

Fast Fonz Facts – Attack of the Asiatic Garden Beetles
13 June 2018

Exactly a month ago, I sent out a Fonz Facts about grubs which included a handy sheet to assist in ID of different species. It's time to pull out that sheet if you are in the southern tier of counties.

Planting in Southern Michigan was delayed in many locations due to cold, then extremely wet, conditions. Crummy stands were being attributed to standing water, weed competition, or herbicide injury. But if the stand is poor on the TOP of a rise in the field (ie an area that did not have standing water) or in locations you know have sandy soil, take another look. In southern Michigan, Asiatic Garden Beetle damage is now very apparent from the road, evident as bare ground, thin stands, stunted plants, variable height, or yellowing (see attached pdf with pictures). In the worst fields, all these problems are evident. The majority of issues are in corn, especially no-till, although I confirmed several damaged soybean fields in northern Indiana. I have visited fields from Decatur in Van Buren County, east to Dundee in Monroe County, and my lab is following several fields on a weekly basis. What we learned so far:

*favored weeds infested by AGB grubs so far include marestalk (Yum!), purple deadnettle, chickweed, poke weed, and Virginia creeper

*in weedy fields, grubs seem to remain on the weeds persistently, even after the corn is planted. Why move from a delicious weed to a new plant? In other words, the silver lining to poor weed control is that weeds keep many grubs away from the corn. When herbicide is finally applied, the grubs move on to the corn and damage can occur seemingly overnight. This is similar to what happens with black cutworm after a herbicide application.

*AGB grubs appear to drown in saturated soil or at least pop up on the soil surface, where they can be killed by something else. In other words, the silver lining to standing water is AGB control.

*Insecticide control options? None that stand out. So far I've seen grubs surviving low, medium, and high (250-500-1250) rates of seed treatment, Lorsban, and tillage.

*This week we found the first pupae (as did cooperators from Ohio State sampling in NW Ohio). That means the oldest grubs are in the process of transforming into adult beetles, so they will no longer feed and cause damage. We do not know, however, how long it takes for all the grubs in a heavily infested field to complete this process, releasing the corn from feeding stress. This is a question we are trying to answer by sampling grubs weekly and trapping the emerging adults.

Many people are experiencing this insect for the first time as populations slowly push northward. I don't have many answers, but I am cooperating with the field crops entomology program at Ohio State to pool data and get a better understanding of the life cycle and damage period for this vicious little insect. In the fall, we will be looking for infested locations to sample NEXT spring, so keep the locations of bad fields in mind or report them to me.

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MSU - Asiatic Garden Beetle pics, June 2018, southern MI



Decatur, MI. Pic from typical 'drive-by' scouting call coming in now. Confirmed as heavy infestation of AGB on sandy hillside. (B. Mackellar)

What the heck is a cup cutter and why use one? The cutter samples a defined area, no matter where we are or who is sampling. Allows us to compare grubs populations from field to field.



Monroe County –Pics from the ground and air showing thin stand and yellowing (the thin, yellow areas are a replant). Avg of 2 grubs per cup cutter, but hot spots with 6-7 per cutter! Pupae found this week.
(Aerial shot courtesy of R. Costa)





Very common AGB symptom = variable height of plants.
AGB damaged plants are very behind their neighbors



St Joe County.
Typical sandy soil
type field with AGB.
This field has ~1
grub per cup cutter,
but does not show
symptoms. Had
enough weed cover
early on to thin out
the feeding.



Angola IN. thin
stand of soybean
on a hillside; AGB
on the roots.
Soyb infestation is
rare, but this field
was soy on soy.