

## Late Season Grub Control Still Achievable!!

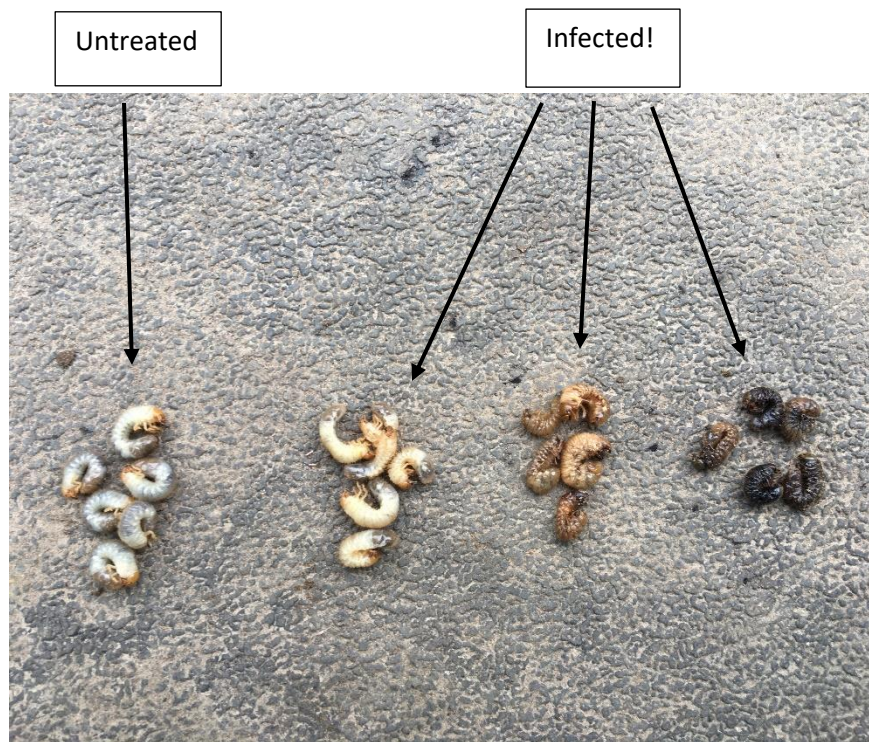
We have now had several reports of animals digging up turf looking for white grubs. Although it is late in the year, development seems to be somewhat behind as most of the grubs we have found are in the second or third instar stage. This is perhaps due to a very dry end of August and September which may have delayed egg laying and growth.

Fortunately, it is not too late to apply Grub Patrol (*steinernema scarabaei* nematode) for curative control. We have had excellent results this fall with curative treatments applied as recently as two weeks ago (on infestations of more than 40 per sq. ft.!) – see pictures attached. Remember that there are a few best management practices that need to be followed to ensure a successful application:

- Apply on a cloudy and/or rainy day – UV light is harmful to this nematode.
  - Apply to moist soils and make sure soils remain moist for a period of time after the treatment. It is best to water in immediately following the application if it is not raining.
  - Thoroughly clean spray tanks and nozzles with tank cleaner prior to application. Residue from other products can be very harmful to the nematodes.
  - Remove all filters from your sprayer prior to application.
  - Mix nematodes into a pail of clean water before adding to the tank.
  - Ensure that pumps are turned on and water is being agitated before adding the nematodes to the tank and keep agitated throughout the duration of the application.
  - Soil temperatures need to remain above 10°C for at least a week post application.
- \*Currently in the Markham area soil temperatures are around 15°C\***



*Figure 1 White grubs in various stages of decline 13 days after treatment with *steinernema scarabaei*.*



**Figure 2** Untreated grubs on the far left, treated and dying grubs in the second column, right two columns are treated grubs that are dead two weeks after an October 2017 application.



**Figure 3** White Grub 13 Days After Treatment with *S. scarabaei*.

\*All images are from applications that were done on a golf course fairway on September 29<sup>th</sup>, 2017.

**For more information or to order please see below:**

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