



September 12, 2003 No. 23

Squash/Pumpkin Cleanup:

By this time of year, many home gardeners have probably have experienced squash bug frustrations. And while little can be done with “spilled milk”, there is something to be done to possibly minimize squash bug populations in 2004: **garden sanitation**.

Squash bugs have a limited “preferred” host range mainly squash and pumpkins. They rely on these two commodities for their nourishment. Take away their food source, and you greatly reduce their chance of survival. Unused squash and pumpkins (Figures 1 and 2) provide food sources which nurture future squash bug populations.



Figure 1



Figure 2

Squash bugs overwinter as adults. However, those which successfully overwinter must have adequate food reserves to sustain them through the “off season”. By eliminating vines and unused fruits, adult squash bugs will be unable to obtain the necessary food reserves to sustain them through the winter months. Thus, although they may enter overwintering sites this fall, the likelihood of them emerging in the spring are greatly diminished. There is an even more dramatic effect on the large populations of immature “grey nymphs” ---- simply, food deprivation will lead to their imminent demise before they advance to the adult stage.

It is recommended that vines and unused fruits be made “unavailable” to squash bugs. This might best be done by complete burial, leaving no exposed plant material for squash bugs to feed on. Or, all vines and fruits might be transported to a landfill far removed from the garden site.

The practicality of sanitation, of course, is dependent on the number of plants involved. But it is an option to be considered . Sanitation efforts do not guarantee that squash bugs

won't reappear next year ----- but possibly the numbers of "local overwintered squash bugs" will have been sufficiently reduced to minimize their numbers next year.

Prior to sanitation procedures, an insecticide application against clustered squash bugs would be useful to lessen their numbers. Possible insecticide selections include: Garden Tech's **Sevin** with carbaryl; Ortho's **Bug-B-Gon Multi-Purpose Insect Killer** with esfenvalerate; Hi-Yield's **Thiodan** with endosulfan; Bonide's **Eight Yard and Garden** and **Eight Vegetable, Fruit & Flower**, and Hi-Yield's **Garden, Pet & Livestock Insect Control** all with permethrin; and Bonide's **Rose & Flower** with rotenone.

Robert Bauernfeind

White Grubs in Turf:

Reports are beginning to filter in regarding white grub damage in turf. Unfortunately, people first become aware of grub damage after they (the grubs) have caused sufficient damage to root systems to cause the appearance of "dead patches" (Figure 3). In these areas (without sufficient roots to anchor the turf), the grass can be easily rolled back to expose the underlying culprits: annual white grubs (Figure 4). Upon closer examination, the root damage is readily apparent (Figure 5).



Figure 3



Figure 4



Figure 5

Another indicator of the presence of white grubs are areas of turf that have been disturbed by the foraging activities of vertebrates. Skunk damage is more of a rooting nature (Figure 6), whereas raccoons tend to be more destructive by literally tearing up turf (Figure 7).



Figure 6



Figure 7

At this point in time, the only remedy against white grubs are curative insecticide treatments. Three active ingredients/products are registered for use against white grubs: carbaryl/**Sevin**, diazinon/**Diazinon** and trichlorfon/**Dylox**. It is important to read product labels for site restriction statements.

Probably more important than which product to use, are the procedures to be followed when attempting grub control. It is important to deliver the proper amount of insecticide to the targeted area. Calibrate granular applicators to ensure their delivery of proper dosage levels. When applying liquid formulations, be sure to measure the size of the area

to be treated, and then measure the required amount of insecticide to be applied to that area in a sufficient amount of water carrier.

Water/irrigate the area to be treated prior to the treatment application. This will facilitate the insecticide movement (down into the soil zone where the grubs are feeding) when the post-treatment water/irrigation is applied.

Lastly, allow time for insecticide treatments to work. People sometimes become overly anxious for results. Digging down a day or two after the insecticide application, they expect to find dead grubs. Instead, the grubs appear healthy (Figure 8). The assumption is that the treatment did not work. Another (unnecessary) application is then made. Rather: **check for grub kill 7-10 days after an insecticide application.** By this time, the watered-in insecticide will have had a chance to exert its effect against grubs as exhibited by their darkened remains (Figures 9 and 10).



Figure 8



Figure 9

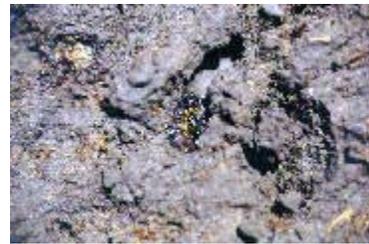


Figure 10

Also, seldom does one obtain 100% kill ----- expect and allow for the fact that occasional grubs may survive treatment applications. However, with most of the population having been eradicated, the few survivors should be of little concern.

Whether or not turf recovers is dependent on the severity of damage to root systems, coupled with efforts to “nurse” the damaged turf. Adequate watering, cooler weather and fertilization may rescue damaged turf — not necessarily overnight, but over time. In areas/spots/patches beyond recovery, fall (now) now is the opportune time for reseeding .

Robert Bauernfeind

Insect Diagnostic Laboratory Weekly Report:

The following samples were submitted to the Insect Diagnostic Laboratory for the week of September 1 through September 5, 2003:

- 9-3-2003, Anderson County: Winged Termites from yard.
- 9-3-2003, Johnson County: Springtails, Clover Mites in home.
- 9-3-2003, Pratt County: Pillbugs on ornamental plants in yard.
- 9-3-2003, Russell County: Indian Meal Moths in home.
- 9-4-2003, Bourbon County: Wood-borer damage in tree.
- 9-4-2003, Republic County: Gallinipper Mosquito in yard.
- 9-4-2003, Harvey County: Carpet Beetles in home.
- 9-4-2003, Harvey County: Winged Ants in home.

If there are any questions regarding these samples or about the identification of any arthropod please contact the Insect Diagnostician (Bobby Brown) at 785-532-6154 or bbrown@oznet.ksu.edu.

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Sincerely,

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