Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel

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All Quiet on the Western Front …. or …. Not-a-Peep of Grubs in Turf

Not to make light of the messages sent through the original 1930 cinema or the 1979 made-for-TV movies based on the original German novel, it is an appropriate opening for incidences of grub damage in turf. We are well past the point-in-time that problem areas should have appeared. But I have neither received inquires nor heard reports of grub problems thus far for this 2009 season.

Two possibilities come to mind that could explain the apparent situation: Number 1, there has been the widespread use of various long-residual systemic insecticides applied as preventative treatments; or Number 2, above-normal precipitation facilitated vigorous growth of cool-season grasses which normally go dormant during the hot droughty conditions of a more typical Kansas summer. That is to say that grub populations which normally account for problems areas might be currently present, but that healthy/plentiful root systems can sustain the grub populations without their causing visible damage to the grass above.

Of course, if problem areas should yet appear, a rescue treatment might be appropriate. The advantage to not having applied preventative treatments is that if/when a problem spot does appear, just that restricted area requires treatment as opposed to having previously applied preventative treatments to entire lawns, sports and recreational areas and golf course playing surfaces.

Rescue treatments rely on direct contact to kill grubs. Basically, two active ingredients are the primary insecticides used for rescue treatments: carbaryl (commonly marketed as Sevin) and trichlorfon (marketed as Dylox or 24-Hour Grub Control). While each product has proven efficacy against annual grubs, trichlorfon has consistently performed better, and is noted for its ability to kill larger grubs ---- those that would be currently present.

Each of these products is formulated for use as a spray or granular application. Granular products are favored for their ease of application. There are 3 types of granular applicators (Figure 1).

Figure 1

Each has its advantages and disadvantages. Handheld units are inexpensive and best suited for treating small areas. For larger areas, hand/wrist/arm fatigue must be considered. Also, these units probably are the least accurate for ensuring proper dosage rates. Whirlybirds are the priciest units, and are "quicker" because they are more geared to treating larger areas with fewer passes. However, they require practice in terms of pace/rate-of-speed to ensure even granule coverage. Drop spreaders are the easiest to calibrate, deliver the most accurate granule distribution and can be used to treat both small and large areas.

One cannot achieve grub control my merely "dumping" a product onto the lawn surface. Certain steps are recommended to ensure the best possible outcome.

1) Calibrate equipment. While manufacturers may suggest settings-to-use with their equipment, wear and tear on the equipment mandates that they be frequently calibrated/re-calibrated to ensure proper product delivery rates.

2) Bear in mind that you are applying granules to the soil surface, and the grubs that you are attempting to kill are in the soil. Thus, insecticides need to penetrate into the soil. Impediments to this movement are trash/litter on the soil surface, and potentially, a thick layer of thatch. Insecticides can be bound tightly to these entities thus preventing them from ever entering the soil and contacting the grubs (Figure 2).

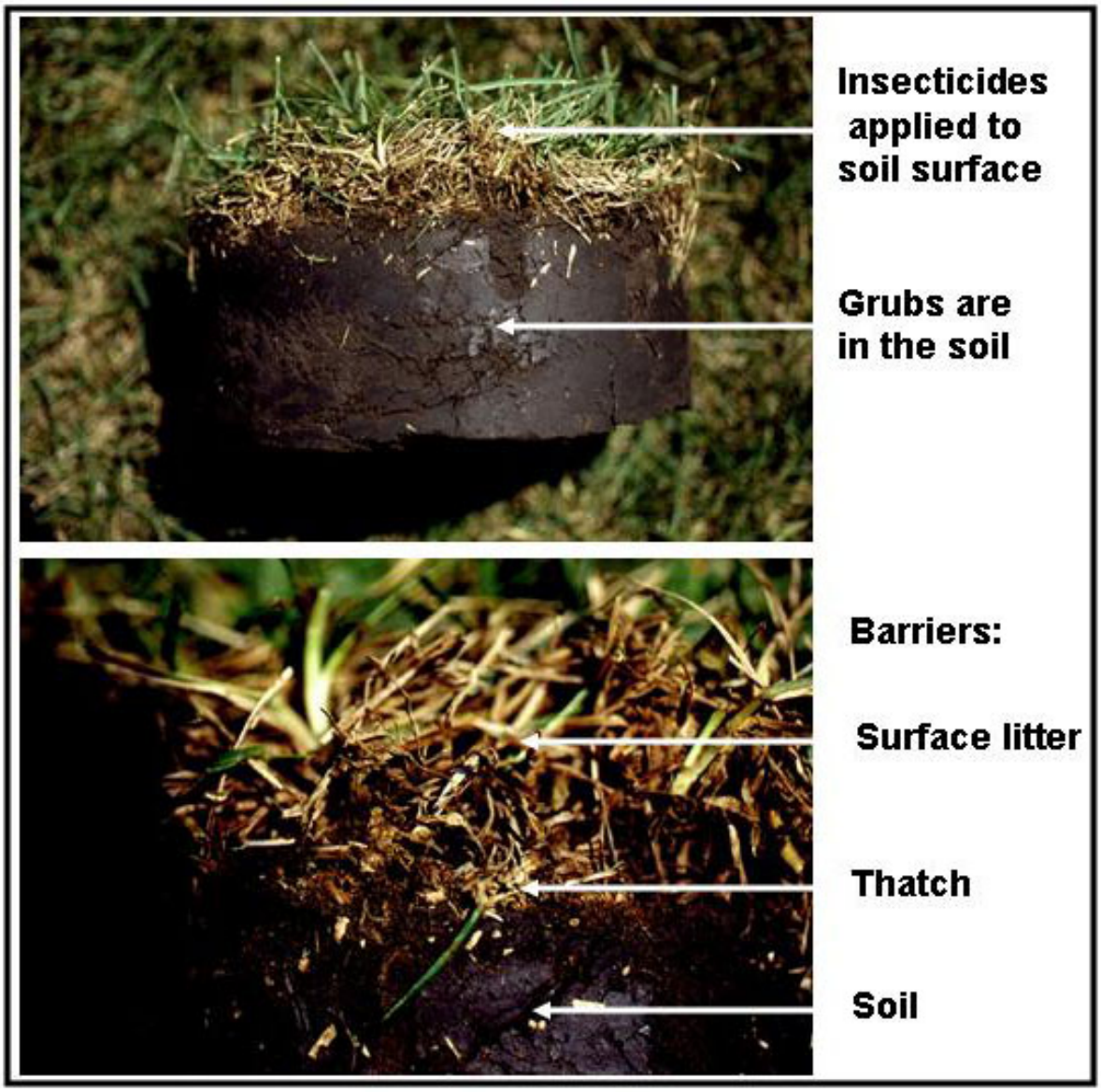

Figure 2

Thatch thickness will vary from lawn to lawn, but can easily be seen to be the major hurdle for insecticide movement/"tie-up" (Figure 3).

Figure 3

To facilitate the movement of insecticides into the soil zone where grubs actively feed, a vertislicer , power rake or core aerator will help create passage ways through the thatch layer. The surface trash created after each of these preparatory operations should be removed before granules are applied.

3) Apply a pretreatment watering to the lawn/turf. This should encourage grubs to be near/in the root zone. More importantly, a pre-moistened soil will facilitate the following.....

4) ….. post-treatment irrigation. This should be applied as soon as possible after insecticide granules have been applied. Short-residual insecticides are subject to rapid degradation/breakdown, and must immediately be moved into the soil. Refer to product labels for the recommended rate of irrigation/watering.

Despite a product's trade name, it is misleading to assume that grub control can be achieved in 24-hours. Rather than being overly anxious to assess control efforts, allow a period of 7 – 10 days (after treatment application/irrigation). It will be easy to determine those grubs that have been killed (blackened – Figure 4), or are dying (discolored and limp/flaccid).

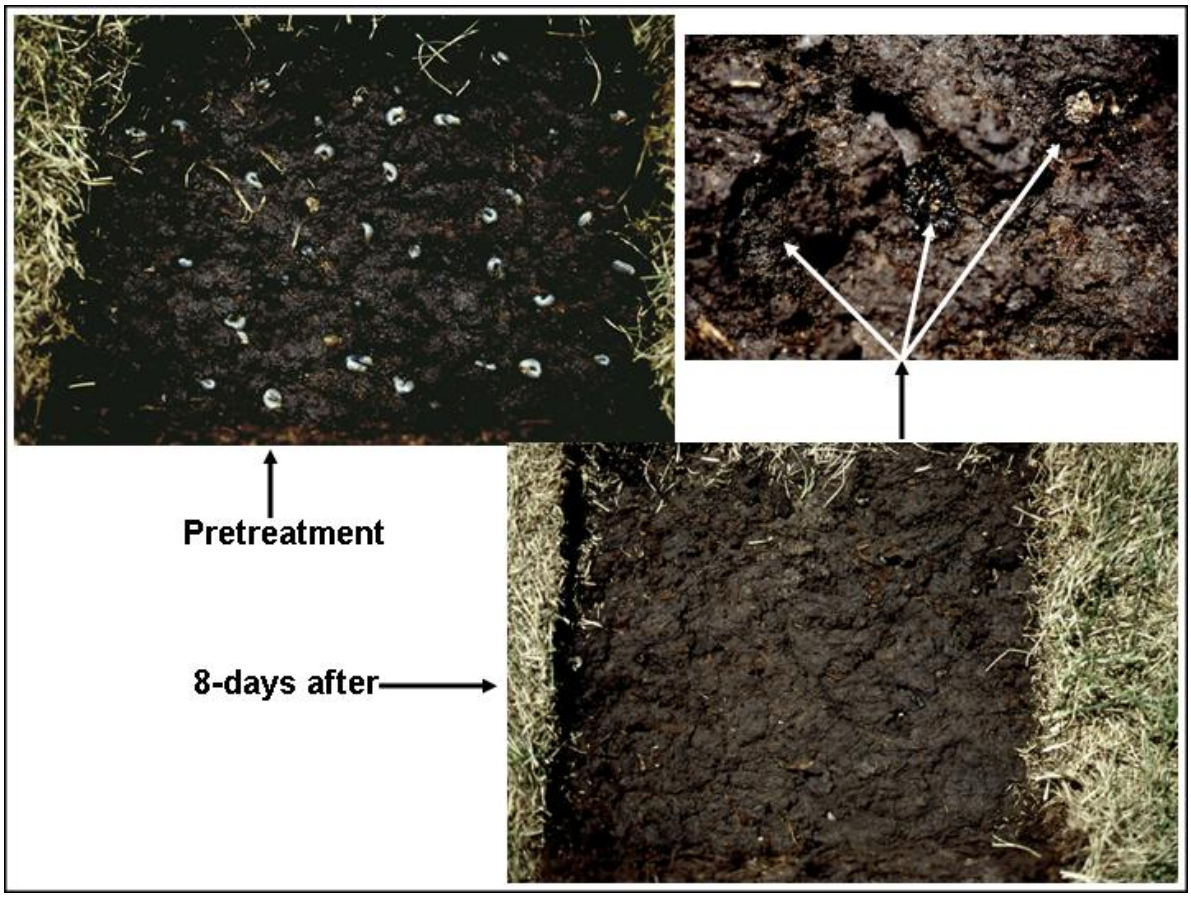

Figure 4

Bob Bauernfeind

Report from the Kansas State University Insect Diagnostic Laboratory:

The following samples were submitted to the Insect Diagnostician Laboratory from September 25th to October 1st.

September 28 2009 Johnson County – Indianmeal moths in pantry and clothes moths in basement
September 28 2009 Wyandotte County – Imperial moth caterpillar on playground
September 28 2009 Wyandotte County – Leopard slug in yard
September 30 2009 Lyon County – Clothes moths in closet
September 30 2009 Lyon County – Dagger moth caterpillar in garden

September 30 2009 Lyon County – Fungal pathogen in swallowtail caterpillars
October 1 2009 Neosho County – Cat flea larvae in home
October 1 2009 Pratt County – Cynipid galls on Oak

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician at (785) 532-4739 or GotBugs@ksu.edu.

Holly Davis

Sincerely,

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