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# WATCH FOR WEB WORMS

S OD web worms do a great amount of damage to lawns and putting greens every year. These small grayish worms, the caterpillars of white and yellowish brown moths, eat off grass just at the crown. Brown dead spots then appear in the turf.

No one can prophesy how severe will be the trouble in any one year. This depends upon weather conditions and upon the prevalence of parasites which ordinarily keep web worms in check. Our suggestion is to watch your lawn carefully during June, July and August for the appearance of small brown dead spots. If these are observed, surrounding areas should be scrutinized closely to determine if any of the worms are present. It is difficult to find the worms as they move swiftly and they are hard to see because of their dirty-grayish color.

### Life Cycle

Web worms originate from little white and yellowish brown moths. They lay their eggs in early June on blades of grass and these are hatched in from six to ten days. The young worms move down into the soil where they form a loose silken web while feeding on the grass roots, and, during the latter half of July form cocoons in which they pass the pupal stage and from which the moths emerge a little later. These moths continue the cycle and the new larvae become partly grown before winter, to become fully grown the following May. They then pupate and the moths hatched in June proceed to repeat the cycle.

### Distinguishing Characteristics

The web worm in many instances has become confused with the army worm. The latter is usually about two inches long, having a dark gray or dingy black color with three narrow yellowish stripes on its back besides a slightly darker and broader stripe on each side. In contrast web worms have no stripes but are covered with small tubercles each bearing a tuft of small hairs. They are from one-half to threefourths of an inch long.

### Control Measures

Arsenate of Lead. Dust this chemical on infested turf at rate of 6 or 7 pounds per 1,000 square feet. A hand dusting machine or a rotating fan duster is best although arsenate can be put on by placing it in a coarse burlap sack and shaking the sack up and down with a quick jerky motion. It can also be mixed with soil or fertilizer and then broadcast by hand or through a mechanical seeder like the Lawn Master.

After this has been distributed it should be worked down into the ground by sweeping the lawn with a floor brush or broom. Following this it should be washed off the grass blades. A mechanical sprinkler is not satisfactory, but a stream of water should be applied direct from a nozzle.

Kerosene Emulsion. The cheapest treatment is to make a kerosene emul-

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sion but there is considerable danger incident to using it. There is a fire hazard in making it, and if improperly made it may injure turf.

The Bureau of Entomology of the United States Department of Agriculture recommends the following procedure in making a kerosene emulsion:

"Dissolve 1 pound of laundry soap in 1 gallon of boiling water; remove from fire, add 1/2 gallon of kerosene, stir rapidly until a creamy emulsion is obtained. This stirring may be accomplished by pumping the mixture into itself through a spray pump or by churning it in an inexpensive household butter churn. Small quantities have been prepared with an egg beater. For use as a spray, 1 part of this stock emulsion should be mixed with 50 parts of water and this mixture applied to the infested turf at the rate of about 1 gallon to a square yard (112 gallons to 1,000 square feet). Apply with a sprinkling can."

The material cost is about one-sixth of a cent per square yard.

Dichloro-ethyl-ether Emulsion. Someone has suggested that the name of this chemical alone is enough to scare sod web worms out of the country. It is widely used on the west coast and is reported highly effective.

It may be obtained from the larger companies dealing in chemicals and insecticides for approximately forty cents per pound in 10 pound quantities. Since it is an oily substance which doesn't easily mix with water, the emulsion form should be obtained to simplify mixing. Place 2<sup>1</sup>/<sub>4</sub> pounds in about 100 gallons of water and apply this on 1000 square feet of infested turf by means of a compressed air spray or sprinkling can.

## Summer Feeding

Many lawns need summer feeding, especially those on rather poor soils or in shaded locations. Where the turf has turned brown from lack of plant food in the soil, there is a noticeable thinning out of the grass and it gives evidence of being starved.

Grass may be fed with a complete food such as Scotts Turf Builder every sixty days if it is thin and unhealthy. Where a three times per year feeding program is carried out we suggest April, June and September. The summer applications demand a little greater care as to method and amount.

### Method of Application

To insure uniform distribution we suggest mixing 10 pounds of Turf Builder with a bushel basket full of screened soil or sand and applying it to each 1000 square feet. Do this when the grass is dry, and if the topdressing is done by hand it is a good plan to use the back of a rake or a broom to spread the material evenly. Otherwise streaks will show in the lawn and those spots receiving the heaviest dose.

Mixing the Turf Builder with sand or soil simplifies the task considerably and the topdressing material itself is quite beneficial to the grass. Among other things it tends to cover up the exposed roots and protect them from the glaring sun.

#### Water Important

Apply Turf Builder late in the afternoon rather than during the heat of the day. Just before a rain is ideal. If such a fortunate time cannot be selected, give the lawn a good, thorough soaking after the task is completed.

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