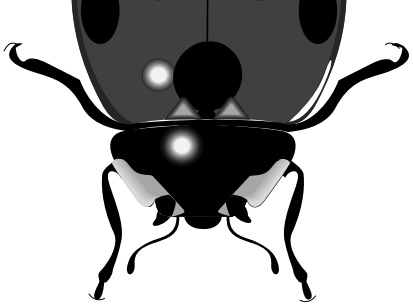

PEST MANAGEMENT & CROP DEVELOPMENT BULLETIN

FOR IMMEDIATE RELEASE
No. 23 / October 3, 2003

Executive editor: Kevin Steffey, Extension Entomologist

Available on the Web at http://www.ag.uiuc.edu/cespubs/pest/
For subscription information, phone 217.244.5166, or e-mail acesnews@uiuc.edu

Also in This Issue

Mark Your Calendars for Two Latitude Bridge Programs

Two pest management programs that should be of great interest to many people in Illinois will be presented via Latitude Bridge in February and March 2004. "Soybean Aphids—What We Learned in 2003, and How We'll Manage These Pests in the Future" will be presented by entomologists from four states on February 5, 2004. Marlin Rice (Iowa State University), Ken Ostlie (University of Minnesota), Eileen Cullen (University of Wisconsin), and entomologists from the University of Illinois will deliver the program from their respective campuses to audiences throughout the four-state region. Two pest resistance programs will be presented on March 5 and March 12. Kevin Steffey and Aaron Hager will discuss issues associated with insect resistance and weed resistance, respectively, on March 5. Dean Malvick and Terry Niblack will discuss issues associated with plant pathogen resistance and nematode resistance, respectively, on March 12.

The Latitude Bridge enables presenters to deliver a program from a central location over the Internet to audiences at numerous locations. The programs will be hosted by county or regional extension offices that can project PowerPoint slides and receive audio input. The presenters control the slides and offer commentary as the slides are shown. Listeners will be able to interact with the presenters, asking questions and offering observations.

We will provide specifics about these programs in a future issue of the *Bulletin*. Announcements also will be released by county or regional extension offices that will host the programs, so keep your eye on the local press. We hope you can participate in one or both of the programs.—*Kevin Steffey*

North Central Weed Science Society Meeting

Make plans now to attend the 58th meeting of the North Central Weed Science Society, December 1 to 4 at the Galt House Hotel in Louisville, Kentucky. Dr. Jerry Doll, extension weed scientist at the University of Wisconsin and program chair for the conference, wrote the following article and graciously granted us permission to publish it here. —Aaron Hager and Dawn Nordby

The program is rich in papers and posters with the latest in weed management information. The general sessions include "It's sexy. It's safe. Everybody wants to do it"; "Future opportunities in weed science: my views"; and "I'm not a real weed scientist but I play one in D.C." Sections that will have both papers and posters include corn and sorghum, soybeans and annual legumes, herbicide physiology, cereals and oilseeds, forage and range, horticultural crops, equipment and application methods, and weed ecology and biology.

Each day will feature a symposium. Tuesday's symposium will provide a review and assessment of genomics applications in weed science organized by those active in the herbicide physiology section of NCWSS. Wednesday's symposium will move us "Beyond Thresholds: Applying Multiple Tactics Within Integrated Weed Management Systems" with five in-depth presentations, one by a noted Dutch weed scientist. Thursday morning's symposium will direct our attention to the future role of weed science extension. This one is very timely because the rapid pace of changes in our discipline has as many or perhaps more implications for our outreach activities and personnel

as it does for those in research and teaching.

Cost for the entire conference is $210 if you preregister, $230 if you register on-site. Full registration includes the proceedings of the papers and posters presented, the Wednesday evening awards banquet, and refreshment breaks. One-day registrations are $40. For registration and hotel information, contact the NCWSS executive secretary, Robert A. Schmidt, 1508 W. University Ave., Champaign, IL 61821-3133 (217-352-4212; raschwssa@aol.com). You can find additional program information and the registration form at http://www.ncwss.org

Please direct responses to Kevin Steffey or Kelly Cook at Department of Crop Sciences, Turner Hall, MC 046, 1102 S. Goodwin Ave., Urbana, IL 61801 (fax 217-333-5245).

Responses also may be sent electronically to ksteffey@uiuc.edu or kcook8@uiuc.edu. Please copy the form from the Web site into a word-processing (Word or WordPerfect) document and complete the form. Attach the completed form to an e-mail message. Please address any questions to us at (217)333-6652.—*Kelly Cook and Kevin Steffey*

INSECT

Learning More About the Effects of Soybean Aphids on Soybean Yields

In an attempt to learn more about the impact of the soybean aphid on soybean yields in 2003, we are asking for your help. (Extension entomologists in other states are doing this also.) Soybean aphids were widespread across Illinois in 2003, and infestation levels were high in many areas. If you treated for soybean aphids and left an untreated area for yield comparisons, we are interested in your findings. We want to learn about numbers of aphids, insecticide application timing, number of insecticide applications, and soybean growth stages, among other variables. We hope to use the information to improve our treatment guidelines.

Please use the form in this issue to submit your information for individual fields or trials. You may not be able to supply all of the information listed, but don't let that prevent you from filling in what you do know. Any information you can supply will be helpful! If we receive enough useful responses, we will summarize the information and publish it in a future issue of the *Bulletin*. Anonymity of individuals who submit information will be retained in any articles we write.

Results from 2003 On-Farm Survey for Rootworm Larval Damage in First-Year Corn

In 2002 and 2003, surveys were conducted to track the distribution of the variant western corn rootworm that lays its eggs in crops other than corn. This variant of the western corn rootworm lays eggs in soybeans, resulting in larval damage the following year in rotated corn. Since the early 1990s, the occurrence of this variant has been common in east-central Illinois, but its distribution has been spreading north and west across Illinois. For the 36-county survey in 2003, we extracted

Table 1. Results from the 2003 on-farm survey for rootworm larval damage in first-year corn, University of Illinois.

County	*Mean*	*Standard deviation*	*Range*	*% of plants with root ratings ≥ 3.0*	*Number of fields with mean root ratings ≥ 3.0*
Adams	1.54	0.503	1.0–2.0	0	0
Brown	1.32	0.471	1.0–2.0	0	0
Bureau	2.12	0.961	1.0–5.0	24	1
Champaign	2.6	0.535	2.0–4.0	68	2
Christian	1.62	0.49	1.0–2.0	0	0
DeKalb	3.02	1.436	1.0–5.0	60	6
Ford	2.32	0.868	1.0–4.0	46	2
Fulton	1.29	0.456	1.0–2.0	0	0
Grundy	2.08	0.853	1.0–4.0	32	2
Hancock	1.23	0.425	1.0–2.0	0	0
Henry	1.41	0.537	1.0–3.0	2	0
Iroquois	2.46	0.973	1.0–5.0	30	2
Kankakee	1.76	0.716	1.0–3.0	16	0
Kendall	2.76	0.625	1.0–4.0	70	4
Knox	1.56	0.76	1.0–4.0	12	1
LaSalle	3.46	0.952	2.0–6.0	86	7
Lee	2.86	0.808	1.0–5.0	66	5
Livingston	2.4	0.99	1.0–5.0	28	1
Logan	1.52	0.707	1.0–3.0	12	0
Macon	2.44	1.053	1.0–6.0	30	2
Marshall	2.66	0.772	2.0–5.0	50	2
Mason	1.64	0.525	1.0–3.0	8	0
McDonough	1.64	0.525	1.0–3.0	2	0
McLean	2.62	0.725	1.0–5.0	54	2
Mercer	1.68	0.513	1.0–3.0	2	0
Ogle	2.3	0.814	1.0–5.0	24	2
Peoria	1.78	0.679	1.0–4.0	10	0
Pike	1.42	0.499	1.0–2.0	0	0
Sangamon	2.06	0.512	1.0–3.0	16	0
Schuyler	1.26	0.443	1.0–2.0	0	0
Stark	2.12	0.689	1.0–4.0	26	0
Tazewell	1.88	0.666	1.0–4.0	10	0
Vermillion	2.1	0.735	1.0–4.0	28	0
Warren	1.24	0.431	1.0–2.0	0	0
Will	1.96	0.947	1.0–6.0	12	1
Woodford	2.98	0.979	2.0–6.0	66	5

five roots from each of 10 randomly selected fields within each preselected county. We had no knowledge whether an insecticide had been applied or a transgenic Bt hybrid had been planted in any of the fields surveyed. All 1,800 roots were transported to Urbana, washed, and rated using the Iowa State 1–6 root-rating scale developed at Iowa State University. (The literature citation for this root-rating scale is Hills, T. M., and D. C. Peters. 1971. "A method of evaluating post-planting insecticide treatments for control of western corn rootworm larvae." *Journal of Economic Entomology* 64:764-765.) The root-rating scale is explained in the article "Root Ratings from 2003 Corn Rootworm Control Trials" in issue no. 22 (September 5, 2003) of the *Bulletin* and also in a video clip that you can access on the IPM Web site at http://www.ipm.uiuc.edu/ipm/videos/index.html.

Tables 1 and 2 show the root-rating information for each county included in the surveys in 2003 and 2002, respectively. Table 3 shows the ranges of root ratings from the counties surveyed in both 2002 and 2003. Other maps, data, and additional information regarding the survey can be viewed at www.ipm.uiuc.edu/wcrsurvey. County-specific information is featured at this site, including the relative location of each field within a county and the corresponding root ratings from that field.

Overall, results from the survey in 2003 revealed that the distribution of the variant western corn rootworm has spread farther northwest than was detected in 2002. The most severe rootworm larval damage in 2003 occurred east of a line extending northeast from Woodford County through DeKalb County. However, average root ratings in Lee, Marshall, and Stark counties were greater in 2003 than they were in 2002. Although Bureau and Ogle counties were not surveyed for rootworm larval damage in 2002, the average root ratings in these counties in 2003 were similar to the average root ratings in Lee, Marshall, and Stark counties.

The variant western corn rootworm still does not seem to be present in most counties west of the Illinois River. Average root ratings in Adams, Brown, and McDonough counties in 2003 were similar to average root ratings from similar surveys in these same counties in the mid- to late 1980s. (The literature citation for this comparison is Steffey, K. L., M. E. Gray, and D. E. Kuhlman. 1992. "Extent of corn rootworm larval damage in corn after soybeans: Search for the expression of the prolonged diapause trait in Illinois." *Journal of Economic Entomology* 85: 268–275.)

If producers in northwestern Illinois have not already begun to monitor for western corn rootworm adults in soybean fields, they should initiate monitoring in 2004. Guidelines for using yellow sticky traps to monitor for western corn rootworms in soybeans can be found at http://ipm.uiuc.edu/fieldcrops/insects/western_corn_ rootworm/wcr.pdf. Results from western corn rootworm monitoring efforts should allow growers to determine the best management strategy for each field. Producers within counties in which severe rootworm larval damage has been detected for some time should continue efforts to determine whether western corn rootworm densities in soybeans indicate that control of larvae in corn the following year is necessary. Remember, economic levels of rootworm larvae do not occur in every field.—*Jared Schroeder, Sue Ratcliffe, and Kevin Steffey*

Table 2. Results from the 2002 on-farm survey for rootworm larval damage in first-year corn, University of Illinois.

County	*Mean*	*Standard deviation*	*Range*	*% of plants with root ratings ≥ 3.0*	*Number of fields with mean root ratings ≥ 3.0*
Adams	1.3	0.46	1.0–2.0	0	0
Brown	1.1	0.3	1.0–2.0	0	0
Champaign	1.9	0.44	1.0–3.0	4	0
Christian	1.9	0.35	1.0–2.0	0	0
DeKalb	2	0.35	1.0–3.0	6	0
Ford	2.5	0.86	2.0–5.0	30	1
Fulton	1.5	0.51	1.0–2.0	0	0
Grundy	2.5	1.03	1.0–5.0	35	2
Hancock	1.7	0.47	1.0–2.0	0	0
Iroquois	1.9	0.85	1.0–5.0	16	1
Kankakee	1.9	0.56	1.0–3.0	11	0
Knox	1.8	0.37	1.0–2.0	0	0
LaSalle	3.1	1.12	2.0–6.0	66	4
Lee	2	0.51	1.0–3.0	14	0
Livingston	2.3	0.78	1.0–5.0	22	1
Logan	1.8	0.45	1.0–3.0	2	0
Macon	2.2	0.81	1.0–4.0	32	0
Marshall	1.9	0.85	1.0–5.0	10	1
Mason	1.3	0.51	1.0–3.0	2	0
McDonough	1.1	0.27	1.0–2.0	0	0
McLean	2.6	0.76	1.0–5.0	53	3
Mercer	1.7	0.44	1.0–2.0	0	0
Peoria	1.4	0.53	1.0–3.0	2	0
Pike	1.7	0.47	1.0–2.0	0	0
Sangamon	1.7	0.44	1.0–2.0	0	0
Schuyler	1.5	0.51	1.0–2.0	0	0
Stark	1.5	0.5	1.0–2.0	0	0
Tazewell	1.5	0.61	1.0–3.0	6	0
Vermillion	2.1	0.45	1.0–4.0	9	0
Warren	1.9	0.3	1.0–2.0	0	0
Will	2.2	0.61	1.0–4.0	20	1
Woodford	2	0.19	2.0–3.0	4	0

Table 3. Ranges by county of average root ratings from the on-farm surveys of rootworm larval damage in first-year corn, 2002 and 2003, University of Illinois.

2002 average root ratings			*2003 average root ratings*		
1.0–1.9	*2.0–2.9*	*3.0–3.9*	*1.0–1.9*	*2.0–2.9*	*3.0–3.9*
Adams, Brown, Champaign, Christian, Fulton, Hancock, Iroquois, Kankakee, Knox, Logan, McDonough, Marshall, Mason, Mercer, Peoria, Pike, Sangamon, Schuyler, Stark, Tazewell, Warren	DeKalb, Ford, Grundy, Lee, Livingston, McLean, Macon, Vermilion, Will, Woodford	LaSalle	Adams, Brown, Christian, Fulton, Hancock, Henry, Kankakee, Knox, Logan, McDonough, Mason, Mercer, Peoria, Pike, Schuyler, Tazewell, Warren, Will	Bureau, Champaign, Ford, Grundy, Iroquois, Kendall, Lee, Livingston, McLean, Macon, Marshall, Ogle, Sangamon, Stark, Vermilion	DeKalb, LaSalle, Woodford

Bt Corn and Insect Resistance Management: Whither Refuges?

Most of you probably have read one or more articles on the USDA' findings that more than 20% of farms in 10 midwestern states where Bt corn was planted failed to comply with federal planting requirements for insect resistance management. In other words, more than 20% of growers in Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, Ohio, South Dakota, and Wisconsin who responded to the survey did not plant non-Bt refuges. Another 6% planted less than the required 20% refuge. In at least one report I read, an official indicated that maybe growers were not familiar with the insect resistance management requirements associated with Bt corn. Please! Bt corn for management of European and southwestern corn borers has been available commercially since 1996—8 years ago. I refuse to believe that more than 20% of survey respondents were unfamiliar with the requirements and guidelines for planting Bt corn and a non-Bt corn refuge, which are widely and readily available. The National Corn Growers Association, state corn growers associations, seed companies and dealers, and university extension personnel all have produced and distributed copious educational and technical information. In addition, companies selling Bt corn are required to notify buyers of the insect resistance management obligations.

I was dismayed by the USDA's findings, and I sincerely hope you were, too. We in agriculture do not need the kind of publicity generated from USDA's report. No wonder the general public is skeptical about our stewardship of products developed from biotechnology. If we ever hope to have access to all worldwide markets for all trans-genic crops, we need to demonstrate our ability to take care of business at home.

I urge everyone involved in insect management in field crops to amplify efforts to ensure compliance with regulations associated with Bt corn for control of Lepidoptera pests (e.g., European corn borer, fall armyworm, southwestern corn borer) and corn rootworms. Compliance with insect resistance management requirements demonstrates our sincerity to be good stewards of transgenic technology and should ensure its continued development for agricultural benefits. Also realize that the potential for insects to develop resistance to Bt proteins is real. If European corn borers, corn rootworms, or any other insects develop resistance to Bt in the field, our insect management options dwindle. Let's not make the same mistakes with Bt corn that we have made with oversue or misuse of insecticides.—*Kevin Steffey*

European Corn Borer Survey Under Way

As I write this article, our annual survey for second-generation European corn borers is under way in Illinois. Extension educators, graduate students, and entomologists will survey 50 counties in Illinois this year, selecting 10 fields at random in each county. We increased the number of counties to be sampled this year in an attempt to fill in some geographical gaps that have been noticeable in previous years' surveys.

Although I have received only a few reports thus far, the word on the street is that densities of second-generation European corn borers are much smaller this year than they were in 2002. In fact, I think most of us anticipated that. However, we won't know the full story until all preselected counties have been surveyed.

You can learn some details of the European corn borer survey on our IPM Web site at http://www.ipm.uiuc.edu/fieldcrops/insects/european_corn_borer/fall_survey.html. Toward the end of the article, you can click to go to the Farm.edu Web site where the database of European corn borer surveys from 1943 through 2002 resides. The 2003 data will be added to the database. We have plans to move the database from the Farm.edu Web site to the IPM Web site during the next year, and some significant changes to the presentation of the data will be made. Stay tuned.

We will report the results from the 2003 survey of second-generation European corn borers in some future issue of the *Bulletin.—Kevin Steffey*

PLANT DISEASES

Charcoal Rot of Soybeans in Illinois: Primary or Secondary Disease?

Charcoal rot has been one of the most talked-about soybean diseases in Illinois in the latter part of this growing season. Other diseases, including SDS, BSR, Phytophthora rot, white mold, stem canker, and others, have also been important in some areas, but charcoal rot seems to have captured the attention of many this year.

Charcoal rot is also known as summer wilt or dry weather wilt. The disease is typically more common across southern than northern and central Illinois but was also common across central and parts of northern Illinois this season. It occurred in many fields, some with scattered, infected plants in small patches or parts of rows and others with patches 30 feet or more in diameter. The most seriously affected areas are often in the drier parts of fields.

For diagnosis, look for several characteristics after midseason. Leaves of severely infected plants turn yellow and brown, wilt, and stay attached to the plant. The initial yellowing is usually more uniform across the leaf than that caused by SDS or BSR. A more solid diagnosis is based on the appearance of the root and lower stem. Scrape off the surface of the root and lower stem with a fingernail or knife, and look on and under the epidermis; plants infected with charcoal rot will have tiny gray/black specks called microsclerotia that appear similar to scattered bits of charcoal dust. They are difficult to see without the help of a hand lens. Cutting the root and lower stem often reveals distinct wavy, gray to black streaks inside the root and lower stem. Many plants with charcoal rot in central Illinois this year also had rotted roots and dead Rhizobia nodules, but it was not clear whether this was caused by charcoal rot or another disease that had also infected the plants.

Charcoal rot occurs primarily when dry, hot weather (soil temperature >84°F) puts stress on soybeans. The fungus (*Macrophomina phaseolina*) that causes charcoal rot is a pathogen that some reports suggest is weak by itself and may cause minimal damage when plants are not stressed but that can severely damage soybeans when plants have been subjected to other stresses. That is, in many cases charcoal rot appears to be a secondary disease that takes advantage of weak plants. The pathogen can survive for years in soil and has a wide host range that includes corn and grain sorghum. The pathogen can be transmitted via infected seed at levels reported from 1.5 to 8%.

Charcoal rot is a difficult disease to manage. Some cultivars have been reported to be less affected by charcoal rot than others, but none appears to be highly resistant. Crop rotation, especially with cereal grains, for 1 to 2 years is recommended where this disease has been a severe problem. Use lower-than-normal seeding rates, and follow a sound fertility program.

Additional basic information about charcoal rot may be found at http://cropdisease.cropsci.uiuc.edu/soybeans/ index.html (look under root and stem diseases). More information along with photos is available at http://www.planthealth.info/minordiseases/charcoalrot.htm.—*Dean Malvick*

CROP DEVELOPMENT

Test Weight and Yield: A Connection?

When the weather turned hot and dry in August, many crop watchers said they thought that test weight, and hence yields, would be lowered by the dry weather. Reports coming in from many directions indicate that neither of these things happened in corn, though yields of soybeans harvested early have been disappointing and some extremely small soybean seed has been reported. Harvested soybean seed size has in some cases exceeded 5,000 seeds per pound, which is about half of normal size. This indicates that there were enough seeds for yields to be about twice what they ended up being; the crop simply ran out of water, with help in some cases from diseases that reduced root health or the ability of stems to transport water.

Once the number of seeds has been determined for either crop, yield is more or less completely a function of how large those seeds get. But final seed size often has little to do with test weight, and test weight really doesn't work as a way to explain the effects of stress on yield. While this may help some people make the connection between conditions and yield, it also implies to some people that low yields mean low test weight and that low test weights mean low yields. That is not the case, at least in a specific sense.

When early frost or something else quickly cuts off grain filling, corn usually has both low yields and low test weight. That's because starch formation stops quickly, so density of the endosperm ends up being low. Low endosperm (kernel) density usually means low test weight, sort of like Ping Pong balls compared to golf balls. But test weight isn't simply a measure of kernel density; it also depends on how well kernels fit together (size and shape), how slippery their seedcoats are, and other physical characteristics.

Once kernel density reaches a certain point, other characteristics of the seed determine test weight. In fact, seeds that fill for a little extra time and so get heavier could even lose test weight if their shape changes in the process. Likewise, moisture changing from 28 to 20 usually increases test weight because the kernels physically shrink and get more dense, while changing moisture from 20 to 15 can actually decrease test weight, because kernels can lose moisture (weight) without changing their size or shape.

Corn yield is number of kernels per acre times weight per kernel at standard moisture divided by 56 pounds

per bushel to give bushels per acre. Test weight is a measure of how many pounds of corn will fit into a certain volume and is only partly related to weight per kernel. Popcorn tends to have lower yields and high test weights. Sweet corn fills poorly and so has low yields and very low test weights. Field corn can go either way. But test weights above 60 are very unusual in field corn, no matter whether it yields 125 or 250 bushels per acre.

This year, kernel number was usually set before stress began, and so whether kernels got larger or stopped filling early had a big effect on yield (weight per kernel) but not always much effect on test weight. I think we could say for certain that yield and test weight will not change by equal percentages and that there is no formula to predict how they will be correlated. Test weight is still used as a sort of "quality" measure by breeders, though, because it does have some correlation with kernel density and it is easy to measure.

Standard test weights for different crops go back to the time when people measured yields by volume, not by weight. A bushel as it was first used hundreds of years ago was a volume measure (1.24 cubic feet), used because people either couldn't weigh things accurately or they couldn't be trusted to do so. A volume measure was a good answer, because the customer could easily see whether the measure was off just by looking at its dimensions. Length was much easier to measure than weight.

Today, we sell corn in 56-pound "chunks" and soybean in 60-pound "chunks" that we still call bushels; but except for wanting to know how many "bushels" will fit into a bin, we don't use it as a volume measure as they did in the old days. I think that is where the "test weight = yield" thinking comes from, though.

Soybean test weight doesn't seem to vary that much, and it doesn't get much attention. Soybean seeds tend to be more regular in shape than corn seeds, and spherical shapes like soybean seed tend to fit together more uniformly regardless of size differences. A shortened seed-filling period may also result in smaller seed but not much change in density of individual seeds.

Anything—dry weather, clouds, cool temperatures, insects, diseases—that reduces the rate or seasonal duration of photosynthesis will reduce the rate of seed filling in any crop and so will reduce yield unless the season is lengthened to compensate. Any such yield reduction might lower test weight or it might not, but the statement that yields will be lower "because of lower test weights" isn't the way it works. In terms of cause and effect, it is more accurate to say that test weights might be lower as a result of lower yields, given that yield changes this late in the season are almost entirely a result of changes in kernel weight.—*Emerson Nafziger*

REGIONAL REPORTS

Northern Illinois

Harvest began on a wider scale throughout the region the week of September 20. Considering the dry August period, initial corn yields have been better than expected, with yields ranging from 150 to 200 bushels, but these numbers reflect only a small percentage of overall acres. Corn has been relatively slow to dry in the field compared with the past few years. Numerous reports of stalk rots have been received. Producers are encouraged to check their fields to identify fields with high lodging potential.

Initial soybean yields have been less than anticipated, with 25 to 35 bushels or less in the northern portion of the region and 35 to 40 bushels common in the southern portion. Some lower yields have been attributed to charcoal rot and white mold diseases, but the dry August period is a major factor.

Light frost was observed in parts of the region on the mornings of September 29, 30, and October 1.

Reports from the annual fall European corn borer survey in the region indicate that percentages of infested plants and borers per infested plant are lower than in recent years.

West-Central Illinois

Harvest is in full swing. Corn harvest began in earnest 2 weeks ago, but most producers have made the switch from early planted corn to soybeans within the past week. Yield reports for early planted corn have been anywhere from slightly better than average (140–165 bushels per acre) in some areas to "phenomenal" (200+ bushels per acre) in others.

Soybean yields have been considerably less impressive, especially in the northeast. Drought stress and ensuing diseases such as charcoal rot have undoubtedly had a significant impact. The effect of the soybean aphid on soybean yields is still not clear, but some have reported a yield advantage of 8 to 10 bushels per acre where insecticides were applied when aphids were at or above proposed threshold levels in mid-August.

Preliminary reports from educators conducting the annual corn borer surveys have indicated that second- (and possibly third-) generation corn borer pressure has been slight to moderate in most areas. However, poor stalk quality due to stalk rots has led to some concerns in the northern part of the region, causing producers to place a harvest priority on some cornfields.

2003 Soybean Aphid Reporting Form

	Grower:	*Agronomic advice by:*
Name:	_____	_____
Address:	_____	_____
City:	_____	_____
Phone:	_____	_____
Email:	_____	_____

Field information:

County:	_____	Township:	_____
Date planted:	_____	Variety:	_____
Maturity group:	_____	Row spacing:	_____

Yield information:

Product	**Rate**	**Application date(s)**	**Application method** *(ground or aerial)*	**GPA**	**Yield (bu/A)**	**Test wt. (lbs)**	**Moisture (%)**
Untreated	*N/A*	*N/A*	*N/A*	*N/A*			

Counts of aphids before insecticide was applied:

Date	**Plant growth stage**	**Aphid infestation levels** ***(please estimate & circle)***
		per plant or per trifoliate
		per plant or per trifoliate

Counts of aphids after insecticide was applied:

Product	**Date**	**Plant growth stage**	**Aphid infestation levels** ***(please estimate & circle)***
Untreated			per plant or per trifoliate
			per plant or per trifoliate
			per plant or per trifoliate

Comments on field conditions, insect infestations, plant health (use additional paper if necessary):

Mail or Fax to:
Kevin Steffey or Kelly Cook
Department of Crop Sciences
Turner Hall, MC 046
1102 S. Goodwin Ave.
Urbana, IL 61801
Fax: (217) 333-5245

U of I Extension Newsletter Service
University of Illinois
at Urbana-Champaign
528 Bevier Hall, MC-184
905 S. Goodwin Avenue
Urbana, IL 61801

Contributing Authors

Kelly Cook (kcook8@uiuc.edu), Extension Entomology, (217)333-6651

Aaron Hager (hager@uiuc.edu), Extension Weed Science, (217)333-4424

Dean Malvick (dmalvick@uiuc.edu), Extension Plant Pathology, (217)265-5166

Emerson D. Nafziger (ednaf@uiuc.edu), Crop Sciences, (217)333-4424

Dawn Nordby (dnordby@uiuc.edu), Extension Weed Science, (217)333-4424

Susan Ratcliffe (sratclif@uiuc.edu), Extension Entomology, (217)333-6652

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

Published by University of Illinois Extension and Information Technology and Communication Services,
College of Agricultural, Consumer and Environmental Sciences,
University of Illinois.
Editor: Erin Cler; formatter: Virginia Cuppernell.

Helping You Put Knowledge to Work

University of Illinois
U.S. Department of Agriculture
Local Extension Councils Cooperating