



Better Turf for Better Golf

# TURF MANAGEMENT

from the USGA Green Section

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## BETTER BLUEGRASS WITH ZOYSIA?

Common Kentucky bluegrass turf suffered severely from *Helminthosporium* leafspot all over the country this spring. The cold, wet weather seemed to favor the growth of the fungus, and many areas of bluegrass turf are going into the summer in a thoroughly weakened condition so we can expect a great deal of crabgrass this summer. It has become quite clear to us we have crabgrass because the turf grasses which we have been using are not sufficiently disease-resistant or heat-resistant to produce a turf strong enough to choke the crabgrass before it gets started.

The bluegrass lawns at the Plant Industry Station, Beltsville, Md., are no exception. Leafspot has reduced them to some extremely bad-looking pieces of turf in which crabgrass already is beginning to make its appearance in great abundance. Three years ago, in one of the bluegrass lawn areas back of the South Building, we decided to make a trial planting of Z-52 zoysia. We had increased this promising strain of zoysia over the winter in the greenhouse in flats. Early in May, 1949, we planted small sprigs of vegetative material on 2-foot centers. First we ran the Aerifier with 1-inch spoons over the area and

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No Green Chairman or Course Superintendent should be without a copy of **TURF MANAGEMENT**. This is a comprehensive, authoritative book on course care and maintenance written by Prof. H. B. Musser, of Penn State, under sponsorship of the USGA. It is the most complete and up-to-date work on that subject.

**TURF MANAGEMENT** may be ordered through your local bookstore, from McGraw-Hill Book Co., or from the United States Golf Association, 40 East 38th St., New York 16, N. Y. The price is \$6 a copy.

planted the sprigs in the Aerifier holes. Then the tractor was run over the sprigs to press them into the soil, and after that the lawn got just ordinary maintenance, which meant fertilizing once or occasionally twice a year with about 400 pounds of a 10-6-4 fertilizer at each application—no irrigation.

The first year (1949), the sprigs practically disappeared. In 1950 small islands of zoysia began to appear towards the end of the season, so that the areas were easy to find. This spring (1951) toward the end of May, it was extremely noticeable that wherever a sprig of Z-52 zoysia developed into turf, the bluegrass was much better in these areas. We say the bluegrass is better because it looks healthier. The zoysia has tended to completely mask the damage done to the

bluegrass by the leafspot. This observation has been made by members of the Green Section staff and has been checked on a number of occasions by the various members of the Department of Agriculture staff, and all came to the same conclusion. The presence of Z-52 zoysia in the common bluegrass turf definitely improves the turf. Crabgrass is beginning to appear where there is no zoysia. Where the areas of Z-52 have become strong, crabgrass is non-existent and there will be none in these areas from now on.

#### Another Example

Across the service drive, at the same time, 4¼-inch cupcutter plugs of common *Zoysia japonica* were planted on 2-foot centers into the same type of turf. By now these plugs have spread and have nearly covered solid, and the reduction in the amount of *Poa annua* and weeds in this planted area is remarkable. Here again the zoysia is covering up the defects of the common bluegrass and the resulting turf is sturdier, healthier, and much more attractive.

Whenever the subject of planting zoysia vegetatively into established turf is brought up, the invariable reaction is that it is too expensive, it requires too much labor and it takes too long. We would like to suggest that the performance of zoysia in many areas across the United States where crabgrass is a severe problem during the summer may possibly be one of the real answers to better turf at lower cost. We would like to suggest further that even though planting of plugs or seedlings or sprigs into established turf may be slow and labor-consuming and expensive, it is justified because the first cost is the last. Once the job has been completed, it does not have to be repeated if it has been done right. Chances for failure are very small if simple precautions are observed at planting time.

The Green Section is attempting to overcome this labor-and-cost-objection by developing seed supplies of zoysia and by learning how to introduce zoysia

#### TURF SPEAKERS



Four who addressed the Northern California Turf Conference this spring. From left, Prof. H. B. Musser, Pennsylvania State College, author of Turf Management; Ellis W. Van Gorder, of Stanford University; Dr. Fred V. Grau, USGA Green Section Director, and O. J. Noer, of the Milwaukee Sewerage Commission.

into established turf by the use of seed. The problem is complicated by a number of factors, and it may be years before the procedure can become practical. In the meantime, the planting of sprigs, or seedlings or plugs, can continue at almost any time during the growing season with a high degree of success. In the northern part of the region where *Poa annua* and crabgrass tend to alternate during the year, it may be necessary, if zoysia is recommended by state and local authorities, to plant it by the seedling or plug method, because the season may be too short to get seed established. Plans are being made now to issue instructions or suggestions on how to raise your own seedlings, which seems to be a very effective and efficient way of using a small amount of seed and making it go a long way. By planting individual seedling plants on 2-foot centers, one ounce of zoysia seed, properly handled, will plant approximately six acres.