

New Jersey's Turf Program Unites Research, Teaching*

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The Turf Program in New Jersey has as one of its annual activities the one week turf course. It is held each year for the purpose of bringing ourselves up-to-date on recent developments that have occurred in the field of turf management.

The lectures are given by various individuals on the College of Agriculture staff and individuals from the field of turf management. We like to have greenkeepers on the program; this year Carlton Treat, Edward Casey, and Leonard Strong spoke to us. Attendance has been between 80 and 90 the past several years which is somewhat above average as compared to that for the years prior to the war. A number of the individuals who enrolled in the first courses still attend. This is evidence that indicates to us that the one week turf course has been an effective project.

Also, we have a ten week course that starts in late October. It has been given for three years. The purpose is to give the fundamentals of turf management such as pertain to fertilization and other factors. While this course does not provide the practical experience, we feel that it is an opportunity for the younger men to gain some fundamental theory before they find themselves confined on the job as the greenkeeper. G.I. benefits have been obtained for this course. The enrollment has been limited to 20 students.

Display Results on Field Day

A third function that has become an annual feature is the Turf Field Day at which time the test plots and demonstrations are displayed. We like to have this event in July when the pressure is on the turf. While this is a strenuous season for the greenkeeper, it still works out quite well since our state is small and most greenkeepers do not have far to travel. We like to keep this meeting limited to a half-day so that no one needs to be away from his course all day.

The turf research program at New Jersey had its origin from grass plantings made in 1925. The severe season of 1928 gave the work additional support and impetus. As a result, research contributions were produced in the '30s such as

* (NGSA convention paper)

the role of lime in turf culture, the rate of penetration of lime, the effect of different sources of organic matter in topsoil, and the factors affecting the growth of *poa annua*.

The turf research work was discontinued during the war years and a new series of tests were started in 1947. One phase of this present work that is of great interest to us is a series of tests that are designed to show the effects of the aerifier and other types of cultivation. I speak of the use of the aerifier as cultivation, because I believe the word aerifying is too limiting for the possible values.

We are using the aerifier in tests on both putting green turf and fairway turf. The experiments are designed so this machine is being used at different seasons and frequencies, and under different soil conditions. The effect of cultivation on the penetration of lime, fertilizer, and water into the soil are some of the problems that we in New Jersey would like to have answered by this study. As yet we do not have any information to give you; possibly we can supply you with some results in the next year or two.

Study Time of Fertilizing

A second problem that we in New Jersey would like more information about is that of time of fertilization with regard to control of *poa annua* and clover. The thought is that we should be able to locate a particular season of the year when it is most advantageous to fertilize for the benefit of the turf grasses. The treatments that we are using are those of steady fertilization throughout the season, concentrating the fertilizer in the cool seasons, and the concentrating of fertilizer in the warmer season of the year.

Tests are established on both the putting green turf and fairway type of turf. Since this type of test is slow to show results, again we do not have any information to give at this time. Also, the time that is best for us will not be the same for your area if the climates are different. However, we shall be glad to pass on our results when they are available as they may reveal a philosophy that will indicate the proper time to fertilize in your particular location.

A study of the companion grasses was run for the purpose of determining if there was any possibility of their use in seed mixture for golf courses. We were not able to find a place for a companion grass under golf course conditions where a good stand of permanent grasses is desired in a minimum of time.

It may be of interest to you that we found under our conditions that perennial rye grass and common rye grass were far more competitive than redtop. However, we did not like the performance of redtop in our area because it tended to die out quite suddenly and leave the turf discolored and unattractive. Neither of the grasses disappeared entirely in 2 years. In one part of the study, we seeded a mixture of 15% rye grass and 25% redtop. With higher rates of seeding, the stand became predominantly rye grass with a loss of Kentucky bluegrass and Colonial bent.

Chemicals As Weed Control Tool

When speaking about the use of chemicals for weed control I have the habit of emphasizing the importance of good maintenance practices. I have not been alone in suggesting that chemical weed control is not a "cure-all," but another tool. In 1947 the New Jersey Agricultural Experiment Station started a test in cooperation with the USGA Green Section and the U. S. Department of Agriculture to determine the value of 2, 4-D along with

fertilizer and seeding in renovation programs.

The use of 2, 4-D only gave very good control of broadleaved weeds for the first two seasons. However, after that a noticeable number began to reappear. Plots that were treated with both 2, 4-D and fertilizer showed far better control of the broadleaved weeds after two seasons. This gave us data to show that chemicals for weed control give the best results when they are tied into a well-balanced program of turf maintenance.

We have put out approximately 1000 plots on chemical crabgrass control in the past two seasons. Of the phenyl mercuries, the commercial preparations of C-Lect, Puraturf crabgrass killer, and Seltox were included both seasons. Also, the experimental materials, phenyl mercury acetate solubilized as prepared by the Gallowhur Chemical Co. and S-2000, an experimental phenyl mercury, were included. We have tested potassium cyanate and several of the Sowa chemicals such as S-1998 for two seasons. Several new materials were tested this year that have given us enough promise that we hope to study them further in the future. While we do not profess that the ideal chemical has been found, we feel that progress has been made and that with the tremendous amount of work being done on chemicals for weed control in crops, something even better may be found.

HOOSIER PROS FINISH DAY'S WORK



Annual spring meeting of Indiana Section PGA this year, as usual, had as its finale a dinner of pros, peddlers, club officials and sports writers. After six hours in intense business sessions the pros relax, tuck up their bibs, then listen to gossip and merriment.