



Extension Ag Update

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Scouting for Black Cutworms

Ellen Phillips, Crop Systems Educator, Countryside Extension Center, 708-352-0109, phillipse@mail.aces.uiuc.edu

There is no way to make an early prediction of the impact of black cutworms this year. Scouting is the only sure method to deal with this unpredictable pest and be ready to apply a rescue treatment when necessary.

Several cutworms can be found in cornfields. Correctly identifying what insect is present is important since not all cutworms cause economic damage. The claybacked cutworm is more likely to cause economic losses in fields that were previously planted to clover or alfalfa. Dingy and variegated cutworms are also commonly found in fields last planted to clover or alfalfa. They are normally leaf feeders and do not usually cause significant economic damage. Sandhill cutworms survive best in sandy soils and can overwinter in Illinois. They usually cut seedlings below the growing point so a reduced stand may be the only indicator of their presence.

Normally, the black cutworm does not overwinter in the Midwest. During April and May adults migrate from the Gulf states, arriving in the Midwest within 2 to 4 nights. You can monitor the flights of adult black cutworms with black cutworm pheromone traps. Traps need to be monitored on a regular basis. For more information on how to use pheromone traps contact your local Extension office or view <http://www.ag.uiuc.edu/cespubs/pest/articles/v983b.html>. An intense capture occurs when nine or more moths are caught during a 1- to 2-day period. Once an intense capture occurs, daily heat units (base 50°F) are tracked. Upon the accumulation of 300 heat units (beyond an intense capture) it is

possible to have black cutworm larvae cutting plants. Let us know if you are monitoring traps and we will report your findings in the Pest Management and Development Newsletter. To check the status of black cutworm moths in your regions, read the Pest Management and Crop Development Newsletter <http://www.ag.uiuc.edu/cespubs/pest/>

Weed free fields of early-planted corn have the lowest potential for black cutworm damage. Females deposit eggs on grasses in pastures or in fencerows as well as densely growing weeds such as curled dock, yellow rocket, velvetleaf, and rough pigweed. Debris such as soybean residue in low-lying fields that have not been tilled also attract adult females. Late planted, weedy fields offer an invitation to this pest.

Corn plants at the 4-leaf stage of development are most susceptible to cutting and economic losses. Black cutworm larvae are able to cut plants once they reach their fourth-larval instar stage. Earlier instars feed on leaves, creating small holes on the leaf surface.

To scout your fields, check plants for leaf feeding, cut, wilting or missing plants. Look at 50 plants in five different locations throughout the field, especially those in low areas or with higher rates of residue. If damaged plants are found, dig around the plant to find at least 10 live cutworm

Larval instar	Head capsule width	Approximate days left to feed	Potential number of plants that may be cut		
			1 leaf	2 leaf	4 leaf
4		25	4	3	1
5		21	4	3	1
6		14	4	3	1
7		5	1	1	1

larvae. Verify that they are black cutworms. Determine their instar stage by comparing the size of the larvae head capsule with the chart below. This chart is also available in University of Illinois Extension, Black Cutworm Factsheet available from your local Extension office or at <http://ipm.uiuc.edu/publications/infosheets/blackcutworm11/> If the larvae are between instars 1 and 3, inspect the fields again in 24-48 hours. A large number of 4 and 5 instars are a greater concern than if they are at instar 7 and have completed most of their leaf feeding.

(Source: Pest Management and Crop Development Newsletter)

Consider a postemergence rescue treatment when 3% or more of the plants are cut and larvae are present. There are several insecticide rescue treatments to chose from. Soil moisture is critical for these to be effective. Detailed information on insecticide rescue treatments is available in the 2002 Illinois Agricultural Pest Management Handbook. To purchase a copy call 1-800-345-6087 or view it at <http://www.ipm.uiuc.edu/publications/pm-handbook/PDFs/01chap.pdf>

Ag FACTS

Over the 1998 to 2001 period, growth in Internet use among people living in rural households has been at an average annual rate of 24 percent, and the percentage of Internet users in rural areas (53 percent) is now almost even with the national average (54 percent).

Forty-five percent of the population now uses e-mail, up from 35 percent, About one-third of Americans use the Internet to search for product and service information (36 percent, up from 26 percent in 2000).

(Source: *A Nation Online: How Americans Are Expanding Their Use of the Internet*, The US Department of Commerce, http://www.ntia.doc.gov/ntiahome/dn/nationonline_020502.htm)

“Caution” Signal-Word Rule Change

Mark Mohr, Ag. Eng. Dept., Extension Specialist, 360t Agricultural Engineering Sciences Building, (MC-644), Urbana, IL, (217) 333-9418, mmohr@age.uiuc.edu

The US EPA has changed the signal-word requirements for the least toxic category of pesticides, those that fall into toxicity category IV. Starting February 12, 2002, if a pesticide falls into the least toxic category for all routes of exposure—such as oral, dermal, and inhalation—the product label will no longer be required to show the signal word “caution,” though the word may be used by the manufacturer voluntarily. The child-hazard warning is still required on all products, and other uses of signal words stay the same.

Signal words are assigned to a product based on the toxicity of the product. There are four toxicity categories, and a signal word is assigned to each of the first three categories. Ranked from most to least toxic, the signal words are “danger” (or “danger–poison”), “warning,” and “caution,” for categories I, II, and III, respectively.

Under the old signal-word rules, pesticides in category IV were also required to bear the word “caution.” The EPA sought to clarify the difference between categories III and IV by using a different signal word for the least toxic category. Because no suitable word could be found to indicate a lower risk from toxicity than “caution,” the new rules make the use of the signal word “caution” optional on the labels of products in toxicity category IV. (Source: Illinois Pesticide Review)

Digital Diagnostics

Ellen Phillips, Crop Systems Educator, Countryside Extension Center, 708-352-0109, phillipse@mail.aces.uiuc.edu



Accurate identification of pests is the basis of a good integrated pest management program. Using state-of-the-art equipment, University of Illinois Extension County offices are now able to speed up the process of identifying insects or weeds, evaluate injury and damage to crop plants. Microscopes and digital photo equipment allows high quality photos to be taken by extension staff. The photos and background information is sent by Internet to specialists for identification and advice. Most samples are responded to within 48 hours. For more information, contact your local Extension office.



Rural Route 2 is Available at 1-800-468-1834

<http://www.extension.uiuc.edu/ruralroute/>

The Rural Route 2 service is designed to help farm families get through tough times. This **confidential service** provides referrals for farm business and family financial advice; helps manage economic as well as personal situations; helps locate local support; and identifies assistance through the Illinois Farm Development Authority.

Research Results

Bt Corn Poses “No Significant Risk” to Monarchs

*Kim Kaplan, ARS News Service, USDA, (301) 504-1637, Kaplan@ars.usda.gov
<http://www.ars.usda.gov/is/AR/archive/feb02/corn0202.htm>*

A consortium of federal, university and industry scientists led by the Agricultural Research Service has completed two years of research to answer the question: Does Bt corn pose a threat to monarch butterflies? The answer, supported by science, is that there is no significant risk. Bt corn is corn to which genes from the bacterium *Bacillus thuringiensis* have been added so the plant naturally produces proteins that protect it from insect pests such as the European corn borer. The research found that Bt corn pollen levels usually had to be more than 1,000 grains per square centimeter to have any negative impact on monarch caterpillars, let alone mortality. Scientists have concluded that less than 1 percent of the time are monarch caterpillars in the environment exposed to levels that even come close to that magnitude.

ARS entomologist Richard Hellmich is already planning the next round of investigations. He hopes to extend the consortium’s work this summer with new collaborative studies, especially field studies, to look at whether there are any effects on monarch caterpillars from long-term or chronic exposure to Bt corn pollen. While the data already accumulated show Bt corn pollen does not pose a threat to monarch populations, these new studies should indicate if any minor effects are possible and the nature of those effects if they occur. ARS entomologist Leslie C. Lewis is planning to extend the work to look at whether Bt corn has any impact on non-target ground insects such as beetles. Hellmich and Lewis are both with the ARS Corn Insects and Crop Genetics Laboratory in Ames, Iowa.

Profits Possible from Pastured Poultry

Researcher: Steve Stevenson, Center for Integrated Agricultural Systems, 1450 Linden Drive, University of Wisconsin, Madison, WI 53706, (608) 262-5202; gwsteven@facstaff.wisc.edu

Wisconsin’s pasturelands - long the land of black-and-white dairy cows -can also support grazing poultry. Properly managed and marketed, pastured poultry can turn a profit for farm owners, a University of Wisconsin-Madison study has shown. The benefits of a pastured poultry operation include low capital investment and the potential to start small and expand over time, according to Steve Stevenson, a researcher with the Center for Integrated Agricultural Systems at the UW-Madison. One person can run a small operation, and kids can help. In addition to building soil fertility and providing sustainably produced meat, the poultry operation can attract customers for other farm products.

CIAS researchers studied pastured poultry operations on five. The farmers had three to 10 years of pastured poultry experience, and most produced fewer than 1,000 birds per year. Farmers charged an average of \$1.90 per pound for their chickens, selling them from the farm, at farmers markets, and to restaurants. The average net return per bird for all farms was \$2.43, ranging from \$7.05 to a \$2.82 loss. Varying levels of managerial experience, wide differences in feed costs, and one case

of chick loss in a brooder fire accounted for much of this variation. The goal of the operation—profits from the chickens, or attracting customers or building soil fertility—also influenced the returns, Stevenson says.

On these farms, a typical pastured poultry pen housed 75 to 100 meat chickens, placed in the pen at 3 to 4 weeks of age and butchered at 8 to 14 weeks. The floorless pens, roofed with plywood and measuring 10 feet by 12 feet by 2 feet, were slid to fresh pasture daily. The birds also received water and a grain ration. Using data from the farms they studied, the researchers developed models for a 1,000-bird supplementary enterprise and a 5,000 bird primary enterprise.

The 1,000 bird operation showed an annual net return to labor and management of just over \$5,000 after five years of operation and building management skills. The four-month production period required 20 to 22 hours of labor per week, and the researchers estimated that an efficient farmer could earn \$10 to \$15 per hour. The 5,000-bird model showed annual net returns to labor and management of more than \$18,000 in its tenth year. The six-month production period required 35 to 42 hours of labor per week, and the researchers estimated that an efficient farmer could earn \$12 to \$18 per hour.

There's a learning curve for the pastured poultry operators. One experienced farmer spent just 10 minutes per chicken from chick to processed bird; a less experienced operator worked for more than an hour per chicken. Feeding and watering birds and moving pens accounted for most of the work. Most farmers reported using some family help or hired labor. Processing poses the biggest obstacle to pastured poultry, farmers in the study reported. They were concerned about both the availability of licensed processors and the quality of processing. In Wisconsin, farmers are allowed to slaughter and sell up to 1,000 chickens per year on the farm. To sell more than 1,000 birds per year, or to sell to restaurants, producers must have the birds butchered at a Type 29 state-inspected plant; there are only two such plants in Wisconsin. Farmers in this study paid \$2.75 per bird for processing at Type 29 plants, and costs are expected to increase. Stevenson notes that Illinois recently raised its on-farm processing limit to 5,000 birds; a similar increase in Wisconsin would improve the processing economics for farmers.

(Source: Agricultural and Consumer Press Service, College of Agricultural and Life Sciences, Univ. of Wisconsin-Madison, 440 Henry Mall, Madison, WI, (608) 262-1461)

▶ Resources to Consider

▶ Pest Management & Development Newsletter

<http://www.ag.uiuc.edu/cespubs/pest/>

A weekly newsletter during the growing season, providing up-to-date information on current pest problems and management options for growers. To order: call (800) 345-6087 or write U of I Extension Newsletter Service, 528WN Bevier Hall, 905 South Goodwin Ave., Urbana, IL 61801

▶ 2002 Illinois Agricultural Pest Management Handbook

<http://www.ipm.uiuc.edu/publications/pm-handbook/index.html>

Sixteen chapters covered current pesticide recommendations for pest of Illinois crops.

▶ Value-Enhanced Corn and Soybean Production in Illinois

<http://web.aces.uiuc.edu/value/>

"About two-thirds of the 16,800 farmers reported that value-enhanced crops had increased their farm income by an average of 12.5 percent," said Swanson. "It is estimated that Illinois farmers received a total of about \$32 million in additional farm income during 1999 and 2000 from growing value-enhanced corn and soybeans." This report discusses changes in value-enhanced corn and soybean production in Illinois including opinions of farmers on the importance of value-enhanced crops in their production systems. Market and production information for high oil corn, non-GMO corn, white and yellow food-grade corn, waxy corn, high-extractable starch corn, non-GMO soybeans, STS (registered trademark), and clear hilum, food-grade soybeans are also discussed. Copies of the report can be obtained by contacting the Value Project office at (217) 244-4796, fax (217) 333-5502, or e-mail: swansonb@uiuc.edu

More Resources to Consider

►2001 Illinois Agronomy Report: Listing of Projects and Selected Research Reports from the Research and Education Centers

Crop Sciences Special Report Number 2001-05, Dec. 2001, p. 78

A summary of 18 research projects is included in this listing of current research projects by the University of Illinois, Crop Science Department. To order a copy call 217-333-9480, write Crop Sciences Dept., AW-101 Turner Hall, MC-046, Urbana, IL 60181.

►Profitable Poultry: Raising Birds on Pasture

<http://www.sare.org/bulletin/poultry>

A free 16-page color bulletin offered by USDA's Sustainable Agriculture Network (SAN) - features farmer experiences, plus the latest research in a new "how-to" guide to raising chickens and turkeys using pens, movable fencing, and pastures. To order a copy, call 301-504-6422.

►Precision Farming Profitability

James Lowenberg-DeBoer, editor, (765) 494-4230, lowenberg-deboer@agecon.purdue.edu

Topics in this book include: estimating precision farming benefits, variety-performance testing with GPS, drainage, soil fertility, weed control, yield monitoring and mapping, soil sampling, remote sensing, variable-rate technologies, Geographic Information Systems, on-farm research, manure management, and weather information. To order call the Purdue Media Distribution Center at (888) 398-4636 or e-mail: Media.Order@ces.purdue.edu

►Low Cost Parlors for Wisconsin and Minnesota Dairy Producers

<http://cdp.wisc.edu>

A description on options for low cost dairy parlors by the Wisconsin Center for Dairy Profitability. To order the fact sheet and CD-ROM call Arlin Brannstrom at 608-265-3030.

►Field Guide to Butterflies of Illinois

Colorful field guide to identify butterflies found in Illinois plus information on habitats, natural history, and distribution. Ph: (217) 333-6880; Distribution Office, Illinois Natural History Survey, 607 E. Peabody Dr., Champaign, IL 61820; E-mail rjohnson@mail.inhs.uiuc.edu,

►Grasshopper Management

www.sidney.ars.usda.gov/grasshopper/index.htm

Kim Kaplan, ARS News Service, Agricultural Research Service, USDA, (301) 504-1637

Kaplan@ars.usda.gov

In 16 hours, a grasshopper will eat its own weight in green food. Seven grasshoppers per square yard over 10 acres can eat the same amount as one cow. The web site and CD-ROM are comprehensive sources for the most recent research in grasshopper management, identification, biology, ecology and control tactics for land managers, and farmers. Decision-making software, which is part of the package, can also help land managers decide if and when pesticide spraying will make economic and environmental sense. The grasshopper CD project is a collaborative effort of ARS, USDA's Animal and Plant Health Inspection Service, and the University of Wyoming, was coordinated by the ARS Northern Plains Agricultural Research Laboratory in Sidney, Mont. The CD-ROM is available without charge by contacting the Northern Plains Agricultural Research Laboratory, 1500 North Central Ave., Sidney, MT 59270, phone (406) 433-5038, fax (406) 433-2020, hoppercd@sidney.ars.usda.gov.

►'Thinking Paper' On Mad Cow Disease

<http://www.fsis.usda.gov/oa/news/2002/bsepapers.htm>

A report by the USDA's Food Safety and Inspection Service (FSIS) on possible actions to minimize human exposure to meat food products from cattle that could contain Bovine Spongiform Encephalopathy (BSE) or the so-called Mad Cow Disease. BSE is a chronic degenerative disease affecting the nervous system of cattle. FSIS requests comments on both the current thinking paper and the Harvard risk assessment. For further information contact Daniel Engeljohn, Director, Regulations and Directives Development Staff, Office of Policy, Program Development and Evaluation, USDA Food Safety and Inspection Service, ph: 202-720-5627.

►"The Dirty Dozen: 12 Pasture Weeds"

Jerry Doll, Extension Weed Scientist, University of Wisconsin

The booklet contains descriptions and color pictures of our most common pasture weeds. For a copy, contact Peggy Compton at the Lancaster ARS, 7396 State Hwy. 35/81, Lancaster, WI 53813; ph. 608-723-6243, fax 608-723-2607 or e-mail peggy.compton@ces.uwex.edu

INTERNET RESOURCES

Calculator for Crop Insurance

<http://www.farmdoc.uiuc.edu/cropins/>

A web-based calculator that allows farmers to project crop insurance for the following: Actual Production History (APH), Revenue Assurance with the base price option (RA-BP), Crop Revenue Coverage (CRC), Group Risk Plan (GRP), and Group Risk Income Plan (GRIP)

Weed Identification

<http://web.aces.uiuc.edu/weedid/>

Enter plant characteristics to narrow the list of possible weed matches

Economic Thresholds for Weeds

<http://www.ag.uiuc.edu/%7Evista/abstracts/aECTHR.html>

A fact sheet discussing how to determine if weeds need to be controlled.

Corn Insect Pests – 52-page guide

<http://ipm.uiuc.edu/agriculture/corn/insects/cip.pdf>

This comprehensive books helps you identify common corn insects.

Corn Flea Beetle Fact Sheet

<http://ipm.uiuc.edu/publications/infosheets/cornfleabeetle19/cornfleabeetle.htm>

This fact sheet discusses the life cycle and how to scout for corn flea beetle.

Wireworm Fact Sheet

<http://ipm.uiuc.edu/publications/infosheets/80-wireworms/wireworms.html>

This fact sheet discusses the life cycle and how to scout for wireworm.

Wireworm Bait Station

<http://ipm.uiuc.edu/publications/videos/wireworm/wireworm.html>

On-line video giving instructions on how to set up and manage a bait trap for wireworms.

Rhizoctonia Root and Stem Rot of Soybeans Fact Sheet

<http://www.ag.uiuc.edu/%7Evista/abstracts/a511.HTML>

Evaluate your soybean fields using this guide to common soybean diseases.

Root and Stem Diseases of Soybeans Fact Sheet

<http://www.ag.uiuc.edu/%7Evista/abstracts/a504.html>

Look for these common soybean diseases while you are scouting.

Foliar Diseases of Wheat Fact Sheet

<http://www.ag.uiuc.edu/%7Evista/abstracts/aFOLIARWH.HTML>

Use this guide to identify diseases in your wheat crop.

Predictive Evaluation of Alfalfa Quality

<http://nautilus.outreach.uiuc.edu/peaq/>

Determine the best time to harvest the highest quality alfalfa hay.

Alfalfa Weevil Fact Sheet

<http://ipm.uiuc.edu/publications/infosheets/56-weevil/weevil.html>

This fact sheet discusses the life cycle and how to scout for alfalfa weevil.

EDUCATIONAL OPPORTUNITIES

University of Illinois Agriculture Events Calendar

<http://www.crops.uiuc.edu/>

Check out our web-based Events Calendar.

New programs are being confirmed every day.

Keep in touch with your Extension Office for programs addressing the topics that interest you and are offered in your County. To find your

counties website go to: <http://web.aces.uiuc.edu/ve/>

About the Ag Update Newsletter

The Ag Update Newsletter is a bi-monthly newsletter providing education and research support to the agricultural industry. Current and past issues may be found at the following website <http://www.urbanext.uiuc.edu/agupdate/index.html>

Contact your county Extension office and request to be put on their agricultural mailing list to receive the local agricultural newsletter and notices about upcoming agricultural events near you. To find your counties location, phone and website go to: <http://web.aces.uiuc.edu/ve/>

For further information about this newsletter, please contact:

Ellen Phillips
Extension Educator – Crop Systems
Countryside Extension Center
University of Illinois Extension
6438 Joliet Rd.
Countryside, IL 60525
(708) 352-0109
phillipe@mail.aces.uiuc.edu