

**JAPANESE BEETLE VS. EUROPEAN CHAFER: WHO'S TURF
ENEMY NUMBER 1?**

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We, in southern and central Michigan, are now blessed with not one major turf feeding grub, but two. And in some areas this past summer, three.

European chafer has been causing problems in Michigan for up to 15 years. It tends to affect whole neighborhoods and prefers non-irrigated turf. It is often missed until damage from the larvae occurs, as the adults fly after sunset in mid-June and do not cause any damage. It can sometimes seem as if European chafer just suddenly appeared in an area, whereas in reality, it has been gradually getting worse bit by bit over several years. There are some areas in Southern Michigan that have had lawns devastated twice in the last decade by this pest. This insect is not native to Michigan and does not have very many natural enemies that keep the population in check.

Japanese beetle has also been a problem in some areas for the last 15 years. It is probably considered to be the most notorious of the grub pests because the adults can cause considerable damage to a large number of different deciduous trees and shrubs. It is generally found to be more of a problem in irrigated situations. Since irrigated turf tends to mean more money and energy inputs into the situation, Japanese beetle is generally considered to be more of an economic problem. It is also the grub pest that can be a serious problem as far as regulatory concerns for the nursery and fruit industry. This insect is also not native to Michigan and does not have very many natural enemies that keep the population in check.

We have also heard several complaints of June beetle damage this past summer. It is the first time in 13 years where there have been reports from several different areas of the state. Typically, the areas attacked are non-irrigated home lawns with woods on one or two sides of the lots. It is an insect native to the area and natural enemies such as parasitic insects, predators and diseases usually hold the population in check.

So – for now – who is turf enemy number one?

There's a simple answer as far as it applies to you. Look at the turf for which you are responsible, if you see any damage, dig up a square foot of turf in several locations and see what you have. If you have Japanese beetle, it's number one. If you have European chafer, it's number one. If you have a mix, you are looking at the kind of finagling that went on with the presidential election (maybe it will have to go to court) to truly determine who is number one. Very simply, the one that is killing the grass you want to keep alive is your number one enemy.

In a situation in which both species of beetles are present and weather conditions are normal, a simple rule of thumb works well. If the turf is irrigated, Japanese beetle is the grub to worry about. If the turf is not irrigated, European chafer is the critter to fear. This is a general rule and as far as general rules, did not work for 1999 and failed miserably for 2000. Rules of thumb are for typical years and since 1999 and 2000 were not typical summers, the rule of thumb didn't work. Generally, we have heard far fewer complaints of European chafer this fall than for the previous two falls.

Why?

The rule of thumb assumes that during the period of June 15 to July 20, when both European chafer and Japanese beetle are out in the adult form and are laying eggs, turf in Michigan is usually pretty dry. This means non-irrigated turf as in home and office/industrial lawns is normally very attractive to European chafer. Since we received rain the last week of June in 1999, and it rained on and off throughout the adult emergence period in 2000, Japanese beetle assumed all turf in Michigan had become irrigated and European chafer decided Michigan turfgrass was just not as attractive as it once was.

So – what does all of this mean as far as the price of tea in China? - or what do I really need to worry about this spring?

The best practice for maintaining turf that has grubs is to maintain adequate fertility and soil moisture. As soil dries, damage from grub feeding becomes more evident especially if the turf root system has already been reduced from inadequate fertility or lack of soil moisture. Mother Nature was very generous this past fall and continued to naturally irrigate all of the areas in Michigan that may have potential grub problems. As a result, there were not many complaints of grub damage as the fall went on. We have found some incredible populations of Japanese beetle on non-irrigated turf this fall. But due to the ample rainfall, there have not been many reports of damage. Reports of European chafer grubs and damage to turf caused by them have been less and less over the last two falls. Now, when grubs are found on non-irrigated turf, it is generally Japanese beetle or if it is a mix, there is proportionally more Japanese beetle than European chafer.

Watch carefully as the grass begins to green in the spring for signs of damage from grubs or from crows, raccoons, and skunks. Don't hesitate to sample and look for grubs in any suspicious areas. If high numbers of grubs are present, use Dylox or Diazinon as a curative treatment no matter which species of grub is present. In areas where damage has occurred in the past and grubs are found in the spring, use Merit, Mach 2 or Meridian (should be available in May from Syngenta) during the first two weeks of July as a preventive treatment.