Last Issue for 1998

With this issue of the *Pest Management & Crop Development Bulletin*, another year is drawing to a close. During this festive holiday season, we offer our thanks to our subscribers for your continued support and interest in our efforts, and to those of you who contribute with your reports and information.

1998 was a year like no other, and 1999 likely will bring plenty of new and different challenges in pest management and crop development. The ways that we grow and manage crops and the ways we manage pests are changing at a rapid pace. We hope our timely and objective information helps you keep up with these changes and enables you to look ahead, too. We intend to continue providing the most current research-based information on pest management and the best observation-based reports on pest status and crop development possible.

In 1999 the World Wide Web version of this bulletin will be provided free of charge. We hope to improve the manner in which the information is provided, and we will be linking articles with other information (Web, print, video, photos, etc.) to provide more details about many of the topics discussed. In addition, we will provide a platform for interaction that should enable us to offer more frequent updates to the information. As the season progresses, keep us informed about your reaction to the changes. Give us a call or send us suggestions for improvement.

We look forward to serving you in 1999 and into the next millennium. Again, we thank you for your continued support, and we wish you a joyous, peaceful, and safe holiday season with family and friends. May the spirit of the season remain with you throughout 1999.

Kevin Steffey (ksteffey@uiuc.edu), Extension Entomology, (217) 333-6652

Insect Management and Insecticide Evaluations, 1998

Every year a team of entomologists in Illinois conducts applied research on different pest management tactics for field, forage, fruit, and vegetable crops. Mr. John Shaw, a Senior Research Specialist in the Center for Economic Entomology at the Illinois Natural History Survey, is the coordinator for the program and is responsible for carrying out much of the research in the field and analyzing the results. He compiles an annual report that includes plot information, methods, results, and discussion about all of the trials conducted. The 1998 report (Center for Economic Entomology Technical Report No. 13) should be available in time for sale at the 1999 Illinois Crop Protection Technology Conference to be held January 6 and 7, 1999. In the meantime, however, we thought you might be interested in getting a “thumbnail sketch” of some of the types of information we include in the detailed report. Following is a list of articles about field crop insect management research conducted during 1998 that will appear in the report:
• Efficacy of preplant, planting-time, preemergence, and rescue insecticide treatments for black cutworm control
• Efficacy of Emamectin 5SC insecticides for black cutworm control
• Efficacy of seed treatments compared with planting-time insecticides for treatments for black cutworm control
• Efficacy of registered and experimental insecticides to control corn rootworm larvae
• Efficacy of different formulations of Regent applied at planting to control corn rootworm larvae and first-generation European corn borer
• Efficacy of seed treatments and registered soil insecticides to control corn rootworm larvae
• Efficacy of different formulations of the soil insecticide chlorpyrifos to control corn rootworm larvae
• Efficacy of different formulations of the seed treatment Adage to control corn rootworm larvae
• Efficacy of registered and experimental insecticides for control of first-generation European corn borer
• The effectiveness of *Beauveria bassiana* for control of first- and second-generation European corn borer
• The effectiveness of Bt-corn hybrids for control of European corn borer

As an example of the type of information included in these annual reports, Tables 1 and 2 provide information about different management tactics for European corn borers. For more information about the research conducted and the details of the report, contact John Shaw at the Center for Economic Entomology, 172 Natural Resources Building, 607 East Peabody Drive, Champaign, IL 61820, (217) 244-5124, jt-shaw@uiuc.edu.

### Table 1. Efficacy of Bt-corn and insecticide-treated non-Bt-corn against European corn borers, Champaign, Illinois, 1998.1

<table>
<thead>
<tr>
<th>Hybrid number</th>
<th>Corn type</th>
<th>Insecticide</th>
<th>Mean cavity length (cm) per plant2</th>
<th>Mean % plants with cavities2,3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgrEvo 8481</td>
<td>Bt</td>
<td>none</td>
<td>0.00 c</td>
<td>0.00 b</td>
</tr>
<tr>
<td>Garst 8342</td>
<td>Bt</td>
<td>none</td>
<td>0.00 c</td>
<td>0.00 b</td>
</tr>
<tr>
<td>StarLink 8366</td>
<td>Bt</td>
<td>none</td>
<td>0.07 c</td>
<td>1.67 b</td>
</tr>
<tr>
<td>Pioneer 33A14</td>
<td>Bt</td>
<td>none</td>
<td>0.05 c</td>
<td>3.33 b</td>
</tr>
<tr>
<td>Pioneer 34R07</td>
<td>Bt</td>
<td>none</td>
<td>1.33 bc</td>
<td>13.33 b</td>
</tr>
<tr>
<td>Pioneer 3489</td>
<td>non-Bt</td>
<td>Baythroid 24</td>
<td>3.65 ab</td>
<td>71.67 a</td>
</tr>
<tr>
<td>Pioneer 3489</td>
<td>non-Bt</td>
<td>Warrior T4</td>
<td>4.68 a</td>
<td>71.67 a</td>
</tr>
<tr>
<td>Pioneer 3489</td>
<td>non-Bt</td>
<td>none</td>
<td>3.70 ab</td>
<td>66.67 a</td>
</tr>
<tr>
<td>AgrEvo 8366</td>
<td>non-Bt</td>
<td>none</td>
<td>5.38 a</td>
<td>65.00 a</td>
</tr>
<tr>
<td>AgrEvo 8481</td>
<td>non-Bt</td>
<td>none</td>
<td>5.93 a</td>
<td>75.00 a</td>
</tr>
</tbody>
</table>

1Manual infestation of two European corn borer egg masses per plant (30 plants per plot) was done on July 9–10 for the first generation and August 13–14 for the second generation. Plots were evaluated and harvested on September 17 and yield was determined on October 19.
2Means in a column followed by the same letter are not significantly different (P = 0.05, Duncan’s New Multiple Range Test).
3Arcsine square root transformations (data not shown) were performed before analysis.
4Baythroid 2 (0.031 lb a.i./A) and Warrior T (0.025 lb a.i./A) were banded over the row on July 15 for control of first-generation corn borers and on August 18 for control of second-generation corn borers.

### Table 2. Efficacy of registered and experimental insecticides for control of first-generation European corn borer, Champaign, Illinois, 1998.1

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate2</th>
<th>Placement</th>
<th>Mean cavity length (cm) per plant3</th>
<th>Mean % plants with cavities4,5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regent 4SC</td>
<td>0.05</td>
<td>broadcast</td>
<td>0.60 c</td>
<td>20.0 c</td>
</tr>
<tr>
<td>Warrior T</td>
<td>0.025</td>
<td>broadcast</td>
<td>1.03 bc</td>
<td>35.0 bc</td>
</tr>
<tr>
<td>DiPel 6469</td>
<td>6 oz/1,000 ft</td>
<td>band</td>
<td>1.15 bc</td>
<td>35.0 bc</td>
</tr>
<tr>
<td>Regent 80WG</td>
<td>0.13</td>
<td>microtube-furrow</td>
<td>1.90 bc</td>
<td>42.5 bc</td>
</tr>
<tr>
<td>DiPel 6504</td>
<td>6 oz/1,000 ft</td>
<td>band</td>
<td>1.33 bc</td>
<td>42.5 bc</td>
</tr>
<tr>
<td>DiPel 6505</td>
<td>6 oz/1,000 ft</td>
<td>band</td>
<td>1.72 bc</td>
<td>45.0 bc</td>
</tr>
<tr>
<td>Regent 4SC</td>
<td>0.06</td>
<td>broadcast</td>
<td>1.85 bc</td>
<td>47.5 bc</td>
</tr>
<tr>
<td>Regent 4SC</td>
<td>0.04</td>
<td>broadcast</td>
<td>1.50 bc</td>
<td>47.5 bc</td>
</tr>
<tr>
<td>DiPel 10G</td>
<td>6 oz/1,000 ft</td>
<td>band</td>
<td>2.63 b</td>
<td>52.5 b</td>
</tr>
<tr>
<td>Pounce 1.5G</td>
<td>0.15</td>
<td>band</td>
<td>2.50 b</td>
<td>55.0 ab</td>
</tr>
<tr>
<td>DiPel 6503</td>
<td>6 oz/1,000 ft</td>
<td>band</td>
<td>2.15 bc</td>
<td>55.0 ab</td>
</tr>
<tr>
<td>Regent 4SC</td>
<td>0.13</td>
<td>microtube-furrow</td>
<td>2.15 bc</td>
<td>57.5 ab</td>
</tr>
<tr>
<td>Untreated check</td>
<td>——</td>
<td>——</td>
<td>4.82 a</td>
<td>82.5 a</td>
</tr>
</tbody>
</table>

1Plots were infested in June by placing two European corn borer egg masses (black-head stage) in the whorl of each plant. Plots were evaluated in August.
2Rates are specified as lb a.i./A, unless noted otherwise.
3Application through microtube was made at planting; all other treatments were applied on July 15.
4Means in a column followed by the same letter are not significantly different (P = 0.05, Duncan’s New Multiple Range Test).
5Arcsine square root transformations (data not shown) were performed before analysis.
CONFERENCE CONNECTION

1999 Crop Protection Technology Conference Right Around the Corner!

Don’t forget to register for the Crop Protection Technology Conference (formerly known as the Agricultural Pesticides Conference, the old “Spray School”) scheduled for January 6 and 7, 1999. Approximately 11.2 hours of Certified Crop Adviser (CCA) credits will be offered for this conference in the following categories: crop production (0.8 hour), pest management (8.9 hours), and soil and water (1.5 hours). If you wish to preregister, please complete and return the enclosed form by December 18, 1998. Preregistration is $80; walk-in registration will be $95. All who register will receive one copy each of the 1999 Illinois Agricultural Pest Management Handbook and the Proceedings of the Crop Protection Technology Conference. Additional copies of these publications may be purchased at the conference. Below is an outline of the program highlights. Hope to see you there!

Program Highlights

**Wednesday Morning, January 6**

- Keynote Session: Agricultural Biotechnology, a Revolution!
- Minimizing Pesticide Drift: National Coalition on Drift Minimization Video and Panel Discussion

**Wednesday Afternoon, January 6**

- Corn Rootworm: Status Report on the Latest Research Findings
- Weed Science: Emerging Issues

**Thursday Morning, January 7**

- Plant Pathology: Emerging Issues
- Precision Agriculture and On-Farm Research
- Fertility & Water-Quality Issues

Thursday Afternoon, January 7

- Food Quality and Protection Act
- New Developments from Industry

Mike Gray (m-gray4@uiuc.edu), Extension Entomology, (217)333-6652

University of Illinois Corn and Soybean Classic Meetings

The College of ACES is ready to deliver the second University of Illinois Corn and Soybean Classic in January of 1999. The response to our 1998 program was overwhelming: over 1,000 participants took part, and they asked for an encore effort in 1999. The protocol we intend to follow for the 1999 program will be very similar to that used last year. Speakers will be asked to make short presentations, not more than 25 minutes long. Following the morning and afternoon portions of the program, a panel of the speakers will have an opportunity to interact with the audience. Only the “hottest” topics will be featured, and speakers will address only those issues of most interest to local audiences. The speakers will present the most current research-based information available and speak to the bottom line of farmers in the audience.

Certified crop adviser credits will be available in the following areas: soil fertility (0.5 credit), soil and water (1.0 credit), crop production (1.0 credit), and pest management (2.0 credits). A synopsis of the 1999 program is provided. If you register on or before January 2, 1999, the fee is $25. If you register after that date, the fee is $40. The registration fee includes lunch and a proceedings booklet.

Dates and Locations

- January 12—Bloomington (Interstate Center)
- January 13—Rockford (Clocktower Resort)
- January 14—Moline (Holiday Inn)
- January 15—Springfield (Crowne Plaza)
- January 20—Mt. Vernon (Holiday Inn)
- January 21—Effingham (Ramada Inn)

Topics and Speakers

- Surviving Low Prices and Preparing for Higher Prices—Darrel Good
- Soil Sampling and Fertilization for Precision Agriculture—Don Bullock
- Nitrogen for Soybeans: Fertilize, Inoculate, or Do Nothing?—Robert Hoeft
- Variable-Rate Seeding in Corn: The Right Thing to Do?—Emerson Nafziger
- Can a Sprayer Be Smart?—Lei Tian
- Shooting at a Moving Target: The Changing Nature of Weeds—Aaron Hager
- Bt-Corn: Today and Tomorrow—Kevin Steffey
- SDS, BSR, SCN, PMG, SSR: How to Abbreviate Gloom and Doom for 1999 Soybeans—Walker Kirby

If you have any questions about registration or scheduling, please contact Conference and Institutes at (217)333-9561. If you have questions about the program content, please contact Bob Hoeft at (217)333-4424 or Mike Gray at (217)333-6652.

Mike Gray (m-gray4@uiuc.edu), Extension Entomology, (217)333-6652
1999 Illinois Crop Protection Technology Conference

Preregistration Form

UFAS ACCT# 1-3-64014-0660; FEIN# 37-6000511-Rev.'99 Crop Tech.

Conference Dates: January 6 and 7, 1999

Location: University of Illinois, Illini Union, Urbana, Illinois

Please mail completed preregistration form(s), or fax to (217) 333-9561 by December 18, 1998. Call (217) 333-2881 to register by phone. Online registration is possible through the World Wide Web at <http://www.conted.uiuc.edu/ci/icptc>.

Name ____________________________________________________________________________________________

Social Security # _________________________________________________________________________________

Federal legislation may make it possible for participants in certain educational programs to qualify for lifelong learning income tax credit(s). In order to receive a statement from the University of Illinois, you must provide your social security number. Providing this information is voluntary, and it will be used only for tax reporting purposes.

Company/Business _______________________________________________________________________________

Address __________________________________________________________________________________________

City/State/Zip Code ________________________________________________________________________________

County ___________________________________________________________________________________________

Telephone (business): ____________________________________________________________________________

Telephone (home): ________________________________________________________________________________

Method of Payment:

_____ Check enclosed (made payable to the University of Illinois)

_____ I prefer to charge on a credit card:

VISA _____ MasterCard _____ American Express _____ Discover _____

Card No. _______________________________________________________________________________________

Expiration Date _________________________________________________________________________________

Signature of Card Holder ___________________________________________________________________________


NOTE: If paying for more than one person, please **enclose a completed preregistration form for each person** (one check may be written to cover the total payment).

Mail completed preregistration form(s) along with payment to

University of Illinois at Urbana-Champaign
Cashiering Office
Administration Building Room 162
506 South Wright Street
Urbana, IL 61801
1999 University of Illinois Corn & Soybean Classic

Registration Form

Registration Methods:

1. Mail the registration form and method of payment to Cashiering Office, University of Illinois, 162 Administration Building, 506 S. Wright St., Urbana, IL 61801.

2. Call (217) 333-2881 to register by phone. Registration form and check or credit card information must then be received at the above address.

3. Fax your registration form to Conferences and Institutes at (217) 333-9561.

UFAS Acct. # 1-3-64101-0660; FEIN # 37-6000511- Rev. ‘99 Corn Classic

I will attend on:

_____ January 12 (Bloomington) _____ January 13 (Rockford) _____ January 14 (Moline)

_____ January 15 (Springfield) _____ January 20 (Mt. Vernon) _____ January 21 (Effingham)

Name: ___________________________________________

Organization: ____________________________________

Address: ________________________________________

City: ____________________ County: _______________ State: _____________ Zip: ________

Telephone #: ______________ Fax#: ____________

Email: __________________

Social Security #: ___________________

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Registration Fee

On or Before January 2, 1999: $25 $ _____

After January 2, 1999: $40 $ _____

Registration fee includes lunch and a proceedings booklet.

_____ Check enclosed (payable to the University of Illinois)

_____ I prefer to pay by credit card (complete the following information):

VISA _____  MasterCard _____  American Express _____  Discover _____

Card No. ______________  Expiration Date ________

Signature of Card Holder __________________________

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