

Control of Pythium Blight with Fungicide Treatments

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Fungicides were evaluated at the Valentine Turfgrass Research Center, University Park, Penn., on perennial ryegrass, maintained under home lawn/golf course fairway management conditions.

Two applications of Prograss, at a rate of 2 lbs. per acre, were applied for *Poa annua* control on 14 and 30 October, 1988. The experimental area was fertilized on 4 and 18 May, 1989, with 0.5 lbs. actual N (NH_4NO_3) per 1000 sq. ft. Tersan 1991 at 2 oz. per 1000 sq. ft. was applied on 23 June to control large brown patch in the experimental area.

Individual treatment plots, 3 ft. x 18 ft., were arranged in a randomized complete block design with three replications. Fungicides were applied with a CO_2 -powered, boom sprayer using T-jet 8004 nozzles, at 30 psi, in water equivalent to 2 gal. per 1000 sq. ft. Two separate tests were carried out.

Fungicide applications were made on 27 June in Test 2. Three days after fungicide applications (30 June), a 3 ft.-wide strip across all treatments was inoculated with a 6-isolate pool of *Pythium aphanidermatum* grown on autoclaved rye grain. Following inoculation, the 3 ft.-wide inoculated strip was covered with PVC pipe-framed, translucent, plastic-covered hu-

midity chambers to increase relative humidity and minimize radiational cooling at night.

Humidity chambers were equipped with intermittent mist to maintain a saturated atmosphere. Chamber ends were open and a 1-minute mist was applied over 20 min. during daylight hours. At night, chamber ends were closed and no mist was applied.

After one week incubation, the chambers were removed and the inoculated areas were visually rated (nine days post-treatment). A second inoculation in test 1 was made nine days after treatment (6 July), in the manner described above. Chambers were removed and this inoculation was rated 16 days post-treatment, (13 July). Fungicides were applied in test 2 on 11 July, inoculation/incubation were carried out two days post-treatment (13 July), and inoculation termination/rating were done nine days post-treatment (20 July). All data were subjected to analysis of variance and Waller-Duncan K-ratio t test. Data from tests 1 and 2 are presented.

In test 1, disease pressure was low in the first inoculation (37% mean blight in non-treated checks), with the result that there was little separation among chemical treatments. By 16 days post-treatment in test 1, only Aliette and Koban + Aliette were providing acceptable levels of disease control. In test 2 at nine days post-treatment, most of the chemical treatments were giving excellent control of *Pythium* blight, except the low rate of P368 and the individual applications of the reduced-rate mixture components. Disclaimer: These results should not be considered by anyone as an endorsement by The Pennsylvania State University.

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