



GAEUMANNOMYCES PATCH
(Take-All Patch)

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Gaeumannomyces patch or take-all patch (formerly called ophiobolus patch), has been observed on cultivated turfgrasses in the temperate regions of the world for many years. It has, in the past, been considered a turfgrass disease of minor importance, except in certain areas of the world (e.g. Pacific Northwest U.S., Northeast U.S., Britain, and northern Europe) where weather conditions are especially conducive to the disease. Recently, Gaeumannomyces patch has been receiving increased attention from turfgrass managers and researchers as it is increasingly identified as a disease problem in areas of the country where it was rarely, if ever, observed previously.

The disease is caused by a fungus (Gaeumannomyces graminis previously Ophiobolus graminis), which infects the underground portions of the plants, eventually plugging the water conducting (xylem) tissues of the roots and crowns. It is primarily a problem on creeping bentgrass areas which are poorly drained and have a high pH level. Other turfgrass varieties are less susceptible, although they may be affected. The disease usually causes circular or ring-shaped dead spots (6"-3' in diameter) which eventually fill in with weeds and resistant grass varieties. Although the fungus is most active in the spring and fall, the disease symptoms are frequently most severe during the summer stress periods.

There is no chemical control for this disease, although some fungicides (Bayleton, Chipco 26019) have shown some disease suppression in recent tests in Maryland. At present, cultural controls such as: 1) reducing high pH levels through the use of sulfur or ammonium sulfate fertilizer and 2) improving poor drainage are the most effective in suppressing this disease. Once the disease has been identified as a problem, the use of lime should be avoided since high pH levels are conducive to disease development.

We have observed minor outbreaks of Gaeumannomyces patch on the bentgrass greens at the Hancock Center and elsewhere around the state during the past year. Our research will involve: 1) the use of heavy drenches of fungicides which are showing promise in research studies elsewhere in the country and 2) cooperative studies with Dr. Rieke to determine the effects of nutrients such as sulfur and phosphorus on disease development.