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Insects, Mites, And Nematodes

Western Bean Cutworm Creating Many Questions - (John Obermeyer and Christian Krupke)

- Indiana's moth captures continue.
- Egg mass scouting has proved frustrating for some.
- Pre-tassel corn is the preferred corn growth stage for egg-laying.
- Hatched larvae can be found in many areas on the plant.

Moth captures of western bean cutworm in pheromone traps continue to accumulate in many northwestern and north central counties. However, field visits by pest managers in these heavy moth flight areas are not yielding the egg mass counts expected, some finding very few. Because egg mass scouting is necessary for this pest to evaluate fields for treatments, many questions are being asked. Admittedly our experience with this pest is limited, so we have been asking many questions of colleagues in the Western Corn Belt.

First, let us make you aware of an excellent western bean cutworm primer from a short course that was conducted on February 28, 2007, supported by the North Central IPM Center. Four comprehensive slide shows with audio from entomology specialists throughout the Midwest are available for viewing at <http://www.ncipmc.org/teleconference/wbc2007/videos>. All of the presentations will take over two hours to view, but to do so will answer many of your questions and make you the expert in your area!

Answering, in detail, the many insightful questions from folks scouting fields would take more room than this



Find the egg mass, a new challenge for Indiana

newsletter allows. Certainly the most asked question of the moment is why egg masses are not being found even though moths captures in the vicinity are over 200-300. The simple answer is that female moths are very finicky where they lay their eggs, remember it is male moths that are being drawn and captured in pheromone traps. Though moths will lay their eggs on most stages of corn, their preference is for pre-tassel (VT) corn. This assures that pollen will be available as a food source for the hatching larvae in about a week. For unknown reasons, female moths can have a strong affinity to certain hybrids (e.g., color, architecture, etc) over others, even within the same field. Too, our moth numbers, though the most ever in Indiana, still pales in comparison to typical captures for high-risk areas in Nebraska and Iowa (although presently their numbers are lower this year).

Finding larvae after they hatch and disperse from their egg cluster is time consuming. In whorl stage corn, which isn't a favorite egg-laying site, larvae can be found inside the whorl attempting to feed on leaf tissue. In this scenario, larvae are vulnerable to heavy rains and predators. In pre-tasseling/tasseling corn, larvae can be found in leaf axils, corn silks, or even the tassel itself. Larvae better survive on a mixed diet of pollen, anthers, and corn leaves. Unlike corn earworm, western bean cutworm will generally feed on these other plant materials before entering into the ear via the silk channel.

masses, as explained above, many corn varieties will be avoided for egg laying.

We appreciate your calls and sharing your field observations (765-494-8761) as we deal with this relatively new pest. Still it looks as though Indiana is the hot-spot in the Midwest for this ear feeder in 2009...aren't we lucky! Happy scouting!



Japanese Beetle in Corn - (*John Obermeyer, Christian Krupke, and Larry Bledsoe*)

- Winter temperatures and spring rains likely reduced populations.
- Beetle damage usually looks worse than it is.
- Corn damage particulars and treatment guidelines are given.

Some calls this week concerning Japanese beetle assured us that their numbers aren't lower everywhere in the state as they are locally. In talking with folks throughout the state, the population is overall lower than most seasons. Obviously some areas got aren't so lucky and have numbers to be concerned about. The following should help make treatment decisions where corn silks are being damaged.

Japanese beetle feed on corn leaves, tassels, and silks. Generally leaf and tassel feeding can be ignored. If beetles are present and feeding on corn silks, an insecticide should be applied only if on average the silks are being cut off to less than 1/2 inch before 50% pollination has taken place. This rarely happens on a field-wide basis. Don't be overly excited by this pest's tendency to clump on a few ears within an area and eat the silks down to the husks. With sufficient soil moisture, silks will grow from 1/2 to 1 inch per day during the



Young larvae are difficult to see in leaf axils

Larval damage to the ear is difficult to assess. For each larva/ear, there is an estimated 4 bushel per acre loss. This equates to 5% egg masses being found while scouting fields, which is the treatment threshold we are recommending. Often molds, within the ear, accompany the kernel damage done by this pest. For high value corn crops, where grain quality is carefully scrutinized, damage above and beyond the actual kernel loss should be considered in treatment decisions. We still advocate scouting for this pest's egg



Black Light Trap Catch Report - (*John Obermeyer*)

County/Cooperator	7/7/09 - 7/13/09							7/14/09 - 7/20/09						
	VC	BCW	ECB	WBC	CEW	FAW	AW	VC	BCW	ECB	WBC	CEW	FAW	AW
Dubois/SIPAC Ag Center	TECHNICAL DIFFICULTIES													
Jennings/SEPAC Ag Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Knox/SWPAC Ag Center	1	0	1	0	0	0	5	0	0	4	0	0	0	10
LaPorte/Pinney Ag Center	5	5	0	4	0	0	3	0	1	0	98	0	0	4
Lawrence/Feldun Ag Center	1	1	1	0	0	0	3	0	0	0	1	0	0	5
Randolph/Davis Ag Center	0	4	0	1	0	0	2	0	1	0	0	0	0	3
Tippecanoe/TPAC Ag Center	10	5	0	1	0	0	3	7	4	0	9	0	0	4
Whitley/NEPAC Ag Center	2	2	0	2	0	0	2	1	1	0	20	0	0	3

VC = Variegated Cutworm, BCW = Black Cutworm, ECB = European Corn Borer, WBC = Western Bean Cutworm, CEW = Corn Earworm, FAW = Fall Armyworm, AW = Armyworm

one to two weeks of pollen shed. Besides, beetles are often attracted to silks that have already completed the fertilization process even though they are still somewhat yellow. Check for pollen shed and silk feeding in several areas of the field. Japanese beetles tend to be present only in the outer rows of the field. Don't be influenced by what you think you may see from windshield surveys! Get out into fields to determine beetle activity before drawing any conclusions.



Japanese beetle party on a fertilized ear

Agronomy Tips

Worrying About Small Soybeans – (Chad Lee, University of Kentucky Grain Crops Extension Specialist)

Some farmers are concerned that the smaller growth of soybeans could result in reduced yields. Some are questioning the use of foliar fertilizers and/or fungicides to help make up the difference.

Soybeans were planted late across most of the state. According to the latest Crop and Weather Report from NASS, soybean flowering is at 35%, behind the five-year average of 47%. Most farmers' "internal clock" says that soybeans should be larger by now. Most years, that is correct. This is not most years.

Some soybeans are getting to flowering (growth stage R1) and may be a little smaller than in previous years. The cooler temperatures combined with later planting dates will cause smaller plants. The smaller plants could be a concern if rows are not closed in shortly after flowering. If the soybean rows are closed, then height is less of an issue. As long as the rows are closed, tall plants do not automatically equal high soybean yields.

If the rows are not closed and the soybeans begin to flower, then yield potential is likely lost. As the soybeans move into pod development and the rows are not closed, yield potential is likely lost. If the soybeans get to seed fill and the rows are not closed, yield potential is lost. This brings us to the main question: will a foliar fertilizer or a foliar fungicide help? The short answer...probably not.

Fungicides will not improve the speed at which soybeans grow and will not help with canopy closure, in the absence of a disease. Fungicides will help soybeans retain leaves, if a disease is present in the field. However, the cooler night temperatures and the smaller soybean plants both contribute to less of a threat from diseases this season.

Foliar fertilizers will not compensate for lower temperatures. They will not increase the speed of growth,

assuming P_2O_5 and K_2O levels are adequate in the field. They will make the plants greener and that might make someone feel better.

If your, or your neighbor, is absolutely set on spraying something, then consider the foliar fertilizer. It will likely make the plants greener and it should cost a little less than the fungicide. Or, take that money you would have spent on the foliar product(s) and take a trip someplace warm. Someplace where you don't have to see the soybeans for a couple weeks. It just might make everyone happier, including your friends! For others, keeping that money in the bank may be the best stress reliever right now.

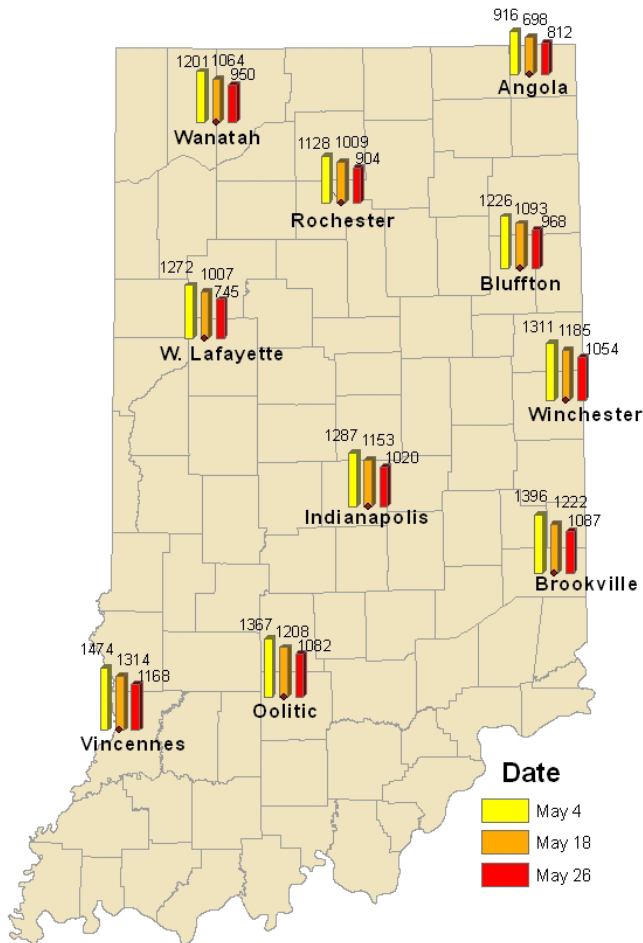
Bottom Line:

Small soybeans or late-planted soybeans that do not reach full canopy by flowering probably have lost some yield potential. Cooler temperatures also reduce the chances of soybeans reaching full canopy by flowering. In hindsight, the best management practice would have been to plant in 7.5-inch rows. The narrow rows would have improved the chances of getting complete canopy closure by flowering. Foliar fertilizers and fungicides will not make up the difference in temperatures, planting date or row spacing.



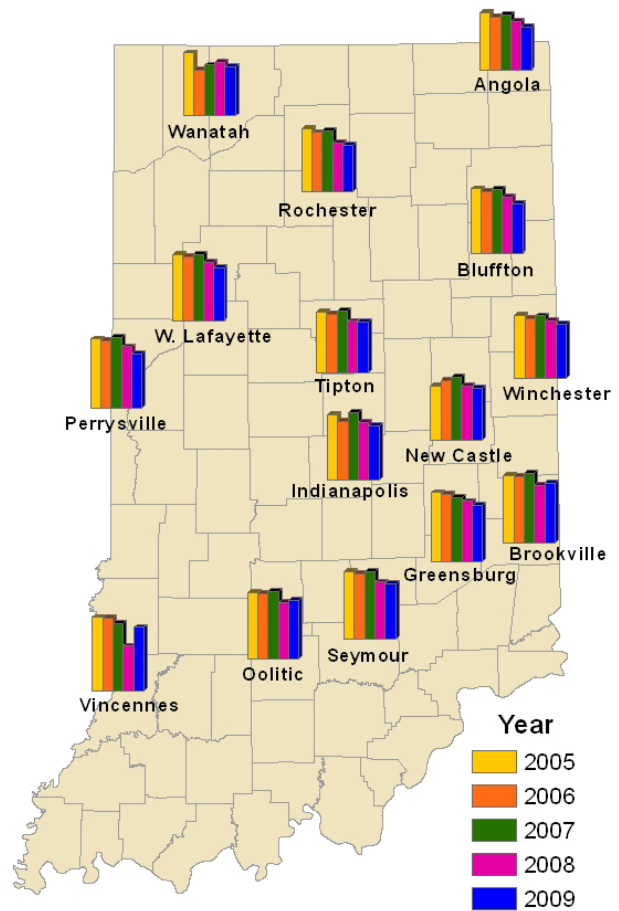
Weather Update

Accumulated Growing Degree Days (86/50) by Date



Data Provided by Indiana State Climate Office
 Web: <http://www.iclimat.org>

Accumulated Growing Degree Days (86/50) Since April 1



Data Provided by Indiana State Climate Office
 Web: <http://www.iclimat.org>

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