

PREVENTIVE FUNGICIDES INSURE OVERSEEDING SUCCESS

By STAN FREDERIKSEN*



Relatively safe from severe fungus disease onslaughts (though not always) are Florida's bermudagrasses. The fine-leaved hybrids (T-328, Tifdwarf, and the like), and the native "common" varieties, being normal to the Florida "turf scene", all have a degree of natural resistance to most fungus attacks.

In North Florida, bermuda's beige-grey winter dormancy brings automatic fall cool-season overseeding, to assure that green winter putting turf so attractive to winter-month tourists and half-year Florida residents. Many South Florida superintendents, on the other hand, have sought to "get by", through winter, by avoiding those frustrating fall and spring "transition" periods and trying to carry their fine bermudas through the cold months *without* benefit of overseeding.

No more! Sub-freezing temperatures and snowy blasts of the past several winters, even in the Miami - Ft. Lauderdale - Tampa - St. Petersburg sector, have convinced them that "it isn't worth the risk!" Grey putting greens are "out" — entirely unacceptable! Green putting turf is "in" — a real "must" — and all those greens likely will be overseeded annually, from now on.

Great! *But* — while healthy and well-managed bermudas are only rarely attacked by fungi (usually the easy-to-control types like brown patch, dollar spot, the leaf spots and others in the "mild" category), the cool-season overseedings (perennial ryegrass, seeded bentgrass, fine-leaved fescues, *Poa trivialis* and mixtures of these) bring with them a "whole new ball game", captained by the most devastating of all known turf diseases — Pythium blight! While Pythium has been known to "cross over" and attack the bermudas (this is fairly rare), it is literally "death" on

unprotected cool-season overseedings, particularly in the tender seedling stages. Strangely, *Pythium* seems (no hard statistics on this) to attack most viciously the highly-prized perennial rye grasses. Paradoxically, the new improved ryegrasses happen to be the most desirable of all overseeding grasses, and for a myriad of reasons. They are fine-leaved, beautifully emerald green colored, quick germinating (5 days or less), make the "transition" periods well, and form the absolute ultimate in turf "cushion" on bermuda putting greens, permitting continued play on green winter putting surfaces, with only minimal "wear" on the dormant bermudagrass beneath.

The "key", therefore, to effective overseeding, is *prevention of fungus diseases* on the overseeded grasses — prevention, especially, of deadly Pythium blight. Fortunately, Pythium prevention is now a well established procedure, and readily attainable by superintendents, including those South Florida turf managers who have just discovered, during the recent several years, that green putting surfaces on bermuda greens through winter can be assured only through well planned cool-season grass overseedings.

Timing will vary, of course, with latitude — earlier (September or October) in North Florida, and later (mid to late November) in extreme South Florida. Ideally, the program will be initiated as soon as the air and soil temperatures have cooled enough so that bermuda growth has diminished, and the wilting of tender emerging seedlings of the cool-season grasses does not occur.

With optimum timing established, here are two simple programs, either of which will produce excellent winter green putting surfaces, based on whether ryegrass or a different cool-season grass or mixture is selected: *continued on page 8*



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1. **PERENNIAL RYEGRASS OVERSEEDING** (*Annual* ryegrass, though cheaper per pound, is of inferior quality, requires heavier overseeding rates, and is now seldom used or recommended).

1.1 As the determined overseeding time approaches, maintain adequate disease prevention on the not-yet-dormant bermuda with weekly fungicide treatments, alternating between the contact fungicides (KROMAD, Daconil, etc.) and the systemics (FUNGO, 1991, etc.) to avoid infestations of brown patch, dollar spot, leaf spots and other diseases to which the bermudas are a natural host.

1.2 When the weather has cooled sufficiently to preclude sun burn-out of cool-season overseedings, aerify and verticut the greens, "dragging" the cores and debris sufficiently to expose enough soil to assure its good contact with the seeds to be planted.

1.3 Be sure that the soil is adequately fertilized to support ready germination and growth of the new overseeding.

1.4 Choose a good weed-free and *Poa annua*-free perennial ryegrass seed that has been *KOBAN-treated!* Northrup-King's Medalist II is excellent, as are *KOBAN-treated* perennial ryes from Loft, Bingham and other reputable seed companies. Make sure the seed bags are tagged "THIS SEED HAS BEEN TREATED WITH KOBAN BRAND "FUNGICIDE" (or other terrazole-containing fungicide.) **NOTE** — as of now, *KOBAN/Terrazole* is believed to be the only chemical labeled for grass seed treatment against *Pythium* disease, and it is limited by its registration *only to ryegrasses*.

1.5 Evenly and uniformly apply the treated ryegrass seed, at the rate of 20 to 25 pounds per 1000 square feet. If your seed is *not* treated, or as an extra precaution (though not normally essential when *treated* seed is used), apply a *KOBAN* spray to the area just seeded, following label recommendations.

1.6 Lightly topdress the area with *sterilized* topdressing (to further insure good contact of the seeds with the soil). Use a topdressing of the same physical and chemical consistency as the upper putting green soil, to help avoid undesirable "layering".

1.7 Irrigate frequently and lightly, making sure that the soil surface *never dries* prior to complete germination of the cool-season overseeding.

1.8 While the *KOBAN-treatment* of the seed will assure maximum (usually almost 100%) germination, rapid growth of the ryegrass will help to dissipate the residual *KOBAN*. *Therefore* — begin weekly

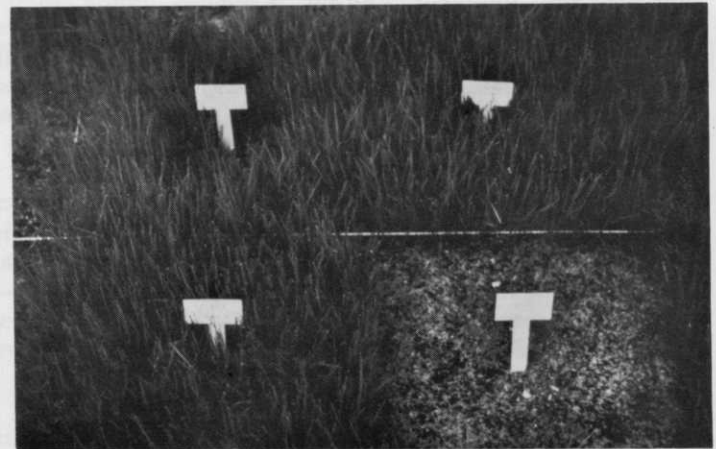


Figure 2. Four plots, all on *Pythium*-innoculated soil, and all ryegrass-seeded at same time. Lower left and upper right plots show full germination and development of healthy ryegrass in the two plots treated with *KOBAN* just after seeding. Compare with untreated check plot at lower right (with no grass at all), and with inferior fungicide-treated plot at upper left, where some grass is developing, but where *Pythium* is attacking the grass right around the plot identification tag.

(Photo from Dr. Edw. Freeman, of the University of Florida)

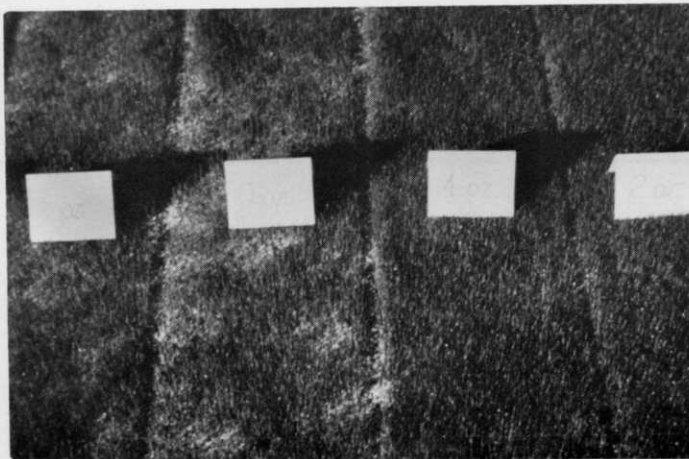


Figure 1. Shows excellence of *KOBAN-treated* Medalist II perennial ryegrass. Two plots on left are ravaged with *Pythium* because *non-treated* ryegrass couldn't develop in *Pythium*-infested soil. Compare with *KOBAN-treated* Medalist II ryegrass seeded two plots on right — *KOBAN* has prevented *Pythium* attack, and ryegrass is developing normally, even in the *Pythium*-infested soil.

(Photo courtesy of Northrup-King Seed Company)

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KOBAN sprays, at label rates, within one week after the new seedlings sprout, and continue until the weather cools and the Pythium threat has passed.

- 1.9 Continue the KROMAD, Daconil, FUNGO and 1991 alternate sprays routinely to prevent other turf diseases (brown patch, dollar spot, the leaf spots, etc.) from invading.
2. **OTHER COOL SEASON GRASS OVERSEEDINGS** (Seeded bentgrasses, fine-leaved fescues, *Poa trivialis*, or recommended mixtures of these)
 - 2.1 Preparatory to overseeding, follow precisely the same initial steps as set forth above in sub-sections 1.1, 1.2, and 1.3 under Section 1., "PERENNIAL RYEGRASS OVERSEEDING".
 - 2.2 Select the overseeding grass or mixture to provide the desired end results and characteristics, in terms of germination time, disease resistance, "turf cushion" (to protect the bermuda base), color, climate adaptability, etc. Regardless of variety, choose a *good* seed that is weed-free and *Poa annua*-free.
 - 2.3 Evenly and uniformly apply the seeds or mixture, at recommended rates.
 - 2.4 *KOBAN-spray the newly seeded area at once*, making sure to use the full recommended rates for this special preventative treatment. **REMEMBER** — unlike the KOBAN-treated perennial ryegrasses, these "other" overseeding varieties are *not* usually treated against Pythium disease, so that *this* particular KOBAN spray is *the* one that affords the protection already "built into" the treated perennial ryegrasses.
 - 2.5 Follow through the remainder of the program by adhering to the actions set forth above under sub-sections 1.6, 1.7, 1.8 and 1.9 in Section 1., "PERENNIAL RYEGRASS OVERSEEDING".

As an "aside", it should be pointed out that when circumstances may so dictate KOBAN and FUNGO may be tank-mixed for broader-spectrum disease control — including *Pythium* control.

Above all else remember that *GREEN* is "the name of the game" (the *golf* game, that is), especially as regards putting turf. Many Florida golf courses represent multi-million dollar investments — all to attain the objective of playing golf on *green* grass. Thus, it is sheer folly for any turf manager to try to "cut corners" and "save" (?) a few hundred dollars, either by avoiding and overseeding or by following a poorly devised overseeding program that doesn't include maximum protection against fungus diseases — especially *Pythium*. Let's face it, fellows — it just "ain't worth the risk!"

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