

The Japanese Beetle in Relation to Golf Grounds

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The Japanese beetle now infests an area in the states of New Jersey and Pennsylvania within which are located several golf courses. Naturally the question arises as to just how much of a nuisance this insect will become from the standpoint of golf-ground upkeep. This question can not be definitely answered at the present time, although observations made at our laboratory during the last two years tend to give some indication of what may be expected.

The Japanese beetle has a one-year life cycle. The beetles emerge in late June and July. During their existence they feed on the foliage of various shade trees, shrubbery, weeds, field crops, etc., in addition to laying their eggs in grass lands. The eggs hatch into the grubs, which remain in the soil until the following June. While the beetle itself may cause more or less annoyance to golf grounds, by feeding on shade trees or shrubbery, it is only of secondary importance in this connection as compared with the grub.

A detailed study of the habits of the Japanese beetle grub has been made by Mr. L. B. Smith, of our laboratory; and regardless of previously published reports to the contrary, it is entirely evident that the Japanese beetle grub is a root feeder; and that under certain conditions it will injure and even kill grass.

The grubs of the Japanese beetle are now present in the turf of several golf courses in the infested area. The insects are distributed generally over the course, but are especially prevalent in the turf of the greens, as many as eight grubs having been found in a piece of sod as large as one's hand. These greens have been injured by the grubs, the killing of grass being especially noticeable on the higher portions of the green, such as the sloping edges. It is these sloping portions of the green which dry out most quickly after being watered, a condition which does not give the grass roots (injured by the feeding of the grubs) a chance to send out new roots rapidly enough to maintain growth, the death of the grass being the ultimate result.

The level portions of the green, when watered properly, are usually sufficiently moist so that the grass can make an optimum root growth and thereby maintain itself fairly well in spite of the continuous feeding upon the grass roots by the grubs. Even under these conditions it is fairly obvious that the grub of the Japanese beetle is another obstacle in the way of maintaining the proper sort of turf on golf greens.

Experimental work designed to evolve a method of destroying the grub in turf has been conducted at our Japanese beetle laboratory at River-ton, N. J., and a fair degree of success has been obtained from the use of sodium cyanide in solution. However, experiments conducted this fall on golf greens indicate that the material is too injurious to have much application in the problem of controlling the grub in greens unless the green is to be reseeded after the treatment. Experiment involving other materials in solution were conducted at the same time, and while prediction of success is premature at this time, it is fairly evident that a treatment can be found which will control the grub without at the same time ruining the turf.

The problem is fundamental in nature, and a basic study of it should properly be undertaken from both the biological and chemical control aspects, such a study to occupy a period of several years. The results would have an important application in the control of not only the Japanese beetle, but other soil insects infesting golf courses.

Dear Bill Letter VI

Richland Center, N. Y., October 14, 1921.

DEAR BILL:

About this time of year every green committee is getting down to the dregs of appropriations; club treasurers are figuring what the deficits will be; and everyone's nerves are on edge. I suppose you are just like the rest—tired of the job; and you are wondering why in hell you accepted it; and you are firmly resolved that this year is the last.

You are looking back over the year and recalling to mind all the plans you made so carefully, all the problems you and your green-keeper studied out, and all the work you both did, and you are asking yourself, Who, if anyone, in the club appreciated it? Do any of them have any conception of the detail and variety of the work required to keep them happy and maintain the course as it should be?

You count the kickers one by one and consign them to the particular variety of eternal punishment your fancy conceives to be most suitable—none excruciatingly painful enough to suit you. And an eternity of punishment for this, that, or the other kicker strikes you as being just a short forenoon of what you'd like to give them.

I can read your mind, Bill, and I can see your right hand raised so that you can tell the world that the oath you are taking—"Never again"—is too solemn to be forgotten; and you hope awful—I might say horrendous—casualties will fall upon you if you ever do it again.

You can count on the fingers of one hand the club members who have come up to you during the year to say that the work was being well done, or that they were pleased.

Tell me this, when you figure it out: Why are the officers and committeemen of any club imbeciles, and why are the conscientious objectors so omniscient? How can an objector decide offhand just exactly what should have been done, though some poor fool of a committeeman was obliged to rack his stupid brain for days only to do the wrong thing?

Sometimes I wonder how it is that I make a living for one wife and a couple of kids—I appear to be so dull in comparison with the objectors.

There's some pleasure in serving others if there's any appreciation of the effort, even if it must be conceded that greater intelligence would have been applied had some one else undertaken the task.

But I have a remedy to propose. We read advertisements that a certain week is prune week or some other week, and large gatherings of people are often asked to devote a moment or two to silent reflection upon this or that. I'm going to ask the Green Committee of the U. S. Golf Association to announce that at 12 o'clock, noon, Naval Observatory time, on Saturday, October 29, A. D. 1921, all green-keepers and green-committeemen in the United States shall stop wherever they happen to be, face south, and shout in unison, though widely separated, something that the scientists in the Department of Agriculture will guarantee to place as a curse on the kickers for at least seven generations; I shall insist that it must be something awful and shivery; I'd not only curdle their blood, but turn it into cheese. Per-