



North Carolina State University
School of Agriculture and Life Sciences
Academic Affairs, Extension & Research

Department of Plant Pathology
Box 7616, Raleigh, 27695-7616

October 16, 1986

Dr. William H. Bengeyfield
USGA Green Section
Box 3375
Tustin, CA 92681

Dear Dr. Bengeyfield:

Ongoing research on spring-dead-spot of bermudagrass at North Carolina State University involves three phases:

1. Fungicide/fertility evaluation for control. Three sites in the southeastern United States have been treated with several fungicides and fertilization sources for potential disease control. Disease control evaluation will be made in the spring of 1987.
2. Fungicide/fertility evaluation on increasing low temperature hardiness of Tifway bermudagrass. Several fungicides and fertilization sources have been applied to Tifway bermudagrass. Plugs will be extracted from these areas during the fall, winter, and spring, and subjected to artificially induced cold temperatures to determine treatment effects on bermudagrass winter hardiness.
3. Isolation of the spring-dead-spot causal organism(s). Several selected media and baiting techniques are currently being used to try and isolate the SDS causal organism(s). Isolation attempts will be during the fall and winter as well as spring.

Also enclosed are several slides of spring-dead-spot disease areas and test sites involved in this study.

If there are any questions or comments, please feel free to contact me.

Sincerely,

Bert McCarty
Postdoctoral Research Associate

BM:jd

Enclosure

ANNUAL REPORT ON SPRING DEAD SPOT RESEARCH
FOR USGA/GCSAA RESEARCH COMMITTEE

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Experiments have been conducted to isolate Leptosphaeria korrae and Phialophora graminicola from bermudagrass from SDS areas. Samples were obtained from SDS-affected bermudagrass from two golf courses in Alabama and from three different areas in North Carolina. Dark mycelium typical of these fungi was observed on the stolons and stems of the bermudagrass. Fungi such as Helminthosporium species, Curvularia species, Trichoderma species were isolated from all of the samples. However, Leptosphaeria and Phialophora species were not isolated directly from the tissues or by using wheat as trap plants. The trap-plant technique was used by Dr. Smiley in New York to isolate these fungi. Isolations are continuing during the fall which may be the time these fungi are most active on turfgrasses.

Fungicide evaluation tests have been established on bermudagrass fairways that had SDS symptoms in the spring of 1985. Eight fungicides are being evaluated by making applications to 20 x 25 ft replicated plots on October 1 and November. The fungicides are being compared to Tersan 1991 that was labelled earlier for control of SDS in North Carolina. The effect of these fungicides on SDS control will be evaluated in May and June of 1986.

A graduate student has not accepted the assistantship to work on SDS in our department yet. An offer was made to several students in

September, but selected to work with other problems and crops. The assistantship will be offered to several new graduate students for January 1986. We have fewer students applying for graduate study in Plant Pathology and Biological Sciences, in general. I did not anticipate problems in finding a graduate student to work on this problem. In the meantime, I am conducting the research on this project. The funding was arranged in our department such that a 6 month delay in filling this position will not create a problem in funding a graduate student for a full three years. I will contact you about possibly using part of the money for temporary labor if a graduate student does not accept the assistantship for spring 1986.

**EXECUTIVE SUMMARY ON SPRING DEAD SPOT
OF BERMUDAGRASS RESEARCH**

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Experiments were conducted to isolate fungi that have been reported to cause spring dead spot in Australia and California. Similar fungi were not isolated from samples collected in Alabama and North Carolina. Fungicide evaluation trials have been established on bermudagrass fairways that had spring dead spot in the spring of 1985. Disease control evaluations will be made in the spring of 1986. A graduate student has not accepted the assistantship at North Carolina State University yet. Efforts are continuing to have a graduate student on the project soon.