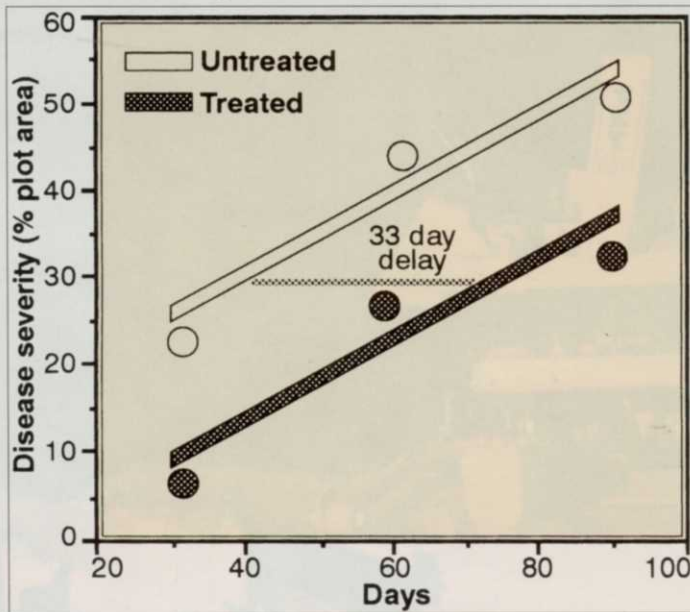


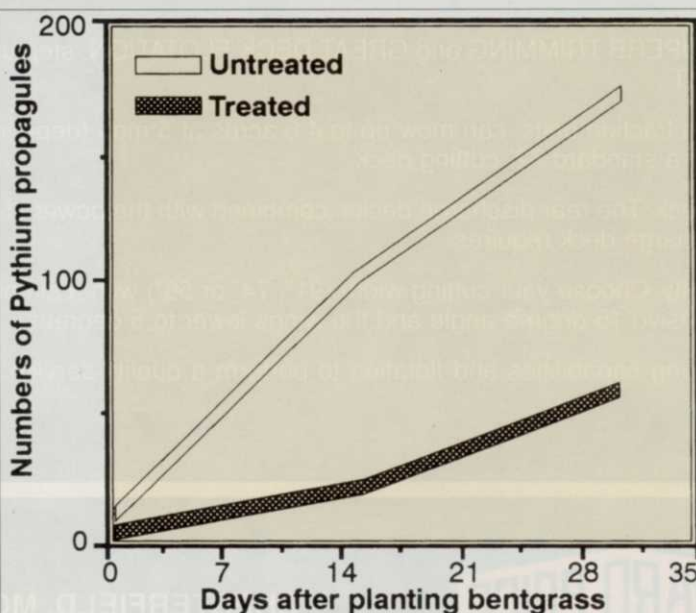
# First bio-fungicide for turf is released

by WANDA J. GARDNER and SANDRA E. KOWALLIS

Control of Dollar Spot with Bio-Trek 22G™



Control of Pythium levels in soil planted to bentgrass with Bio-Trek 22G™



The Environmental Protection Agency has approved the first biological turf fungicide, a highly effective strain of the fungus *Trichoderma harzianum* (T.h.), which is a natural component of soil microflora.

Developed by a team of Cornell University researchers, a hybridized strain of T.h. (T-22) is the active ingredient in Wilbur-Ellis's Bio-Trek 22G. It is a living organism that is dormant in dry granular form. The fungicide is appropriate for any high-value turf, such as commercially-managed lawns and sod farms.

The product is applied at a rate of 1.5 lbs./1000 sq.ft. Repeat applications can be two to four weeks later in soils with harsh chemical residues or poor growing conditions.

T-22 falls into the thatch where natural moisture is usually enough to activate the organisms; however, watering in ensures full activation.

When pathogens such as pythium, fusarium, *Rhizoctonia solani* or *Sclerotinia homeocarpa* attempt to move in, T-22 extends branching structures to entwine the hypha of its competition, drills into the hypha and secretes an enzyme to kill the pathogen, which then decomposes in the soil.

Bio-Trek prefers neutral or slightly acidic soil; however, the organisms will thrive in normal soil pH ranges suitable for turf, even in somewhat alkaline soil. Because they are sensitive to soil temperature and grow faster above 50 degrees F., populations may decrease through the winter.

In test plots monitored by Cornell University scientists, T-22 showed 20 percent less severity of *Sclerotinia homeocarpa* after a 60-day period, and its early use avoided a 33-day delay in beginning treatment. In similar tests, pythium levels measured in soil planted to bentgrass were significantly lower in the sample treated with T-22.

While Bio-Trek provides early defense against invading pathogens and, therefore, reduces appearance of surface symptoms, evidence of disease may eventually surface. At that point, chemical sprays should be applied, but you will not need as much product because of the early work of Bio-Trek. □

—The authors are public relations writers based in Fresno, Calif.