farms

**Returning to the Farm** – a University of Nebraska program to help young people return to family farms and ranches -- will be held at two sites in eastern and north central Nebraska this winter.

The program takes participants through the steps necessary to develop successful multi-generational working arrangements.

"Blending a variety of talents and personalities into one farming or ranching operation takes planning, communication, and management," said Deb Rood, program coordinator. The **Returning to the Farm** program is designed to help families develop these successful working arrangements.

During the program, participants will:

- write long- and short-term business and family goals;
- assess the preferences of individuals in the operation;
- recognize personalities and learn to work with each individual's strengths;
- become informed about alternative business arrangements;
- analyze your operation's financial performance; and
- evaluate various operating alternatives.

The two-weekend program is open to families who are planning

the return of a daughter or son to the operation or who are presently working in a multi-generation family operation. All members of the management team are strongly encouraged to attend both weekends of the program. Program dates are:

- Dec. 13-14 and Jan. 24-25, University of Nebraska-Lincoln, East Union

- Dec. 6-7 and Jan. 17-18, University of Nebraska College of Technical Agriculture, Curtis

Program facilitators will include Rood, Dave Goeller, NU farm transition specialist, and Al Prosch, NU Pork Central Coordinator.

Preregistrations are due by Nov. 21. Registrations will be accepted up to the date of the first weekend if there are openings. Due to the nature of the program, registration is limited to 15 families at each site. Registration is \$150 per family, plus \$10 per attending family member. The cost includes materials, refreshments and one meal.

For more information or a registration form, contact Rood at (402) 472-1771 or (800) 535-3456.

**Returning to the Farm** is sponsored by the NU Department of Agricultural Economics, NU Cooperative Extension, the Nebraska Pork Producers Association, Nebraska Corn Board, Nebraska Farm Bureau and Nebraska Cattlemen.

## Drought (Continued from page 241)

In southwest Nebraska and in the Panhandle, irrigation water from several reservoirs was restricted and several NRDs have placed bans on drilling new wells.

UNL agricultural economists estimate that Nebraska's net farm income was down \$500 million to \$600 million in 2002, approximately 25% below the annual net farm income from 1992-2001. Much of the

loss was directly or indirectly due to the drought and reduced yields.

With the exception of 2000, you'd have to go back 19 years to see the state's annual net farm income lower than this year's forecasted level, UNL ag economist Bruce Johnson told a drought seminar in late October.

While the overall loss to the state was significant, the loss to indi-

vidual farmers and ranchers was highly variable, depending on the type of farm and location, Johnson said. In areas of prolonged drought and water limitations, there's likely to be some downward adjustments to land rents and values with the potential for liquidation of some farming operations and deferred equipment purchases, Johnson said.

**Lisa Jasa, CropWatch Editor**

# Integrated crop management winter programs

A series of University of Nebraska Cooperative Extension programs this winter will provide up-to-date information on a variety of topics of interest to agribusiness professionals and producers.

NU's Integrated Crop Management Winter Programs will be offered December through March at several sites across the state. These sessions will provide the opportunity for agribusiness professionals to expand their knowledge base, earn CCA credits, and ultimately increase profits.

The training sessions provide indepth and detailed information from NU specialists and private industry about crop production, management and diagnostics; soil and water quality; soil fertility and pest management issues.

Continuing education credits for the Certified Crop Advisers Program have been applied for. For more information or to register, contact Keith Glewen, extension educator, at (402) 624-8030 or kglewen1@unl.edu or visit the web at <http://ardc.unl.edu/2003ICMWP.htm>.

Those who register one week in advance of programs will receive the discounted rate. Fees include lunch, refreshments, workshop materials and an instruction manual.

## Irrigation -- Soil and Water Management

December 5, 8:30 a.m. - 4:15 p.m., Lifelong Learning Center, Norfolk

**Topics:** Soil water measurement techniques; estimating crop water use rates; irrigation scheduling using spreadsheets; effective use of water at the field and watershed scale; irrigation management strategies for corn and soybeans; furrow irrigation system management; sprinkler positioning; and irrigation system case studies - economics.

**Instructors:** Jose Payero, extension water resource engineer; Steve Melvin, extension educator; Derrel Martin, professor of biological systems engineering; Dean Yonts, extension irrigation engineer; Bill Kranz, extension irrigation specialist; and Roger Selley, extension farm management specialist

**Credits:** 6 CCA credits

**Program fee:** \$90; after Nov. 28, \$100.

## Crop Pest Management

December 17, 8 a.m.-5 p.m., Dec. 18, 8 a.m.-3 p.m., UNL East Campus

**Topics:** Indepth training on mycotoxins and grain molds; review of 2002 pest problems, insects, weeds and herbicides; herbicide interactions; herbicide carryover; weed increasers and decreasers; understanding the new root rating system; cost of neglecting weed control; insect outlook for 2003; integrated diagnostic overview; soybean defoliation and how it causes yield losses; identification of cutworms and defoliators found in corn and soybeans.

**Instructors:** John Watkins, extension plant pathologist; Loren Giesler, extension plant pathologist; Jennifer

Chaky, extension plant pathology educator; Jim Stack, extension plant pathologist; Alex Martin, extension weed specialist; Ron Seymour, extension entomology educator; Keith Jarvi, extension IPM specialist; Barb Ogg, extension educator; Rod Madsen, UNL graduate student.

**Credits:** 13 CCA credits in pest management have been applied for.

**Program fee:** \$180; after Dec. 10, \$200.

## Advances in Soil Fertility Management

December 19, 8:30 a.m.-4:30 p.m., UNL East Campus

**Topics:** How soils develop and vary; soil foodwebs; adjusting NH<sub>3</sub> applications; nitrification inhibitors; tips for uniform applications; yield potentials for corn in different areas of Nebraska; using a corn growth model for improving crop management; factors affecting the economics of fertilizer use; software for choosing the least costly fertilizer source; estimating the value of manure.

**Instructors:** Charles Wortmann, extension nutrient management specialist; Charles Shapiro, extension soils specialist; Richard Ferguson, extension soils specialist; Achim Dobermann, extension soil fertility/nutrient management specialist.

**Credits:** 13 CCA credits.

**Program fee:** \$90; after Dec. 12, \$100.

## Understanding Genetic Improvement in Crops

February 5, 8:30 a.m. - 4:30 p.m., College Park, Grand Island

**Topics:** Genetic principles of crop improvement; how varieties are developed and released; theories of heterosis and hybrid vigor; sources of pure lines and uniformity in hybrids; common breeding techniques in self-pollinated crops (wheat and soybeans) and in-cross pollinated crops (corn and alfalfa).

**Instructor:** Stephen Baenziger, professor of plant breeding in the Agronomy and Horticulture Department.

**Credits:** 6 CCA credits have been applied for.

**Program fee:** \$80; after Jan. 29, \$90.

## Soil and Crop Ecology

February 6, 9 a.m. - 3 p.m., NU Ag Research and Development Center, near Mead

**Topics:** Examine the role of the eight soil micro and macro soil organisms in the mineralization and maintenance of soil fertility; learn how these organisms form a food web that dramatically affects soil fertility and soil structure; the benefits of cover crops for conserving crop nutrients, improving and maintaining soil structure and preventing water and wind erosion; understanding soil quality testing and how it translates science into practice; developing an awareness of the value of crop and soil ecology in developing a soil fertility program.

**Instructors:** James Peterson, extension educator; Paul Hay, extension educator; Rhae Drijber, associate agronomy professor; John Doran, USDA-ARS soil scien-

(Continued on page 246)

## Integrated crop management meetings *(Continued from page 245)*

tist; Charles Wortmann, extension nutrient management specialist

**Credit:** CCA credits have been applied for.

**Program fee:** \$80; after Jan. 30, \$90.

### Integrated Weed Management

March 7, 8:30 a.m.-4:30 p.m., Ag Center in Holdrege (Education Rm.)

**Topics:** the principles of integrated weed management; weed biology and ecology; critical period of weed control -- pros and cons, weed thresholds, weed shifts; biologically effective dose -- saving money and the environment; and benefits and concerns with herbicide tolerant crops.

**Instructors:** Stevan Knezevic, extension weed specialist

**Program fees:** for CCA or professional development, \$80; after Feb. 28, \$90. For college credit, the fee is \$100 by Feb. 28 or \$130 after that date. College credit entails additional assignments and may include additional fees. Call for information.

**Credits:** 5 CCA credits have been applied for.

### Precision Agriculture Workshop

March 13-14, LW Chase Hall, University of Nebraska East Campus, Lincoln

Day 1: 8:30 a.m.-5 p.m. Day 2: 8 a.m.-5 p.m.

**Topics:** hands-on training related to key aspects of precision agriculture data collection and processing; **Day 1:** principles of GPS and using a handheld receiver; free geospatial data on the Internet; principle components of a

yield monitoring system (use AgLeader display); conventional and perspective soil mapping techniques. **Day 2:** combining data sources in a farm-level GIS package (AGIS or Farm Works); understanding and applying data processing techniques (map comparison, query, etc.); becoming familiar with the most popular data mining approaches; and understanding development of prescription maps for variable rate application of agricultural inputs.

**Instructors:** Viacheslav Adamchuk, precision agriculture engineer; Richard Ferguson, extension soil specialist; Achim Dobermann, extension soil fertility/nutrient management specialist; Maribeth Milner, GIS specialist/pest management, NU Department of Agronomy and Horticulture; and Paul Jasa, extension engineer.

**Program fee:** \$160; after March 6, \$180.

**Credits:** 12 CCA credits have been applied for.

### CROP Scout Training for Pest Managers

March 19, 8:30 a.m.-4:30 p.m., NU Ag Research and Development Center, near Mead

**Topics:** growth staging of corn and soybean plants; recognizing fertilizer deficiencies; identifying major pests in corn and soybeans; economic thresholds of insects; handling the soybean cyst nematode; weed and disease identification and management.

**Instructors:** Dale Flowerday, agronomist, Delmar Consulting; Keith Glewen, extension educator; Barb Ogg, extension educator; Brady Kappler, extension educator

**Program fee:** \$80; or after March 12, \$90.

**Credit:** 5.5 CCA credits have been applied for.

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# CROP WATCH

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