

### White Grubs—

There are several species of beetles, including chafers, in the white grub family. Some common characteristics include:

- One- to three-year life cycles
- C-shaped larvae, 3/4 to 1-1/2 inches long, cream or gray with brown head
- root and rhizome feeders that destroy root system, leaving irregular brown patches
- dead or dying turf often appears in April, May, September, October and November.

"A fairly new white grub problem, **Ataenius spretulus**, causes considerable damage to fairways, greens and tees. This pest prefers Poa and bentgrass turf, but also damages bluegrasses and other species. Damage first appears in mid-June and extends into July or August," says Parham, who recommends looking for the pest in three-day intervals during the middle to latter part of June.

About the size of a grain of rice, this destructive white grub usually can be found in the top two to three inches of soil where they feed on grass roots.

"The underground feeding of white grubs ruins turf appearance and kills the grass," explains Parham. "This damage often requires replacing the turf — a costly and time-consuming effort."

According to Parham, insect pressures often develop locally — not always in the same area or over the entire golf course. "By using an organophosphate such as Proxol 80 SP, you have the option of treating only those areas that are infested," says Parham.

Water-soluble Proxol 80 SP gives fast, effective control of surface-feeding pests such as the armyworm, cutworm and sod webworm, and white grubs (including **Ataenius spretulus**).

"For surface feeders, two to five larvae per square foot is an economic threshold level often used to determine when to treat, but these levels are dependent upon local conditions," notes Parham. He recommends applying Proxol 80 SP when insect populations reach levels sufficient to warrant control measures.

"The most effective time for controlling white grubs is during the larval stage. "Second instar larvae are easier to control than older larvae. Treatments should be applied and carefully watered-in during late April to mid-May for control of the first generation, and again in mid-August, September or October for control of the second generation," recommends Parham. "Six to eight one-year cycle larvae per square foot is a commonly used economic threshold level. However, some states recommend treating at a lower threshold level, thus it's wise to check the guidelines recommended for your geographic area."

Proxol® 80 SP readily penetrates thatch, and golfers are not exposed to a granular residue left on the turf. It can be applied with conventional ground spray equipment and Proxol 80 SP is compatible with other commonly used fungicides and insecticides.

When used at the recommended rates, Proxol 80 SP control principal damage-causing insects without significantly affecting beneficial insects.

"Monitoring turf for pests and treating on an 'as needed' basis is an economical and effective approach to insect control," states Parham. "A preplanned program of attack provides healthy, vibrant turf for optimum playability."

**Dr. Price Parham**

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