True white grub rasters

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Abstract
Two groups of white grubs are found in Iowa croplands: the true white grub, which can cause significant stand loss in corn and sometimes soybean; and the annual white grub, which probably does not cause stand loss in either crop. True white grubs are the larvae of June beetles (the big brown beetles that fly around yard lights during May and June evenings). They feed on the roots of seedling plants, causing them to wilt and die. True white grubs have a 3-year life cycle and can reduce plant populations during 2 of these 3 years. Predicting what corn or soybean fields might have problems from true white grubs is nearly impossible.

Keywords
Entomology

Disciplines
Agricultural Science | Agriculture | Entomology

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Two groups of white grubs are found in Iowa croplands: the true white grub, which can cause significant stand loss in corn and sometimes soybean; and the annual white grub, which probably does not cause stand loss in either crop.

[Image 1]

White grub showing location of raster on underside of tail.

[Enlarge 1]

True white grubs are the larvae of June beetles (the big brown beetles that fly around yard lights during May and June evenings). They feed on the roots of seedling plants, causing them to wilt and die. True white grubs have a 3-year life cycle and can reduce plant populations during 2 of these 3 years. Predicting what corn or soybean fields might have problems from true white grubs is nearly impossible. It is usually after stand loss occurs that true white grubs are first noticed.

Many of you have asked how to distinguish true white grubs from annual white grubs. Begin by locating the cluster of setae or hairs on the underside of the tail. This area often is covered with soil or excrement that must be removed so that the pattern of hairs can be examined. Next, look for a long, narrow smooth area that is bordered on either side by two parallel rows of short, stubby hairs. This area is called the "zipper." If a grub has a zipper, it is the true white grub. Notice in the photograph that one species of true white grub has a very dark and easy-to-see zipper, whereas the zipper on the other species has a less distinguishable zipper. There are several species of true white grubs that occur in corn and their zipper patterns are slightly different. Annual white grubs also have hairs, but no zipper pattern. It often takes some practice in finding the pattern on the raster and magnification with a hand lens is helpful.

[Image 2]

True white grub rasters from two different species showing smooth area of raster bordered by two parallel rows of zipper-like hairs.

[Enlarge 2]

This article originally appeared on page 100 of the IC-486(12) -- June 4, 2001 issue.