

SW Iowa Crop Update, Aug. 8, 2008

For the past month I have been counting aphids and recording the population for ISU and the USDA. Soybean aphid population had been low and very slowly increasing, it was my thought that this year aphids would follow their cycle and be in low numbers in the even years and high in the odd years. I guess we can say goodbye to that cycle of every other year the soybeans aphids would be a non issue. I have been scouting and fielding many questions in the past week about soybean aphids in SW Iowa.



In the past two weeks I have observed the soybean aphid population continue to grow. Most of us had hopes that the extreme temperatures last weekend would cause some mortality. The heat was detrimental to some of the aphids but not as many as I would have hoped for. This week's weather with nights in the 60's and daytime temperatures in the 80's has aided in very rapid aphid population growth.

Scouting: I can guarantee every field in SW Iowa has some aphid pressure. Many fields in the NW part of my area have already been sprayed or very near threshold. I encourage everyone

to take the time to get out in your fields and scout. I have observed quite a few winged aphids in fields that have low populations right now. This is an indicator that new aphids are flying into the fields. Populations are increasing at a rapid rate right now. Walk into the soybean fields and take a look at soybean plants. In my experience, you will more than likely see some border effect so walk at least 100ft. from the edge. The action threshold for soybean aphids is 250 aphids/ plant and weather in the forecast that favors aphid reproduction and longevity. Aphids may have 15-18 generations per year. Optimum temperatures for reproduction and longevity are 72-77 degrees Fahrenheit. Data suggests that in optimum conditions soybean aphid population can double every 5.5-7 days. Soybean aphids do not do well in extreme heat, when temperatures reach 95 lifespan is shortened and reproduction ceases. Soybean aphid life cycle from nymph to adult will take about 14 days. The aphid is a large adult and feeds aggressively for about 7 days of their life cycle.

Matt Oneal, ISUE entomologist, studies soybean aphids extensively and has many trials with soybean aphids. Here is a link to much of Matt's work, very good data that answers many of the questions of timing, populations, and chemistries.

<http://www.ent.iastate.edu/soybeanaphid/>

I also have been talking to many people concerned with the action threshold of 250/plant. 250 soybean aphids/plant is **still** the threshold for treatment. The economic injury level (EIL) is the number of insects that need to be present for the value of the lost yield to equal the costs of control. So the short story is the EIL was 654 and the current EIL is 452. The goal is to control the insect when the action threshold is reached and not let the population reach the EIL. Read this ICM News article and it will fully explain why the threshold has not changed but how the EIL changes with soybean aphids.

<http://www.extension.iastate.edu/CropNews/2008/0730tollefsonriceoneal.htm>

One more side note, I have been scouting many acres of soybeans in the last week. I have also been seeing Western Bean Cutworm egg masses and larvae in the beans. Many of you may see this, and a few of you have called me about this. What I have seen, this is a very low percentage of plants. I may do a little research on damage from the WBC and report back to you next week.

Have a good weekend, and go look at your crops.