

Slow Start Results in Delay in Japanese Beetle Emergence

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Rarely are any two years (seasons) alike, after all it's weather! Compared to last year, as of about June 20, we were between 230-350 GDD (growing degree-days) or the equivalent of 2-3 weeks behind in heat units this year. Because insects are cold-blooded animals, they are dependent on temperature for biological activity, most insects are inactive at temperatures below 50°F. Japanese beetle adults typically begin emerging around 1030 GDD, and on June 20 (when they normally start to emerge) we had only accumulated about 760 GDD units in the Madison area. It was not until around July 4 that we reached 1030 GDD units, this is often when peak adult emergence occurs.

As a result, Japanese beetle emergence is measurably behind compared to the average. This occurrence of the delayed emergence has a profound impact the timing of preventative insecticide treatments for Japanese beetle; applications should be delayed accordingly (i.e., about

a two week delay). This being said, it is important to understand that nature frequently tends or finds a way to make-up or catch-up to get things back to some degree of normalcy. What does this mean for your management approach or strategy for managing insect pests such as the Japanese beetle?

The ideal IPM strategy is be to closely monitor adult emergence by either using pheromone traps or merely observing preferred hosts of Japanese beetle adults such as linden, birch, maple, etc. Once Japanese beetles adults are captured in traps or observed on plants, respective preventative grub insecticide treatments can be applied. There are several preventative insecticide treatments available, they include: 1) chlorantraniliprole (Acelepryn); 2) clothianidin (Arena); 3) imidacloprid (Merit as well as numerous other brand names); and 4) thime-thoxam (Meridian). It is important to make certain to appropriately water grub insecticide treatments into the turf with

an adequate amount of water (about 0.10-0.20 inches) immediately following insecticide application to move the insecticide into the soil profile where the grubs are located to ensure maximum performance.

Should you choose to make a curative or corrective grub control application over the preventative approach, understand that smaller grubs (younger) are much easier to control than larger (older). Since most curative or rescue grub insecticides are relatively short-residual products (< 15 days) and the grub are delayed as a result of the cool conditions, be sure to closely inspect the turf for the presence of young larvae to ensure maximum control. The result of the delayed emergence of adult Japanese beetles directly influences the timing of insecticide treatment applications. Consequently, be sure to routinely monitor and sample Japanese beetle adults to accurately determine the appropriate insecticide timing to ensure the greatest likelihood of success. 



Japanese Beetle Adults feed and defoliate the leaves on a number of plants.

The adults feed on over 300 species but prefer apples, cherries, grapes, peaches, plums, birch, crabapples, hollyhocks, linden, maples, mountain ash, roses.