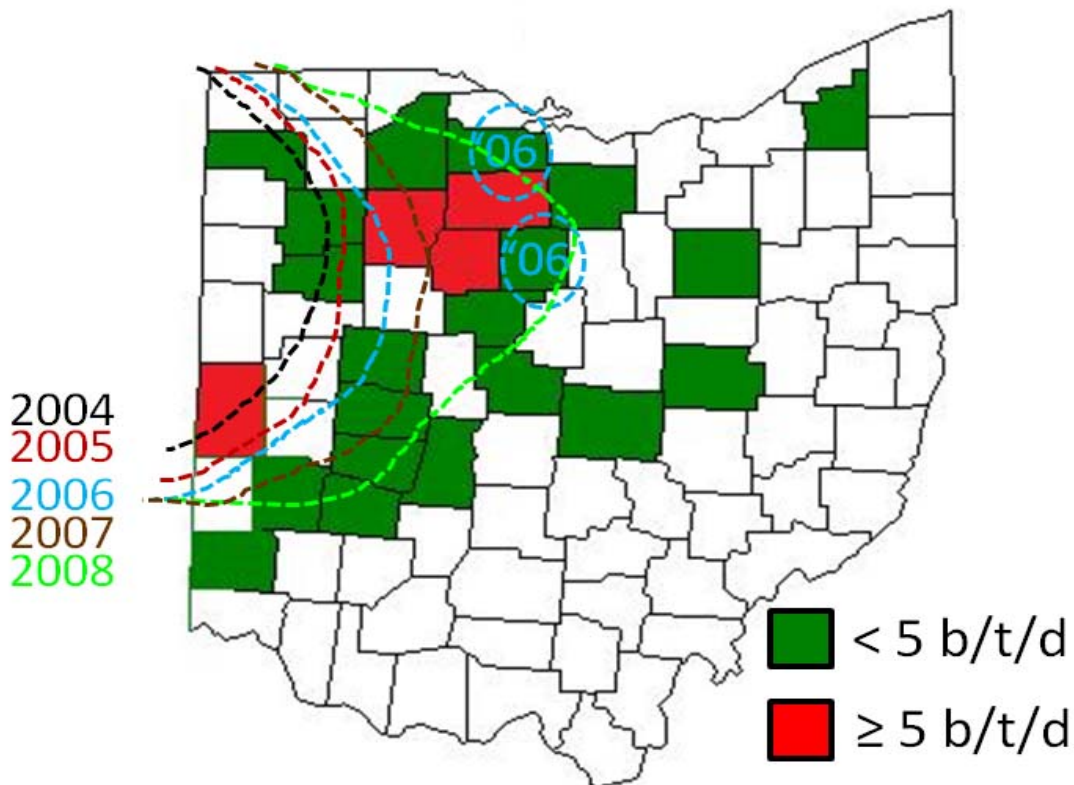


STATUS OF WESTERN CORN ROOTWORM VARIANT IN OHIO

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Along with the regular western corn rootworm damaging corn following corn, the western corn rootworm variant that lays its eggs in soybean fields only to cause problems the following year in first year corn continued in an easterly and southerly march. We were able to confirm damage to first year corn as far south as South Charleston at the Western Research Station and as far east as a line from Bucyrus down towards Marion and western Morrow County. We were also able to add a few other counties to the list of fields exceeding threshold: Seneca, Wyandot and Hardin.

Yellow Sticky Trap Sampling. Personnel from Ohio State University Extension continued to sample for the western corn rootworm adult variant in soybean fields for the 12th year in a row. However, with the variant now common in the western most counties, an effort was made to expand the sampling into locations more southerly and easterly. Research suggests that catches in soybean of 5 or more beetles/trap/day during any trapping week indicates a potential problem with rootworm in the field the following year. The sampling is done using Pherocon[®] AM yellow sticky traps.



Out of 70 soybean fields surveyed, 5 were over or close to threshold. We were able to add 3 new counties to the list: Hancock, Seneca and Wyandot, which fills a gap from 2007 where Crawford County had fields over threshold. The number of fields below threshold decreased from last year. Even though we focused our trapping this year on more central and eastern counties, we did include fields that had been historically part of this long term study and had repeatedly exceeded threshold. Very few of these fields had more than 3 beetles/day/trap. Conversations with other extension entomologists from the Midwest suggest that low numbers occurred across the corn belt. There could be many reasons for this decrease, including the cold and wet spring weather, poor adult emergence, or the presence of late-maturing corn during peak adult emergence which tends to keep adults within corn. The latter explanation could be the most likely. This unprecedented decrease makes predictions for 2009 difficult—especially if spring weather conditions can adversely affect rootworm populations. Although the trapping indicates damage may be low, the distribution still remains spotty even at the county level. Fields that reached threshold or that are in counties with historically high variant populations may still consider preventive treatment in 2009, although we recommend not controlling for the variant where populations were low. This inability to make accurate predictions reflects the importance of on-farm trapping.

We tested the efficacy of a few different trapping systems: the yellow sticky trap with extra glue, the green Scentry Multi-gard, and the vial traps. There was no difference among the vial and the normal yellow sticky traps. However, the extra glue and the green traps caught significantly more beetles than the yellow or the vial. Why? The traps with extra glue can be trusted more than the green. The green color is very attractive to WCR, therefore we may be more likely to catch not just “true” variants, but also catching other adults that are being attracted to the trap. These are not true variants, and will provide an overestimate of the numbers of beetles caught. Since there is no diagnostic tool to determine variants from normal WCR, the numbers on SMGG are probably an overestimate. Why there was such a disparity between the yellow and green traps could be due to presence of late-planted corn. Corn phenology may affect whether or not variants disperse to soybean; if a lot of late planted corn remains, beetles may be less likely to leave the cornfield unless actively attracted, *e.g.* the SMGG traps.

	Week in Field					
	1	2	3	4	5	6
PYST w/glue*	2.1	2.1	2.1	1.8	2.1	2.1
SMGG*	7.6	8.3	5.5	4.6	4.3	4.5
Vial^{ns}	0.3	0.7	1.8	1.5	1.4	0.6

Table 1. Ratio of the number of adult FYWCR b/t/d captured by alternative traps compared to unaltered PYST in the same soybean field. Ratio is alternative trap captures/PYST captures. 1 = equal captures, <1 = fewer captures on the alternative trap, and >1 = greater captures on the alternative trap. *Overall mean $P < 0.001$ by Wilcoxon Sign-Rank Test. ^{ns}not significant