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Lisa Brown Jasa
University of Nebraska-Lincoln, ljasa@unlnotes.unl.edu

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Bt corn and resistance management in 2002

In mid October corn genetically modified with Bacillus thuringiensis (Bt corn) received EPA registration for seven more years. After an almost two-year review process, EPA determined that the currently registered Bt corn products that are resistant to European corn borers do not pose a significant risk to human health or the environment. Numerous scientific studies were considered during the review, including those addressing potential risks to Monarch butterflies, effects on birds, and human allergenicity to Bt. The complete review document and other information on biotechnology can be viewed at: www.epa.gov/pesticides/bioprotecticides.

What does this mean for Nebraska farmers? In practical terms, not much will change for farmers planting Bt corn in 2002, although resistance management compliance requirements have been strengthened. Companies marketing Bt corn will have to monitor for the development of insect resistance, provide annual reports on the efficacy of resistance management plans, and implement remedial action plans in the event that resistance is detected in insect pest populations. They also will have to educate growers about resistance management. Farmers will be required to sign contractual grower agreements when buying Bt corn seed, and resistance management compliance surveys will be conducted annually. Actually, companies marketing Bt corn have already been performing most of these compliance activities during the last couple of years. For the Nebraska farmer, the same general resistance management requirements have remained in place.

Resistance management for European corn borers and Bt corn revolves around the use of refuge plantings. In Nebraska, a refuge is non-Bt corn. The purpose of the refuge is to supply a source of Bt-susceptible corn borers that can mate with resistant corn borers potentially emerging from nearby Bt corn. Specific resistance management information will be a part of each corn seed bag label. Be sure to discuss resistance management with your seed dealer.

The resistance management requirements as stated by EPA for 2002 are:

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Diversify market plans and develop a local attitude amid a growing global ag market

The events of September 11 still loom large in our minds as we deal with loss of human lives, threats to our internal national security, and conflicting feelings about our country’s response and future role in the world order. How does this affect those of us involved in Nebraska agriculture? Will the attacks influence our decisions on crops and systems in the future?

Our farm economy is closely tied to a global food system. A large proportion of our commodity crops are exported from Nebraska and the United States. We depend on global security and economic stability, as well as inexpensive fossil fuels, to keep this system intact. Given the attacks on New York City and

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Diversify  (Continued from page 223)

Washington D.C. and the broad economic consequences, we also begin to appreciate the fragility of the system and our dependence on agricultural exports. We also may need to think about the impact of our exports on family farmers in countries where we sell these products.

The obvious short-term solution is to establish and maintain security in the current system. A longer-term discussion should include thoughtful study of why insecurity occurs, how large economic differences between north and south affect global stability, and what alternatives should be considered for us in agriculture. For example, who ultimately benefits from the current export-oriented agriculture, and how are these benefits distributed? Do Nebraska family farms and our rural communities receive the benefits from an industrial model agriculture that locks them into a few subsidized commodity crops, dependence on government subsidies, and reliance on a shrinking number of input suppliers and grain buyers often found under the same umbrella corporations? Do we have other options?

What about local food systems? Each food molecule in the United States travels an average of 1,400 miles from point of production to the table. In Nebraska, we import about 70% of the food we consume, in spite of our enormous natural resource base and agricultural productivity. If we could substitute food produced and processed within the state for even one quarter of what we currently import, this would be an additional multi-million dollar infusion into our local economy, communities, and farms. Money spent for local crops and products circulates three to four times in the community where this business occurs, an additional boost to economic viability in rural Nebraska. Farmers’ markets, community supported agriculture, local processing, fruits and vegetables in season in our supermarkets, and direct sales from the farm are all options we should pursue. This is one way that we can look at the larger issues in designing a viable future agriculture for Nebraska, rather than pursuing a singular strategy of increased exports.

Charles Francis, Professor
Agronomy and Horticulture

Ag technology workshop, tour Dec. 10-14

A precision ag tour and map data analysis service will be featured during the fourth annual Crop Modeling for Environment-Specific Management workshop Dec. 10-14 in Lincoln.

This workshop is designed to help farmers, researchers and crop consultants learn to use the latest technologies to increase yields and profits.

Bob Caldwell, Extension cropping systems specialist and conference chair, said the precision ag tour will be of particular benefit. Participants will be able to see real-world examples of how crop models are being used today and see and study some of the more important soils in the state.

“One of the important components we are adding this year is a map analysis service,” Caldwell said.

Workshop sponsors include the University of Nebraska-Lincoln, Oregon State University, University of Florida, American Society of Agricultural Engineering, American Society of Agronomy, American Society of Horticulture Science, Crop Science Society of America, mPower3, Nebraska Agricultural Technologies Association, Nebraska Research Initiative, Soil Sciences Society of America, USDA/ARS Soil and Water Conservation Research Unit and the USDA/NRCS National Soil Survey Center.

Cost is $495 and does not include hotel accommodations. Hotel reservations are available by calling (402) 472-3435. More information about the workshop is available by calling (402) 472-2844 or by visiting its web site at http://dcs.unl.edu/cropmodel.
What happens if ECBs develop Bt resistance

Resistance management has been an important topic since the advent of Bt transgenic corn. We have talked about resistance management in Crop Watch articles, NebFacts, newspaper articles, and other educational materials. However, we have devoted little time to discussing what would happen if European corn borer (ECB) resistance to Bt corn was found. The EPA’s recent re-registration of several Bt transgenic corn events includes a section concerning resistance monitoring and remedial action to be taken should resistance occur. In light of the many “what if” questions Extension has been getting about resistance, I would like to discuss the EPA’s remedial action plan requirements for responding to resistance in insects targeted by Bt corn (e.g. ECB).

The remedial action plan is part of an overall integrated resistance management (IRM) program. Its purpose is to contain resistance and perhaps eliminate resistance if it develops. The general plan is that registrants (Syngenta Seeds, Inc., Monsanto Co., Mycogen Seeds c/o Dow AgroSciences LLC, Pioneer Hi-Bred International, Inc.) must monitor insect susceptibility to Bt toxins, respond to reports of less than expected results or control failures for target pests (e.g. ECB). If needed, they will implement a “remedial action plan”. Of course, there are various steps and requirements for each of these basic steps. This article focuses on the remedial action plan.

Two types of situations may occur which will trigger remedial action. The first is suspected resistance and the second is confirmed resistance.

Suspected resistance is not simply a case of reported product failure. There are several requirements that must be met for a situation to be classified as “suspected resistance”. They include:
- the corn in question has been confirmed to be Bt corn;
- the seed used had the proper percentage of corn expressing Bt protein;
- the relevant plant tissues are expressing the expected level of Bt protein; and
- it has been ruled out that an insect species not susceptible to the Bt protein (e.g. grasshopper) could have caused the damage, that no climatic or cultural reasons could be responsible for the damage, and that other reasonable causes for the observed product failure have been ruled out.

If the situation meets these requirements, the registrant must instruct growers to use alternative methods to control the pest suspected of resistance in the affected region and destroy crop residues in the affected region immediately after harvest (i.e. within one month). Crop destruction methods will be appropriate for local production practices (e.g. incorporating crop residues into the soil) to minimize the possibility of resistant insects successfully overwintering.

A situation is classified as “confirmed resistance” if the offspring of the sampled insect population (e.g. ECB) exhibit specific survival characteristics in each of several different laboratory bioassays. If resistance is confirmed, the registrant must notify the EPA within 30 days and take the following measures:
- notify customers and extension educators in the affected area;
- require customers and extension educators in the affected area to use alternative control measures to reduce or control the target pest;
- where appropriate, require that crop residues be incorporated into the soil after harvest; and
- immediately stop sale and distribution of Bt corn in the affected area (remedial action zone) until an effective local mitigation plan approved by the EPA has been implemented.

The remedial action zone may be smaller than a county or it may be multiple counties. As noted, the registrants will work EPA to develop and implement an appropriate long-term resistance management action plan for the affected area. This plan could include a variety of measures and would be designed to be appropriate for the specific situation and location.

During the following growing season of a confirmed resistance incident the sales suspension of all Bt corn hybrids (with the same or similar Bt proteins as those with the resistance insects) in the affected area would continue until an EPA-approved local resistance management plan is in place. Alternative resistance management strategies will be developed and recommended for controlling the resistant pests, and all relevant personnel (e.g. growers, consultants, and seed distributors) will be apprised of the situation.

So, finding resistance does not mean an end to Bt corn, even in the area where resistance is found. What it does mean is that a series of procedures will be put in place to contain the resistance and hopefully eliminate it. To date there has been no documented case of European corn borers developing resistance to Bt corn in the field. All reports of possible product failure have been proven to be false and the result of other causes. None of these cases would have fulfilled the requirements to be classified as “suspected resistance.”

While responsibility for the monitoring and reporting lies with the registrants, the farmer has the most important job in maintaining the continued effectiveness of Bt corn and limiting the development of resistance. This job is following resistance management practices and reporting any possible product failure to their seed dealer or local extension person. With continued IRM compliance we may never need to resort to a “remedial action plan”, and therefore preserve Bt corn as an effective pest management tool well into the future.

Tom Hunt, Extension Entomologist
Haskell Ag Lab, Northeast REC
Several nice rains would benefit drying soils

Abnormally dry conditions have become a concern since Indian Summer conditions began dominating the state in late October. A semi-permanent ridge of high pressure centered over the central Rocky Mountains has enhanced precipitation prospects from weak areas of low pressure sliding through the Dakotas.

Most of the state has now been upgraded to abnormally dry conditions on the U.S. Drought Monitor. This is merely a reflection of the recent dry spell and does not signify at this time a return to drought status for most of the state. In order to drop the abnormally dry criteria, the western half of Nebraska needs to receive 0.50-1.00 inches of liquid equivalent precipitation prior to the ground freezing up. For eastern Nebraska, we would like to see 1.00-1.50 inches.

Even with the dry conditions during the last few weeks, soil moisture recordings indicate that moisture supplies are at or above levels recorded at the end of April. In fact, conditions right now are better than they have been at the same comparison point in 1999 and 2000. Models run by the Climate Prediction Center indicate that Nebraska soil moisture is normal, or when put into statistical terms, plus or minus 20% of the statistical mean.

Southwest Nebraska still remains a concern due to effects from the prolonged drought on hydrological components including streamflow rates and reservoir recharge. At this time, we feel that above normal snowfall/snowpack in eastern Colorado will be the key to alleviating the effects of prolonged drought for this area; however, the primary snow season for this region doesn’t occur until February to April.

Al Dutcher
State Climatologist
Agricultural Meteorology

Workshop helps family operations prepare for transitions in the management team

Blending a variety of talents and personalities into one farming or ranching operation takes planning, communication and management. An upcoming UNL workshop will help families develop successful working arrangements and make the transition smoother, said Deb Rood, program coordinator.

“Returning to the Farm,” will be conducted Dec. 14-15 and Jan. 18-19 at the University of Nebraska East Union.

Families will evaluate the business and personal aspects of their operations, create short- and long-term operation goals, discuss business options, assess individual commitments to the operation and analyze their operation’s financial performance. Participants also will learn how to use each family member’s strengths in decision-making.

The workshop is recommended for college students, parents, spouses and significant others who plan to farm or ranch together, families currently operating farms or ranches and those who are making business and family decisions. All members of an operation’s management team should attend, Rood said.

Registration is $150 per family plus $10 per attending family member. Participants must attend both sessions. Registration, which is due by Nov. 21, is limited to the first 15 families. If the program isn’t filled, registrations will be accepted up to the date of the first weekend. For more information or to register contact Rood at (800)535-3456.

Bt management
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- Growers must plant a refuge of at least 20% non-Bt corn that may be treated with insecticides as needed to control lepidopteran (caterpillar) stalk-boring and other pests.
- Refuge planting options include: separate fields, blocks within fields (e.g. along the edges or headlands), and strips across the field.
- External refuges must be planted within 1/2 mile of the Bt field (1/4 mile or closer preferred).
- When planting the refuge in strips across the field, the strips should be at least four and preferably six rows wide.
- Insecticide treatments for control of European corn borer, corn earworm, southwestern corn borer (Cry1Ab or Cry1F corn hybrids) and/or fall armyworm and black cutworm (Cry1F corn hybrids only) may be applied only if economic thresholds are reached for one or more of these target pests. Economic thresholds will be determined using methods recommended by local or regional professionals (e.g. Extension educators, crop consultants). Microbial Bt insecticides (e.g. Dipel) must not be applied to non-Bt corn refuges.

Additional information concerning Bt corn and resistance management is available on the Crop Watch web site at cropwatch.unl.edu or from local Extension educators.

Tom Hunt, Extension Entomologist
Haskell Ag Lab, Northeast REC

Ag technology conference

Learn how new technologies are changing agriculture at the 2002 Nebraska Agricultural Technologies Association (NeATA) Conference and Trade Show. The Conference will begin Monday evening, Feb. 4, and continue through Tuesday, Feb.5 at the Holiday Inn Conference Center in Kearney.

“Conference participants can expect to see and experience the latest agricultural technologies,” said Dave Varner, NU Extension educator and IANR precision agriculture

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Winter meetings/programs

Corn/Soybean Production and Marketing Workshops

This year’s Corn/Soybean Production and Marketing Workshops will provide an even greater opportunity for producers and speakers to interact and assess the effects of potential changes on their operations. Formerly known as the Corn/Soybean Expos, these workshops are held in two one-day sessions, two weeks apart at each of five Nebraska sites. The first set of meetings will cover production innovations that can be implemented on-farm; the second set covers marketing techniques.

Topics during the production sessions will include:
- Reducing risk and improving yields by better variety and hybrid selection
- Effective, low risk weed management; total Post vs Pre + Post, glyphosate brands comparison study.
- Reports from the Nebraska Corn Board and Nebraska Corn Growers Association and the Nebraska Soybean Board and Growers Association.
- How to improve yields by reducing costs in the corn/soybean rotation and fertility, insects and diseases.
- Economics of doing your own pesticide application sprayer set-up, nozzle selection, drift management.

The second round of meetings -- Marketing Techniques: Winning the Game Workshop -- will be Feb. 11-15. Marketing and risk management topics will include:
- Assessing your cash flow and risk management needs
- The role of crop insurance in marketing plans
- Pre-harvest decisions and forward pricing strategies
- Post harvest marketing decisions and basis patterns
- The use of options to complement other strategies.

In addition, producers will be able to participate in a grain market simulation game which uses actual yields and prices from a case farm.

Preregistration for these meetings is not required. A fee of $15 per day will be charged to cover the costs of the meal, refreshments, and printed seminar materials. All meetings will be from 9 a.m. to 3 p.m.

Production Innovation Sessions
- Monday, Jan. 28, Norfolk
- Tuesday, Jan. 29, Ainsworth
- Wednesday, Jan. 30, Holdrege
- Thursday, Jan. 31, Aurora
- Friday, Feb. 1, Beatrice

Marketing Techniques: Winning the Game Workshop
- Monday, Feb. 11, Norfolk
- Tuesday, Feb. 12, Ainsworth
- Wednesday, Feb. 13, Holdrege
- Thursday, Feb. 14, Aurora
- Friday, Feb. 15, Beatrice

These workshops are sponsored by NU Cooperative Extension and Farm Credit Services of America in cooperation with the Nebraska Corn and Soybean Boards and Growers Associations.

For more information, contact Robert Klein, Extension cropping systems specialist, at (308) 532-3611 ext 144 or the Extension educator at dvarner1@unl.edu

Crop Protection and Pesticide Applicator Recertification

Crop Protection Clinics and Pesticide Applicator Recertification training will be held jointly at several sites across the state. Participants will be able to brush up on their crop protection strategies and learn about the latest products, regulations, and recommendations. Pesticide applicator recertification will be available in the Agricultural Pest Control - Plant Category (01). Recertification also is available through Custom Applicator School or by examination.

Register for clinics at the door. Fee is $25. For more information contact your local Cooperative Extension office or call the Department of Agronomy and Horticulture Weed Science Section at (402) 472-1527. All meetings start at 8:50 a.m.

Lincoln, Jan. 3 -- Lancaster Extension Education Center, 444 Cherrycreek Road
- Fremont, Jan. 4 -- Holiday Lodge, 1220 East 23rd Street
- York, Jan. 8 -- Chances Are Restaurant, 124 West 5th Street
- Hastings, Jan. 9 -- Garden Cafe (Holiday Inn), 2201 Osborne Drive East
- O’Neill, Jan. 10 -- Allison’s Restaurant, 5th and Douglas Streets
- Norfolk, Jan. 11 -- Lifelong Learning Center, Northeast Community College, 601 East Benjamin Scottsbluff, Jan. 14 -- NU Panhandle Research and Extension Center, 4502 Avenue I
- Ogallala, Jan. 16 -- Ramada Limited, 201 Chuckwagon Road
- Broken Bow, Jan. 17 -- Uncle Ed’s Steak House, 625 South 10th St.
- Holdrege, Jan 18: Ag Center (Fairgrounds), 1308 2nd Street
- Deshler, Jan 22: American Legion Club, 1109 4th Street
- Auburn, Jan 23: Arbor Manor Restaurant, 1617 Central Avenue

Ag tech
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Integrated crop management winter programs

The University of Nebraska offers a variety of integrated crop management winter programs, several of which provide in-depth content to those preparing for the certified crop advisor exam. Producers and agribusiness professionals will be able to update and sharpen their skills and understanding of various integrated crop management strategies and how they can be implemented. Participants from previous years have estimated that information from the meetings helped them save $5.50 to $7 an acre. Many participants also benefit from the continuing education credits available.

Courses will be taught by university and industry specialists and provide intensive and detailed instruction. Fees and specific information for each course are listed in the following section. Visit the Crop Watch web site at cropwatch.unl.edu for further information on the courses, including a list of instructors.

Early registration is recommended. Those registering at least one week before a program will receive a discount. Fees include a course instruction manual, lunch, refreshments, and all workshop materials. Registration fees do not include the cost of lodging. Listed meeting times are tentative. Early registrants will receive a confirmation letter, exact meeting time, map, and other details.

For more information, contact NU Cooperative Extension at (402) 624-8030 or e-mail Keith Glewen, Extension educator in Saunders County, at kglewen1@unl.edu. Information is also available on the web at ardc.unl.edu/2002ICMWP.htm.

IRRIGATION – SOIL AND WATER MANAGEMENT SHORT COURSE

Dec. 11, 9 a.m. - 4 p.m. CST at College Park, Grand Island This is a CCA test preparatory short course. CCA credits applied for include: 4.5 in soil and water management and 1.5 in crop production. Program fee is $90 if registration is received by Dec. 4 and $100 after Dec. 4.

Program content includes:

- assembling soil and water relations information; soil and water measurements, characteristics of soils, soil water issues, and plant growth and development. Other topics to be discussed during the two-day program will include soil and fertilizer nitrogen and phosphorus, macro nutrients and micro nutrients, manure management, soil sampling procedures, soil testing principles and plant analysis, fertilizer recommendation philosophies, and precision agriculture.

Registration is $225 if received by Dec. 11 and $245 after Dec. 11. Sessions are tentatively scheduled for 8 a.m. to 5 p.m.

CROP PEST MANAGEMENT

Dec. 18, 2001 8 a.m. - 5 p.m. CST at the Lifelong Learning Center, Norfolk This is a CCA test preparatory short course. CCA credits applied for include: 8.5 in pest management.

Program fee is $125 until Dec. 11 and $135 after Dec. 11.

Program content includes:

- plant disease biology; insect biology; weed biology; plant pathogens, weeds and insect laboratory exercise; joint field diagnosis of crop injury symptoms; insect management concepts; and herbicide action in plants and the environment.

BASIC SOILS

Dec. 19-20, 8 a.m. to 5 p.m. CST at the Lifelong Learning Center in Norfolk. CCA credits applied for include: 13.5 CCA credits (3.5 for soil and water management and 10 for nutrient management) Individuals preparing for the Certified Crop Consultant Exam in February can increase their understanding of soils and nutrients during a two-day short course.

The program is designed specifically for individuals who will take the Certified Crop Consultant Examination.

Program content includes:

- how soils develop and vary; soil survey usage, physical and chemical characteristics of soils, soil water issues, and plant growth and development. Other topics to be discussed during the two-day program will include soil and fertilizer nitrogen and phosphorus, macro nutrients and micro nutrients, manure management, soil sampling procedures, soil testing principles and plant analysis, fertilizer recommendation philosophies, and precision agriculture.

Registration is $225 if received by Dec. 11 and $245 after Dec. 11. Sessions are tentatively scheduled for 8 a.m. to 5 p.m.

CROP PRODUCTION DECISION AID COMPUTER SOFTWARE

Jan. 30, 9 a.m. - 4 p.m. CST at the Ag Research and Development Center, near Mead. CCA credits (5-7) have been applied for. Program fee is $75 if registering by Jan. 23 and $85 after Jan. 23.

Program content includes:

- fine-tuning nitrogen rates; calculating preplant nitrogen rates; estimating nitrogen volatilization losses and estimating nitrate leaching; determining nutrients available from manure; assessing a site for phosphorus loss to streams and lakes; weed identification; cost effective and environmentally sound herbicide treatments; on-line decision worksheets for first and second generation European corn borers; how economic thresholds are developed for insect pests and maximizing their use; treatment thresholds for insect pests; recognizing and using different treatment thresholds; geospatial applications in crop production; true costs of weeds; and using WeedSOFT to apply economics to weed management decisions.

SURFACE WATER QUALITY MANAGEMENT: WATERSHED PLANNING, TMDL’S AND HERBICIDE RUNOFF

Feb. 7, 9 a.m. - 4 p.m. CST at the Ag Research and Development Center, near Mead. CCA credits applied for are 5-6 in soil and water management.

Program fee is $75 before Jan. 31 and $85 after Jan. 31.

Program content includes:

- Status and development of total maximum daily load (TMDL) regulations in Nebraska; local watershed planning for surface water quality - chemical and soil factors; and best management practices to reduce herbicide runoff.

IDENTITY PRESERVED CROPS FOR LIVESTOCK MANAGEMENT

Feb. 12, 8 a.m. - 5 p.m. CST at the Ag Research and Development Center, near Mead. CCA credits applied for include: 5-6 in crop production. Program fee is

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Integrated crop management (Continued from page 228)

- NU Panhandle Res. & Ext. Center, Scottsbluff
  Via satellite
  - College Park, Grand Island
  - NU West Central Research and Extension Center, North Platte

CCA credits applied for include: 3 in pest management; 1.25 in nutrient management and 1 in soil and water management. Program fee is $75 if registration is received by Feb. 12 and $85 after Feb. 12.

Program content includes:
- Irrigation management sprinkler and furrow from east to west; disease management in alfalfa; alfalfa soil fertility management plan; understanding insect management of alfalfa; developing an effective weed control program. Trainers will be available to cover the topics for all areas of the state.

HERBICIDE ACTION AND DISSIPATION IN SOILS

March 5, 9 a.m. - 4 p.m. at College Park, Grand Island. CCA credits applied for include: 5-7 in soil and water and pest management. Program fee is $75 before Feb. 26 and $85 afterward.

Program content includes:
- Understanding herbicide leaching, runoff, biodegradation and absorption; how herbicide action is affected by dissipation processes; why glyphosate has no preemergence activity; what herbicides impose environmental risks; practical ways to reduce environmental risks while increasing crop safety and weed control, and the dynamic processes that affect herbicides in soil and water environments.

SOYBEAN INSECT MANAGEMENT

Feb. 14, 9 a.m. - 4 p.m. CST at the Lifelong Learning Center, Norfolk and Feb. 27, 9 a.m. - 4 p.m. at College Park, Grand Island. CCA credits applied for include: 1 in crop production and 4-5 in pest management. Program fee is $75 by Feb. 7 and $85 after Feb. 7.

Program content includes:
- Soybean growth and development; assessing soybean defoliation; soybean tolerance to defoliation; economic threshold use; scouting methods/procedures; and biology, identification and management of common soybean insects in Nebraska.

ALFALFA PRODUCTION AND PEST MANAGEMENT

Feb. 19, 9 a.m. - 4 p.m. CST; 8 a.m. - 3 p.m. MST
Live
- Lifelong Learning Center, Norfolk
- NU Ag Research & Development Center, near Mead

CROP SCOUT TRAINING FOR PEST MANAGERS

March 12, 9 a.m. - 4 p.m. CST at the Ag Research & Development Center, Near Mead. CCA credits applied for include: 5 in pest management. Program fee is $75 before March 5 and $85 after March 5.

Program content includes:
- Growth staging of corn and soybean plants; recognizing fertilizer deficiencies; identifying major pests in corn and soybeans; economic insect thresholds; soybean cyst nematodes; and weed and disease identification and management.

Agronomy Highlights

Set for Dec. 4

Expanding opportunities for agronomic and horticultural crops in Nebraska through research, extension and teaching will be the focus of the NU Agronomy and Horticulture Highlights program Dec. 4.

NU researchers and specialists will cover topics ranging from new food and horticultural crops to emerging technologies and the latest research findings, said Ken Cassman, head of the Department of Agronomy and Horticulture. The program, planned for 8:30 a.m. to 3 p.m. at Lincoln’s Cornhusker Hotel, is targeted at crop consultants, industry professionals, Extension educators, and producers.

“This program has become a tradition that celebrates the high quality, high impact and future directions of the wide range of programs in our department,” Cassman said.

Topics include endangered species restoration, wildflowers’ links to NU research, the development of chicory as a new Panhandle crop, Nebraska’s grape and wine industry, white wheat’s status, native and turfgrass seed production, building a crop genomics, using plant transformation for genetic crop improvement, and yield potential and optimum soil productivity in irrigated and dryland corn production. Poster presentations will address a variety of topics. A free lunch is provided to those registering by Nov. 26. For more information or to register, contact the Department of Agronomy and Horticulture at (402) 472-2811.

Sandi S. Alswager
IANR Newswriter
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(Full search engine for Crop Watch articles from 1998 to 2002 is available on the web at cropwatch.unl.edu.)

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Prizes awarded to *CropWatch* survey respondents

Thanks to all who returned their *Crop Watch* readership surveys in time to be entered in the prize drawing. (Of course, if you haven’t mailed yours yet, your comments are always welcome and will be added to the survey results.) Congratulations to the following winners in this year’s drawing:

**John Skalsky from Curtis:** One half-price reduction in the registration fee to an Integrated Crop Management Winter Program available at the NU ARDC near Mead. (Value not to exceed $50)

**Daniel L. Javins of Kearney:** A 2002 subscription to the print version of *Crop Watch*.

**William Lueck of Arcadia:** Free registration to the NU Crop Protection Clinic of your choice. (Value of $25)

**Lawrence Oltman of Adams:** One copy of the *Crop Management and Diagnostic Clinic Reference Book* (Value of $50)

**John Hannah of Columbus; Richard Rice of Creighton, and Mark Werner of Davenport:** Each will receive a copy of the new NU *Agronomic Crops of Nebraska Nutrient Management Guide*, a 176-page book addressing in depth the nutrient needs of the state’s major agronomic crops. (Each is valued at $25)

**Mark Kottmeyer of Kearney:** Ten pairs of chemical resistant gloves. (Value of $25)

**Mark Brockhaus of Madison:** $25 toward the purchase of your choice of any NU Cooperative Extension publication(s).

**Craig Murman of Glenvil; Gary Schroeder of Smithfield; and Eugene Trausch of Minden:** Each will receive a free diagnosis from the NU Plant and Pest Diagnostic Clinic. (Each valued at $10)

Winners will receive their prizes or further information in the mail.

**Nebraska Soybean Day and Machinery Expo Dec. 14 in Wahoo**

The Nebraska Soybean Day and Machinery Expo will be 8:30 a.m.-2:30 p.m. Dec. 14 at the Saunders County Fairgrounds in Wahoo. Presenters will include NU research-ers and Extension specialists, Nebraska Soybean Board representatives, soybean growers and private industry representatives.

“Producers will learn from research projects, as well as real world situations and strategies,” said Keith Glewen, Extension educator and soybean day coordinator. Producers will be able to visit with representatives from seed, herbicide, fertilizer and equipment companies and view new farm equipment in the fairgrounds pavilion during the 10 a.m. break.

Topics will include: what the 2001 growing season means for 2002, soybean insects, taking control of soybean diseases, early planted soybean research, no-till’s performance, planting Bt corn, soybean markets and new marketing channels for soybeans.

Preregistration is not required. For more information call Glewen at (800)529-8030 or e-mail kglewen1@unl.edu.

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