



# PEST MANAGEMENT & CROP DEVELOPMENT

## BULLETIN

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### A Shot Heard 'Round the Industry

Since the Worker Protection Standard became law in 1992, this federal program has moved through various phases of federal and state implementation, including (1) education/compliance assistance, (2) product labeling inspection, and (3) employer compliance inspections. Because of the relatively long time spent focusing on education/compliance assistance, you may have been led to believe that the WPS is not being enforced and that the law has no “teeth.” Enforcement actions taken and comments made last month by the U.S. Environmental Protection Agency should dispel these myths.

The EPA issued administrative complaints against five Colorado growers on June 3, 2003, for violations of the Federal Insecticide, Fungicide, and Rodenticide Act's (FIFRA's) Worker Protection Standard (WPS), a regulation aimed at reducing the risk of pesticide poisonings and injuries among agricultural workers and pesticide handlers. In one case, EPA is proposing a civil penalty of \$231,990 for 229 violations of the WPS and FIFRA. This is the largest proposed federal WPS misuse penalty in EPA history.

“Environmental justice is one of the highest priorities for EPA's enforcement program, and this Agency will take whatever steps are necessary to ensure agricultural workers and pesticide handlers are protected from harmful exposure to pesticides,” said John Peter Suarez, EPA Assistant Administrator for Enforcement and Compliance Assurance. “The federal government will not tolerate growers who place their workers in harm's way because they fail to comply with the law.” (For the complete article, see U.S. EPA at <http://cfpub.epa.gov/compliance/newsroom/>, released 6/5/03.)

### WPS Assistance in Illinois

In Illinois, the Illinois Department of Agriculture has been conducting WPS-specific compliance inspections for several years. What has University of Illinois Extension done to help Illinois producers and commercial applicators understand and comply with the WPS? In addition to press releases, newsletter articles, radio spots, and answers to untold individual compliance questions, we have spread the word in the following ways:

1. *WPS-specific sessions.* Soon after the EPA's manual *The Worker Protection Standard for Agricultural Pesticides: How to Comply* was released in 1993, University of Illinois Extension offered numerous informational WPS sessions across the state. These sessions continued for several years until widespread interest waned. In recent years, University of Illinois Extension has, upon request, conducted WPS refresher and WPS train-the-trainer sessions.
2. *WPS worker and handler training.* The WPS provisions are discussed during private and commercial pesticide applicator training clinics, and, upon request, the Extension educator or specialist can issue a worker or handler training verification card following training (these cards are optional and no test is required). Since about 1995, U of I Extension has issued 71 worker cards and 223 handler cards. Clearly, these cards are requested by a small fraction of the WPS employees in Illinois.

3. *WPS resources.* The Pesticide Safety Education Web site (<http://www.pesticidesafety.uiuc.edu/facts/facts.html>) offers several simplified WPS guides, a resource guide, and linkage to the EPA's WPS Web site. Note that a wide range of WPS training materials and compliance publications and supplies can be purchased through major agricultural and horticultural supply catalogs, such as Gempler's.

### Future of WPS

Following full implementation in the mid-1990s, there have been a few specific amendments to the WPS rules that provide increased flexibility. However, the 132-page *How to Comply* manual published in July 1993 remains as EPA's official compliance reference. Over the past 11 years, the EPA has received considerable constructive and destructive criticism about the WPS from producer groups, worker advocacy groups, the U.S. General Accounting Office (report dated 4/13/2000), and the Children's Health Protection Advisory Committee.

In response, the EPA sponsored four national stakeholder workshops over the past three years to determine if and how the WPS provisions should be revised. University of Illinois Extension specialist Michelle Wiesbrook participated in two of these workshops. The reassessment centered on six areas: (1) training, (2) enforcement, (3) complaint and retaliation, (4) communications, (5) children's health, and (6) funding.

In short, the WPS is a federal program, and diverse stakeholder needs and opinions must be addressed. At this time, there is little more than speculation to offer WPS employers and employees regarding potential changes to the rules and regulations. A draft national WPS reassessment report is expected in mid-July 2003, and a draft proposal for regulation changes is planned for September 2004.

In the meantime:

- Review the existing WPS provisions (see item 3, "WPS resources"), and make sure you are adequately protecting yourself and your employees as well as third parties (e.g., crop advisers, commercial applicators, etc.) who enter your fields. If you have specific questions, don't hesitate to contact your local University of Illinois Extension office. In addition, you can contact Bruce Paulsrud (217-244-9646) or Michelle Wiesbrook (217-244-4397) for help.

- Watch for EPA's draft reassessment report later this year. Expect further information via this newsletter.

Until the dust begins to settle with the WPS reassessment, U of I Extension does not intend to launch any major WPS-specific training campaigns or develop additional paper, Internet, or other digital training materials.—  
*Bruce Paulsrud*

## INSECTS

### Western Corn Rootworm Adults Have Emerged

On June 30, Jared Schroeder, a graduate research assistant in the Department of Crop Sciences, observed a western corn rootworm adult on corn in an experimental plot located in Champaign County. During the past week, we have received several reports from field scouts who have observed corn rootworm larvae feeding on corn roots. Although most western corn rootworms will remain in the larval stage for several more weeks (until mid-July), sightings of adults will become increasingly common after the Fourth of July celebration. Initially, corn rootworm adults will feed on corn leaf tissue. This type of feeding does not result in yield loss. During flowering of corn plants, western and northern corn rootworm adults will begin feeding on silk tissue and pollen. As we approach anthesis, we

will provide management tips to prevent excessive silk clipping and potential yield loss. At this point, it still remains uncertain how large the western corn rootworm adult population will be this season. Let us know when you begin to observe adults in your area of the state.—*Mike Gray*

### Soybean Aphids—Increased Densities in Northern Illinois Compared with Previous Two Years

Although it's still too early to predict accurately the severity of soybean aphid infestations this year, recent observations in northern Illinois suggest that growers will need to be vigilant with respect to this insect pest for the remainder of the season. David Onstad, an entomologist with the Department of Natural Resources and Environmental Sciences, shared these data for Kendall County: number of soybean fields infested (14 fields were sampled) in 2001, 2002, and 2003—8, 8, and 14, respectively; average number of plants (50 plants sampled) infested per field in 2001, 2002, and 2003—2.14, 1.57, and 14.3, respectively; and average number of aphids per plant in 2001, 2002, and 2003—1.57, 0.19, and 3.44, respectively. In 2001 and 2002, sampling was conducted in early July. In 2003, sampling was performed on June 24. So even though soybean fields were scouted earlier this year for soybean aphids, 100% of the fields examined were infested. In addition, nearly 29% of the plants were infested. This compares with slightly more than 3% of plants infested in early July 2002. Thus far, we have not received many reports of soybean aphid infestations. If aphid numbers begin to increase rapidly in your area, please let us know so that we can pass along the information to our readers. For now, stay tuned; the soybean aphid story is yet to be written for 2003. Natural enemies and weather may take their toll on this insect pest as the season develops.—*Mike Gray*

## Looking Ahead for Corn Leaf Aphids

The possibility of finding corn leaf aphids in cornfields is looming on the horizon. They are blue-green aphids, with black legs and cornicles (or “tailpipes”). As the season progresses, adults become dark green to black in color and may be winged or wingless. Corn leaf aphids are migratory insects that quietly make their way into Illinois cornfields in the spring.

These aphids start colonies in the whorls of corn plants. They remain in corn whorls until tassel emergence. As tassels emerge, aphids move down the plant, forming colonies on stalks and leaves, and behind ears. These colonies are often kept in check by natural enemies such as lady beetles, lacewing larvae, syrphid fly maggots, and other insect predators. However, during hot, dry summers or times when these predators are scarce, populations can increase dramatically. Corn leaf aphids may produce as many as 40 to 50 generations each year; populations are higher in dry years. As corn begins to senesce later in the season, winged aphids are produced and migrate to other suitable hosts.

During the growing season, both adults and nymphs will feed in the whorl, causing injury by removing water and nutrients. Damage is most severe between the late-whorl and pollination stages. Corn plants heavily infested by corn leaf aphids may wilt, curl, and show yellow patches; tassels and silks may become covered with honeydew and turn sooty black as mold grows on them. Heavily infested plants may experience poor grain fill or barrenness. If corn plants have adequate moisture, corn leaf aphids cause little damage. Stress caused by high densities of aphids is more severe when it occurs at a time of moisture deficiency for plants, and injury may exaggerate symptoms of drought stress. If aphid colonies continue to increase after pollination and natural enemies are scarce, feeding by corn leaf aphids may cause the death of plant tissue.

To monitor aphid populations, examine 100 plants (five sets of 20) during the whorl stage (3 weeks before tasseling). A treatment may be warranted if 50% of plants have light to moderate infestations (50 to 400 aphids per plant) and plants are under drought stress. If soil moisture is adequate, treatment may be warranted if there are more than 400 aphids per plant.

If such a treatment is needed, the following insecticides are labeled for use: \*Capture 2EC at 2.1 to 6.4 ounces, dimethoate (see product label—do not apply to corn during pollen-shed period), \*Lorsban 4E at 1 to 2 pints, and \*PennCap-M at 2 to 3 pints. Products preceded by an asterisk are restricted for use by certified applicators. Please follow all label directions and pay attention to precautions.

As we proceed through July, the potential exists for these insects to interfere with pollination; don't forget about the injury they may cause.—  
*Kelly Cook*

## Novel (Amusing) Insect Sampling Technique Reported in Britain

Suzanne Bissonnette, Extension IPM educator, Champaign Extension Center, recently sent me an interesting (and somewhat amusing) article concerning some insect sampling efforts being conducted in Britain by the Royal Society for the Protection of Birds. This society is concerned over what they perceive as a decline in Britain's overall insect population. So they intend to organize an insect survey effort next summer with the cooperation of 100,000 to 200,000 cooperators who will utilize “splatometers.” In essence, participants will be asked to position a square piece of flypaper on their windshields. Let's hope the size of the flypaper does not obscure the vision of the insect surveyors. No further details were outlined in this sketchy Web-based report. Questions quickly come to mind: How far will the participants be asked to drive? Will they be asked to drive during

certain times of the day (night)? Will the drivers be asked to maintain certain speeds? How often will fresh pieces of flypaper be required? Grahame Madge, spokesman for the Royal Society for the Protection of Birds, was quoted: “If you can get 100,000 people taking part, that's probably equivalent to several entomologists' life work and obviously gives you the data very quickly.” I'm not sure how to react to this quote—my life's work being equated to 100,000 sheets of flypaper on windshields. All kidding aside, from time to time, Kevin Steffey and I have discussed the so-called windshield splatter technique that can be used to determine the intensity of European corn borer flights. We look forward to the results from this interesting British survey.—*Mike Gray*

## REGIONAL REPORTS

Extension center educators, unit educators, and unit assistants in northern, west-central, east-central, and southern Illinois prepare regional reports to provide more localized insight into pest situations and crop conditions in Illinois. The reports will keep you up to date on situations in field and forage crops as they develop throughout the season. The regions have been defined broadly to include the agricultural statistics districts as designated by the Illinois Agricultural Statistics Service, with slight modifications:

North (Northwest and Northeast districts, plus Stark and Marshall counties)

West-central (West and West Southwest districts, and Peoria, Woodford, Tazewell, Mason, Menard, and Logan counties from the Central district)

East-central (East and East Southeast districts [except Marion, Clay, Richland, and Lawrence counties], McLean, DeWitt, and Macon counties from the Central district)

South (Southwest and Southeast districts, and Marion, Clay, Richland, and Lawrence counties from the East Southeast district)

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We hope these reports will provide additional benefits for staying current as the season progresses.

### **Northern Illinois**

The main activity the past week has been soybean postemergence herbicide application. Scattered thunderstorms occurred throughout the week-end, but additional rainfall would be welcome. Early-planted corn in the center of the region is at V11 to V12. As has been the trend this growing season, we have received few reports of insect infestations.

Just a reminder that the annual Weed Control Tour at the U of I Northern Illinois Agronomy Research Center, Shabbona, will be held next Wednesday, July 9, beginning at 5:00 p.m.

U of I weed scientists and graduate students will discuss some of the more than 30 weed control research studies being conducted at the center. At the conclusion of the 1-1/2-hour tour, a meal will be available on site.

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