

Crop Protection Clinic, Jan. 22

The 2007 Crop Protection Clinics sponsored by UNL Extension, will address new problems, new products and recommendations for crop pest management in Nebraska.

A Crop Protection Clinic will be held on Monday, Jan. 22 at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln. Registration begins at 8:30 a.m. and the clinic runs from 9 a.m. to 3:30 p.m. The registration fee is \$30 and includes meals, refreshments and resources such as the 2007 Guide for Weed Management in Nebraska.

Extension specialists in weed science, plant pathology and entomology will cover the "hot" topics in the crop protection industry and share objective, research-based information to help you better manage inputs and production costs.

Sessions include the following topics:

- Glyphosate-Resistant Marestalk in Nebraska, Enhancing Glyphosate Performance on Tough

Weeds

- Northern Corn Rootworm Extended Diapause and Damage to 1st Year Corn
- The Importance of a Correct Disease Diagnosis
- Alfalfa Insect Management
- Soybean Cyst Nematode Update
- What's New in Pest Management?
- Too Many Weeds, Not Enough Water
- Bt Corn Update
- Use of Foliar Fungicides to Increase Crop Yields

The clinic also meets recertification requirements for commercial and non-commercial applicators in the ag plant category and its subcategories: research and demonstration and regulatory. Bring your current commercial pesticide applicator registration card so a representative of the Nebraska Department of Agriculture can facilitate recertification.

Clinic organizers have applied for 4.5 CEU Certified Crop Advisor credits in the pest management competency area.

Glyphosate-Resistant Marestalk Confirmed in Nebraska

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UNL researchers have confirmed the first glyphosate-resistant weed species in Nebraska—marestalk, also known as horseweed. While Nebraska researchers first suspected resistance had developed almost a year ago, it took tests and growing plants from last year's seeds to confirm it.

Weed resistance usually results from repeated use of the same herbicide. Widespread use of glyphosate-tolerant crops and repeated use of glyphosate herbicide has resulted in selection pressure on weed populations in recent years. Prior to the introduction of glyphosate-tolerant crops only a few weed species (eg. ryegrass and goosegrass) had developed resistance to glyphosate worldwide.

However, the number of glyphosate-resistant weeds tripled in just over eight years of repeated glyphosate use over a large land area (over 50 million acres) due to introduction of

Roundup-Ready crops. Current examples of glyphosate-resistant weeds in the United States include: waterhemp, lambsquarters, giant ragweed, common ragweed, palmer amaranth and marestalk (horseweed).

Identifying Resistance in Nebraska

Seeds of three suspect marestalk populations were collected in fall 2005 in eastern Nebraska. Greenhouse bioassays were conducted this summer, and dose response curves for glyphosate were defined for each marestalk population. Curve comparisons clearly showed glyphosate resistance requiring three to six times the rate needed in a susceptible population. (Resistance level varied with the marestalk population.)

For example, 90 percent control of a susceptible population was achieved with 32 ounces of a glyphosate herbicide (3 pounds per gallon acid equivalent) (1 times rate), while the resistant populations needed about 100 ounces per acre (3 times rate) and 200 ounces (6 times rate) in order to achieve the same level of control.

Using Management to Counter Potential Resistance Development

We believe that glyphosate- and herbicide-tolerant crops, including those based on glyphosate herbicide, can remain useful components of crop production systems only with proper management. It is easy to fall into a trap of overusing glyphosate, versus combinations of pre-emergence herbicides or tank mix partners, when one Roundup-Ready crop is grown after another.

Therefore, proper use of herbicide tolerant technology, as a component of an integrated-weed-management program, is the key to preserving the long-term benefits of this technology while avoiding many concerns about its use or misuse. More details about glyphosate-resistant marestalk will be provided during this year's UNL Extension Crop Protection Clinics and other UNL extension programs.

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Upcoming Pesticide Applicator Trainings

Private Pesticide Applicator Trainings

Federal and state law states a private pesticide applicator must be certified and licensed to buy, use or supervise the use of restricted-use pesticides to produce an agricultural commodity on property they own or rent or on an employer's property if the applicator is an employee of a farmer. No pesticide license is needed if one will only be using general use pesticides on their farm.

Applicators whose certification is due to expire on April 15, 2007 will receive a letter from the Nebraska Department of Agriculture (NDA).

There are two certification options for private pesticide applicators: attend a UNL Extension training session or take a self study book and test. If you are re-certifying, bring the notification letter and registration form you received from the NDA.

Extension forwards all application forms to the NDA which then bills private applicators a \$25 license fee. Allow approximately three weeks for the application to be processed and the certification to be mailed to the applicant. The license is good for three years, expiring on April 15, 2010 for those who certify this spring.

Five Private Pesticide Applicator Training Sessions will be offered this Spring at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln. No pre-registration needed. There is a \$15 extension training fee.

- Thursday, Jan. 18, 8:30–11:30 a.m.
- Tuesday, Jan. 30, 8:30–11:30 a.m. and repeated 1:30–4:30 p.m.
- Thursday, Feb. 8, 6:30–9:30 p.m.
- Saturday, Feb. 10, 8:30–11:30 a.m.

The Self Study

Method of receiving certification can be done at any time throughout the year. The study book may be picked up weekdays 8 a.m.–4:30 p.m. at the extension office. There is a \$30 materials fee. The applicator can read the chapters, complete the test questions and bring the book back to the office where the test will be graded. Most people can complete the home study course in three to four hours.

Commercial Pesticide Applicator Training

Commercial applicators are persons who apply restricted-use pesticides for any purpose on any property other than property owned or rented by the applicator or their employer or for hire or compensation. Commercial applicators shall also include any person who applies lawn care or structural pest control pesticides whether restricted- or general-use to property of another person. Public employees (employed by a town, county, state) applying mosquito control pesticides whether restricted- or general-use, must also hold a commercial or non-commercial certification.

To become licensed initially as a commercial applicator, one must pass a written examination in the general standards category and one or more additional categories. A commercial license is good for three years. Once licensed in a category, you can maintain commercial certification by



attending a re-certification training session or by passing a written examination, with a few exceptions explained below.

UNL Extension offers Commercial Initial Certification and Recertification Training Sessions. Call the UNL Pesticide Education office at 472-1632 to register for a session. The training fee for either initial or recertification sessions is \$30. The training fee for adding one or more categories to an existing certification is \$15. Note: Due to time and space limitations, only specific categories will be presented on training days. Call the UNL Pesticide Education office at 472-1632 or the Lancaster County Extension office at 441-7180 to learn which specific categories will be offered on a given day.

Commercial applicators meeting the requirements for certification or re-certification will receive an invoice from the Nebraska Department of Agriculture for \$90 for the license fee.

Initial Commercial Certification training and testing sessions will be offered on Feb. 6, March 1, and April

19 at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln. The general standards session will begin at 9 a.m. and other categories at 1 p.m. or 3 p.m.

It is highly recommended you obtain and review written study materials prior to attending the training session for initial certification. This will greatly improve your chances of passing the written examination. Study materials for all commercial categories may be purchased from the

pesticide education office 101 Natural Resources Hall on East Campus, 472-1632 or materials can be accessed on the UNL Pesticide Education Web site at <http://pested.unl.edu/pat/>

Commercial Recertification Training Sessions will be offered on Thursday, Feb. 8 and Tuesday, March 20 at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln. The general standards session will begin at 9 a.m. and other categories at 1 p.m. or 3 p.m.

Note: There are no certification training sessions for: Fumigation of Soil, Agricultural Pest Control - Animal, Forest Pest Control, Sewer Root Control with Metam Sodium, Wildlife Damage Control, Seed Treatment, Regulatory Pest Control (subcategory) and Demonstration/Research Pest Control (subcategory). There are self-study materials which will prepare the applicator to take the examinations in these categories. The only way to certify or re-certify in these categories is to pass a written examination. However, a commercial applicator may re-certify in the Regulatory and the Demonstration/Research subcategories at the Crop Protection Clinics.