First Round of Corn Rootworm Research Evaluations Completed

By the end of the week of July 24, the Illinois Insect Management Program team had completed our first round of corn rootworm research evaluations at four locations—the Crop Sciences Research and Education Center (Urbana), the Northern Illinois Agronomy Research Center (DeKalb), the Northwestern Illinois Agricultural Research and Demonstration Center (Monmouth), and the Orr Agricultural Research and Demonstration Center (Perry). We observed significant rootworm larval damage in our untreated check plots at all locations except Perry. We added the Perry location for the first time in 2006, primarily to test the waters in western Illinois, and we may have to make some adjustments to the location of our trap crop.

The damage in untreated check plots at DeKalb, Monmouth, and Urbana in most experiments was severe (node injury rating of 2.0 or greater on the 0-to-3 node-injury scale), and we observed differences in rootworm larval damage among treatments, which included granular and liquid soil insecticides, seed-applied insecticides, and transgenic Bt hybrids (Herculex RW and YieldGard Rootworm). In fairness to our cooperators in industry, we won’t share the data until after they have had a chance to see them. So look for the preliminary results in a forthcoming August issue of the Bulletin.

As we have done during the past couple of years, we will dig and evaluate roots for rootworm larval damage a second time, beginning the week of August 7. We will dig roots from selected treatments (i.e., a soil insecticide, a seed-applied insecticide, and transgenic Bt hybrids) and determine whether the amount of rootworm injury increased from the first to the second evaluation times. We also will dig another complete set of roots from our transgenic Bt hybrid evaluation studies at Urbana and Monmouth. In these trials, we planted an array of transgenic Bt hybrids, with at least one non-Bt hybrid, to determine the amount of rootworm larval injury in both July and August.

The results from all of our corn rootworm control studies should provide additional information about consistency of performance of all of the rootworm control products on the market today. We welcome your observations as well to help us paint a broad picture of rootworm control successes and disappointments in 2006.—Kevin Steffey, Mike Gray, Ron Estes, and Jared Schroeder

Weekly Survey—Soybean Aphid Numbers Continue to Increase

We continue the weekly survey for soybean aphids in Woodford County (10 fields), Stephenson County (10 fields), and in between (six fields, one each in Marshall, Putnam, Bureau, Lee, Whiteside, and Ogle counties). The average density of soybean aphids per plant increased from the July 17–18 survey to the July 25–26 survey in 23 of the 26 fields sampled. However, the average densities in all fields were well below the economic threshold
of 250 aphids per plant. Nonetheless, soybean aphids were found in all 26 fields surveyed on July 25 and 26. Most of the fields surveyed July 25 and 26 were in the R2 or R3 stage of development.

The largest density of soybean aphids observed on July 25 was 32.1 aphids per plant (Marshall County). More than 200 aphids were found on two of the 20 plants sampled in that field. Ninety percent of the plants were infested with soybean aphids. However, of the 26 fields surveyed, only five had average densities greater than 10 aphids per plant.

We are quickly approaching the stages of soybean development beyond which soybean aphids should have much impact (i.e., past the R5 stage of development). However, I have received one confirmed report of a soybean field in Woodford County that was sprayed with an insecticide because the density of soybean aphids had exceeded the economic threshold. It is likely that other fields have been sprayed, although the number of fields treated in Illinois thus far in 2006 has been extremely low. It seems unlikely that soybean aphids will pose much of a threat to soybean production in Illinois in 2006, but the increases in numbers over the past couple of weeks suggest that continued scouting is appropriate. A return to cooler temperatures will encourage more rapid development of soybean aphid colonies. — Kevin Steffey

**Insects to Keep in Our Sights**

Mike Gray wrote a detailed article about soybean pod-feeding insects in last week’s issue (no. 18, July 28, 2006) of the Bulletin, and I urge you to continue watching for bean leaf beetles, grasshoppers, and stink bugs as soybean pods begin to fill out. Reports from different parts of the state suggest potential for significant infestations of green stink bugs and second-generation bean leaf beetles, so vigilance is due.

In corn, keep watching for two late-season insects, in particular. Some people report finding an unusual amount of injury caused by first-generation European corn borers in some areas of the state, which suggests that a larger second generation may be in store for us. Although European corn borers have become “the forgotten insect” over the past few years, we should not let our guard down. After the second-generation larvae hatch from eggs, the small larvae feed in leaf axils until they grow large enough to bore into the stalks. Control with insecticides, if necessary, is not effective after larvae have tunneled into stalks.

The other insect in corn for which timing of an insecticide application is critical is the western bean cutworm, discussed in some detail last week (no. 18, July 28, 2006). Because this insect is a relatively recent invader in Illinois, I do not believe it has reached pest status in most areas (i.e., densities large enough to cause economic yield losses). However, the numbers of western bean cutworms could be significant in some fields. Insecticide applications are effective only when applied before the larvae begin feeding in the ears, so scouting to search for egg masses and small larvae is crucial. The nominal economic threshold is 8% of the plants with eggs and/or small larvae.

Thorough scouting of both corn and soybean fields at this time of year should reveal whether any of the aforementioned insect pests are present, and also whether other pests pose any threats. As we get closer to harvest for corn and soybean, there may be a tendency to curtail scouting activities, especially in the heat we have experienced. However, always remember that unhappy surprises can be avoided through regular scouting that extends well into August. — Kevin Steffey

**REGIONAL REPORT**

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)

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

**Northern Illinois**

The corn and soybean crops look very good throughout the region. Soybean aphids are present in many soybean fields, but populations are well below economic thresholds. Recent high temperatures have hindered soybean aphid populations. Several Extension educators have reported grasshoppers feeding in soybeans. Greg Clark, crop systems educator, Whiteside County, reported observing soybean sudden death syndrome there.
Wheat harvest is complete, with most yields reported in the range of 80 to 100 bushels per acre. Oat harvest is occurring this week.

Just a reminder that “Nitrogen Management and Weed Seedbanks and Resistance” will be held on Wednesday, August 9, from 9:00 a.m. to noon at the Crops Training Center, located at the U of I Northern Illinois Agronomy Research Center, Shabbona. The cost is $25 per person, and reservations can be made by contacting Greg Clark, Whiteside County Extension Unit Office, 100 E. Knox Street, Morrison, IL 61270; phone (815)772-4075. Certified Crop Adviser CEUs have been applied for for the program.

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