

Shade Study

1. Helminthosporium leaf spot is the most important disease on Kentucky bluegrass grown in the shade during most of the growing season and powdery mildew only becomes a problem late in the fall and then only on certain varieties. This susceptibility to Helminthosporium occurred on many varieties that are normally resistant to Helminthosporium in full sunlight. The two exceptions were Nugget Kentucky bluegrass and Warren's A-34 Kentucky bluegrass.

2. The two best grasses for dense shaded areas would appear to be Warren's A-34 and Nugget Kentucky bluegrass. They are even more adapted for dense shade than the red fescues which were previously recommended for such conditions.

Systemic Activity of Chloroneb in Turfgrass

Chloroneb was shown to be systemic in Merion Kentucky bluegrass. Penncross creeping bentgrass and Poa annua. This would suggest that to obtain the best Typhula blight control, chloroneb should be applied shortly after the last mowing, while the grass plant is still active.

Stripe Smut

This study was conducted on a Merion Kentucky bluegrass turf heavily infected with stripe smut. The fungicides were applied dormant in the fall following the last mowing. The three systemic fungicides used were Tersan 1991, Fungo, and Cleary's 3336. They were applied at an 8 oz/1000 sq. ft. rate and drenched into the soil immediately after application. These fungicides all significantly controlled the stripe smut when compared to the untreated check. However, where they were used alone there was severe thinning of the Merion turf due to Helminthosporium leaf spot infection.

A second part of the study was to use Terraclor, (PCNB) Scotts F+F II (Fertilizer + PCNB) and IBDU + Terraclor (Fertilizer + PCNB) by themselves and across areas treated with the three systemics. Where the PCNB treatments were used in conjunction with the systemic fungicides not only was stripe smut controlled by the systemics but the Merion turf had good density because the PCNB prevented a Helminthosporium leaf spot invasion. The plot treated only with the PCNB fungicide or one of the PCNB Fertilizer combinations had better density than the untreated controls or the systemic fungicide only plots, however, they had levels of stripe smut comparable to the untreated control which could lead to severe loss of turf during the heat and drought stress of summer.

Conclusions:

1. Systemic fungicides will control stripe smut when applied dormant in the fall.
2. Systemic fungicides applied dormant cause Merion to lose its resistance to Helminthosporium leaf spot, resulting in severe thinning of the turf.
3. Where dormant applications of systemic fungicides are used to control stripe smut a residual Helminthosporium control like PCNB must also be used.