European Corn Borer Densities In Illinois Reach All-Time Record Low

DR. MICHAEL GRAY

URBANA, ILL.

The results of the annual fall European corn borer survey for Illinois are now available. I offer my thanks to Kelly Estes, coordinator of the Cooperative Agricultural Pest Survey Program, Illinois Natural History Survey, for her leadership and to the IPM and Crop Systems extension educators who spent many hours in cornfields collecting the data. I would also like to acknowledge Ron Estes, senior research specialist in the Department of Crop Sciences, for his extensive survey work this past season. The results for 2009 are stunning, particularly compared with state averages for the previous 10 years (Table 1).

Table 1. European corn borer infestations in Illinois, 1999 through 2009.

State average	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
% plants infested	24.3	41.8	49.3	49	32.5	17.1	24.2	33	10.7	8.0	1.2	26.5
Borers per 100 plants	29	38	91	95	52	15.5	34.4	23.2	13.4	9.61	0.60	36.5

Only 1.2 percent of corn plants in our survey showed any sign of European corn borer injury. The number of second-generation European corn borers was reduced to fewer than 1 borer for every 100 plants! In 23 counties, no European corn borers were found – this includes 230 sampled fields. These numbers suggest that this once prominent insect pest of corn has been reduced to nearly an insignificant threat.

Our surveyors did not distinguish between refuge and nonrefuge corn acres. All fields were chosen at random, and the same sampling procedures were used as in previous years. The insect densities across the years thus can be compared in a relative sense. It seems very clear that the spring flight of moths in 2010 will be exceptionally low--yet the use of Bt hybrids will undoubtedly continue to increase. As refuges decrease in size and additional Bt hybrids with pyramided genes expressing multiple Cry proteins are brought to the market, European corn borer densities will most likely continue their decline. Δ

DR. MICHAEL GRAY: Professor, Crop Sciences, University of Illinois