



# UNITED STATES GOLF ASSOCIATION GREEN SECTION

## Mid-Continent Turfletter

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### GRUBS IN TURF

Dr. J. B. Polivka, Entomologist for the Ohio Agricultural Experiment Station, recently has discussed the "Present status of insecticides for control of grubs in turf." Dr. Polivka lists the insecticides that have been used most widely for grub control and presents information concerning their respective periods of effectiveness.

Lead arsenate is one of the first used effective controls. The combined results of 18 experiments indicate that a single application of 10 lbs. of lead arsenate per 1000 sq. ft. can be expected to give control for a period of 6 years.

DDT applications of 25 and 37.5 lbs. per acre were still effective when checks were made 9 years after application. Results of 16 field tests indicate that a 25 lb. per acre application will give control for a period of 6 or more years.

Chlordane at the rate of one pound per acre ceased to provide control after the 5th year but 5 and 10 pound applications were 100 percent effective when surveyed seven years after application. In two tests 5 and 10 lb. rates have provided control for a period of eleven years.

Heptachlor at the rate of one pound per acre of actual material began to lose some of its effectiveness after 7 years. The 3 and 5 pound rates were still 100 percent effective in controlling grubs after that length of time. This insecticide may be recommended for grub control if the cost factor permits.

Dieldrin tests have given variable results but rates of 3 and 5 pounds per acre have generally been very effective. This insecticide is coming into considerable use because other tests have indicated a long residual effect in the soil.

Aldrin and endrin at rates of 3 lbs. and above are giving control after 4 years.

Summary: On the basis of cost per acre and effectiveness of grub control, these tests indicate that chlordane at the rate of 5 lbs. of actual material per acre is outstanding. DDT and lead arsenate are no longer generally recommended. If the cost per acre should change, it is possible that heptachlor, dieldrin, aldrin or endrin might replace chlordane as the choice of insecticides for grub control.

### MORE ABOUT MONDO GRASS

Inquiries continue to come to us about Mondo grass. Mondo grass (Ophiopogon spp.) is not a grass at all, but rather a member of the lily family. It has been growing wild in damp, humid regions of the south for years. It characteristically has a sedge-like growth, a pale green color and will reach an average height of 6 to 10 inches. When full grown, it bends or "weeps" over, giving the appearance of a shaggy sheep dog. Where it is indigenous (in the south), it thrives best in moist shade and under large trees. It has been put to some use along walks as semi-hedges, etc.

Mondo will not stand traffic to any extent. In more northerly climates, it will remain green during the summer months only. All indications are that it will be killed or growth severely retarded during cold winters.

It does not perform well under close mowing conditions. The tightness of growth formed is deceiving because of its "weeping" character. At the present time, we can see no useful purpose for this plant on golf courses. This plant was discussed more fully in the Southwestern Turfletter published in April, 1956.

### WHERE ARE YOUR TREE FEEDER ROOTS?

Unless you have been pruning roots every two or three years, it is very likely you are feeding trees when you fertilize greens and tees. Proximity to such a well cared for area is an ideal location for trees. They get nutrients and a large amount of water that is necessary to their welfare during the summer months. When adequate water and fertilizer is applied to turf around trees, you may be assured the trees will receive a great deal of benefit. Trees need to be well fed but sometimes turf on greens and tees may suffer from the competition. In taking plugs from greens, tree feeder roots just under the soil surface are sometimes revealed. Troublesome sprouts may arise from the larger roots of some trees. Cottonwoods are notorious in this respect.

There are several ways of pruning the roots of trees. Three of the most common and effective ways are by use of a tractor and root pruner, digging a trench by hand, or using a ditch digger.

It may be hazardous to the turf on some greens to prune the tree roots. This is because some of the old greens constructed without proper drainage have had excess water removed by feeder roots of nearby trees. If tree roots around such greens are pruned, it may be necessary to alter the watering procedure to compensate for the change. In greens that are well constructed with proper drainage and with a good soil mixture, however, the turf may suffer from starvation. In such cases it is necessary that both trees and turf receive adequate nutrients.

If trees are near the greens, the presence of tree feeder roots in the turf may be detected very quickly by digging a narrow ditch. If many roots are present you will uncover some in a short distance. Pruning roots is not a cure for all green trouble, but it may solve one of your problems.

### DISEASE DAMAGE ON FAIRWAYS

The weather during the spring of '57 was ideal for the development of many turf pathogens. It was damp, humid, and changeable. In many areas fungi have taken a severe toll of turf, especially on fairways, where cost prohibits fungicide treatments. Septoria and Helminthosporium (leaf spot) have been very severe on bluegrass and, in some cases, bent. Fusarium and a number of other fungi with tongue twisting names have been very active on bent. The Omaha area furnishes an example of the severity of fungi damage. At the Omaha Country Club, Mose Payette was not satisfied with the off-color of his fairways and some greens. The diseases which were active were the slow, insidious type; turf is so gradually weakened and killed that considerable amounts are lost before it become visibly noticeable. Microscopic examination revealed the presence of a number of fungi known to be parasitic. Through regular fungicide treatments, Mr. Payette is getting his greens back into fine shape.

Getting fairways back into fine shape is another story. When diseases kill out areas of desirable turf, weeds such as crabgrass and Poa annua or annually seeded plants re-establish the area and may constitute most of the cover.

The weather history in the Omaha area gives the severity of disease damage this spring an interesting twist. For a number of seasons, this particular area has had dry weather with below average rainfall. Most parasitic fungi are less damaging under these conditions. Therefore, for the past few years, there has been very little disease trouble - especially on fairways. When all the rain arrived this spring, the fungi again became damaging and set up entirely different conditions than those present in the immediate past. Therefore, such a situation is not something new but rather something infrequent. Such conditions will have to be tolerated until chemicals which are economical as fairway fungicides are developed. Good cultural practices will speed recovery.

### FIELD DAYS and TURFGRASS CONFERENCES

- August 8.....Rutgers University Turf Field Day  
Rutgers University, New Brunswick, N.J. Dr. Ralph E. Engel
- August 14.....Texas Turfgrass Association Field Day  
Texas A. & M. College, College Station. Dr. Ethan C. Holt
- September 10.....St. Louis District Golf Association Field Day  
Link's Nursery, Route 1, Conway Road,  
Clayton, Mo. Leo S. Bauman
- September 16-17.....Midwest Regional Turf Foundation Field Days  
Purdue University, Lafayette, Indiana. Dr. Wm. H. Daniel
- October 14-15.....New Mexico Turfgrass Conference  
New Mexico College of Agriculture and Mechanic Arts  
State College, N. M. Prof. Clarence Watson
- October 16-17-18....Kansas State Turfgrass Conference  
Kansas State College, Manhattan, Kans. Dr. Ray A. Keen

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USGA GREEN SECTION

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