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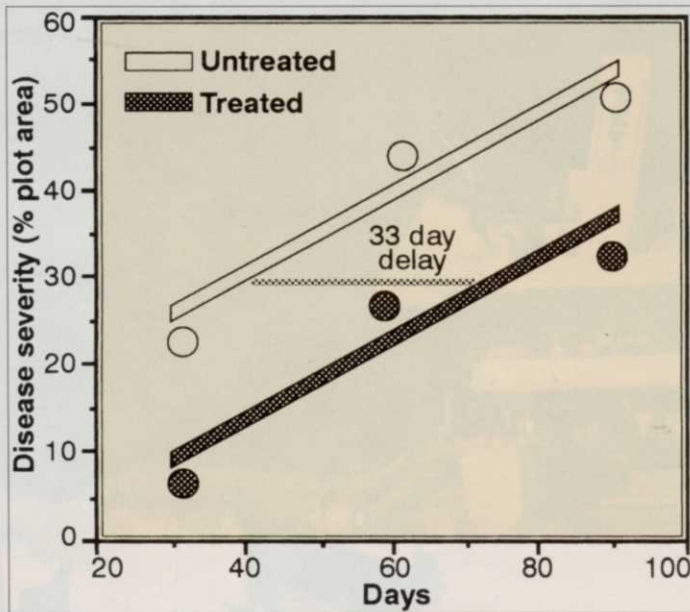
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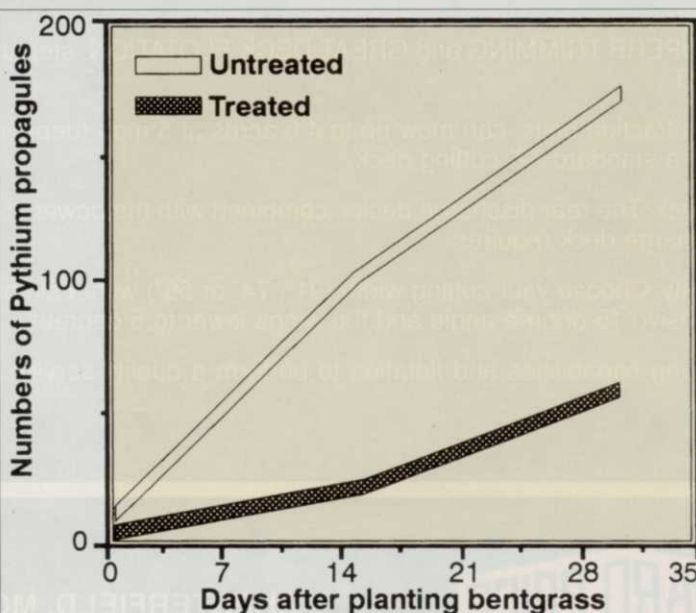
First bio-fungicide for turf is released

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™



SOURCE: DEPARTMENT OF HORTICULTURAL SCIENCES, DEPARTMENT OF PLANT PATHOLOGY, CORNELL UNIVERSITY.

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.

Bill Clinton's fear: a Dole/Powell ticket

If President Bill Clinton had his druthers, he wouldn't want to face a Republican presidential ticket of Bob Dole and Colin Powell, says Wolf Blitzer, CNN's White House correspondent.

While that scenario is not out of the question, it is premature, Blitzer pointed out to about 100 LCOs and industry suppliers in Washington D.C. on Jan. 29. The event was PLCAA's annual Legislative Day.

First, Blitzer said, Dole is hardly assured the Republican nomination (especially

after what happened in the New Hampshire primary, which took place after Blitzer's speech). Also, Powell has studiously avoided tipping his hand about the vice president's job even though he declared himself a Republican last fall.

If Powell does have future White House aspirations, what better route than through the vice presidency, specu-



CNN Correspondent Wolf Blitzer, right, with Thomas Diederich of Orkin, center, and Norman Goldenberg, TruGreen/ChemLawn.

lated Blitzer. After all, since World War II, five vice presidents have gone on to serve as presidents: Harry Truman, Richard Nixon, Lyndon B. Johnson, Gerald Ford, and George Bush.

Blitzer said President Clinton's fondest wish for the November election would be the emergence of a strong third-party candidate like independent candidate H. Ross Perot in the 1992 election. Some White House staffers felt that Perot won just enough support to swing the presidency away from Bush and to Clinton, said Blitzer.

"Between now and November is going to be filled with unpredictability," said Blitzer. "There are so many wild cards out there that I wouldn't even attempt to try to guess what's going to happen."

While President Clinton's popularity was high in January, it could plummet if Bosnia erupted into fighting again with American casualties, or if the U.S. economy faltered, Blitzer said. □

Dursban lawsuits dropped

Two lawsuits against the turf insecticide Dursban that were spotlighted on CBS-TV's "Eye to Eye with Connie Chung" last year have been resolved, and the DowElanco product has been vindicated.

In *Jack Kahn vs. DowElanco*, Kahn's attorneys filed a motion to dismiss their case with prejudice—meaning that the case can never be re-filed. Kahn had claimed that Dursban had caused him to develop "chemical sensitivity" and "peripheral neuropathy." But when faced with a list of expert witnesses which the defendant was ready to call to the stand, Kahn's attorneys asked for the dismissal.

"This action is a complete victory for DowElanco and, we believe, an acknowledgment by Mr. Kahn and his attorneys that they simply did not have any credible evidence to support their allegations," said Dave Morris and Guy Relford of DowElanco in a letter to customers.

In *Apple vs. Tri-County North Local School District*, DowElanco was never sued—just a pest control operator, building architect, building engineer, contractors and various others. Recently, however, the students' and teachers' suit against the pest control operator was voluntarily dismissed.

"The results of these cases is not unusual," claimed Morris and Relford. "Neither Dow Chemical nor DowElanco has ever lost a Dursban personal injury lawsuit at trial. In these two lawsuits, the individuals attacking Dursban were simply unable to prove their allegations." □

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>HOT TOPICS

Battening the hatches for hurricane season

Hurricane season in the Gulf Coast states begins in June. Golf course superintendents there should have a preparedness plan designed for their golf courses, but Dan Jones of Banyan Golf Course in West Palm Beach, Fla., offers this general plan as a starting point:

Maintenance shop:

- ▶ Store all machines and equipment possible inside the maintenance building.
- ▶ Secure all loose material such as pipe, garbage cans, etc.
- ▶ Check stockade fence for loose boards; brace with two-by-fours from both sides.
- ▶ Turn off main breaker switcher at maintenance building and pump stations.
- ▶ Service two-inch pipe for possible

emergency.

- ▶ Install plywood over all glass windows.
- ▶ Store all damageable items above

ground level.

Golf course:

- ▶ Store all flags, ball washers, signs and moveable objects in maintenance shop.
- ▶ Clean all drainage inlets.
- ▶ Check flap gates for proper operation.
- ▶ Prop taller trees with two-by-fours in three directions.
- ▶ Have backhoe, front-end loader and trucks serviced and fueled.

Clubhouse:

- ▶ Store all golf cars at maintenance compound.
- ▶ Store all golf clubs in locker room.
- ▶ Put four-inch pump at top of cart storage.

- ▶ Put storm shutters on windows.
- ▶ Turn off all power except kitchen.
- ▶ Turn off main gas line.
- ▶ Fill kitchen pots with water.
- ▶ Store pool and snack bar furniture in locker room.
- ▶ Remove all outdoor potted plants.
- ▶ Remove all outdoor signs and moveable objects.
- ▶ Store all important records from temporary buildings in clubhouse.
- ▶ Store all water-damageable items off floor.
- ▶ Put sand bags against locker room and clubhouse doors.

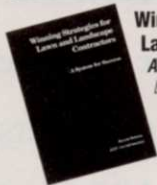
Tennis courts:

- ▶ Remove windbreaks from fence.
- ▶ Store all furniture in locker rooms.
- ▶ Remove all signs.

This information first appeared in *The Florida Green*, the magazine of the Florida Golf Course Superintendents Association. □

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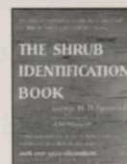
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Is it SAFE to use 'safe?'

Dr. Kirk Hurto of Tru-Green/ChemLawn says the worst four-letter word you can use starts with "S," as in "safe" when you're talking about pesticides.

"The media has helped raise safety concerns," Hurto notes. "The media will continue to associate pesticides with Agent Orange [the cancer-causing compound used in the Vietnam War]."

"Everything you say is considered advertising under the new Federal Trade Commission guidelines. So—even though you want to get the word out on your company

and how it uses pesticides—you have to be careful what you say."

Hurto says the public fears the unfamiliar (pesticides) or things over which they have no control.

"Everything we do in life has risk," Hurto says. "The goal of risk communication is to make the public understand risk so they can accurately weigh the benefits against the risks. So we have to instill confidence that the risks [of using pesticides] are negligible compared to the benefits, and that those risks are controlled."

Hurto lists the "5 C's" to effective risk communication:

1) **Concern:** recognize and respond to emotional concerns.

2) **Clarity:** communicate in non-technical language.

3) **Confidence:** be knowledgeable and credible.

4) **Competence:** be professional.

5) **Control:** take it by saying what you're doing to mitigate risks.

"Answer questions honestly," Hurto suggests. "Clearly address the issues." **LM**

DON'T SAY:

"The chemicals are EPA-approved."

"They are as safe as common household chemicals."

"The government requires the sign."

DO SAY:

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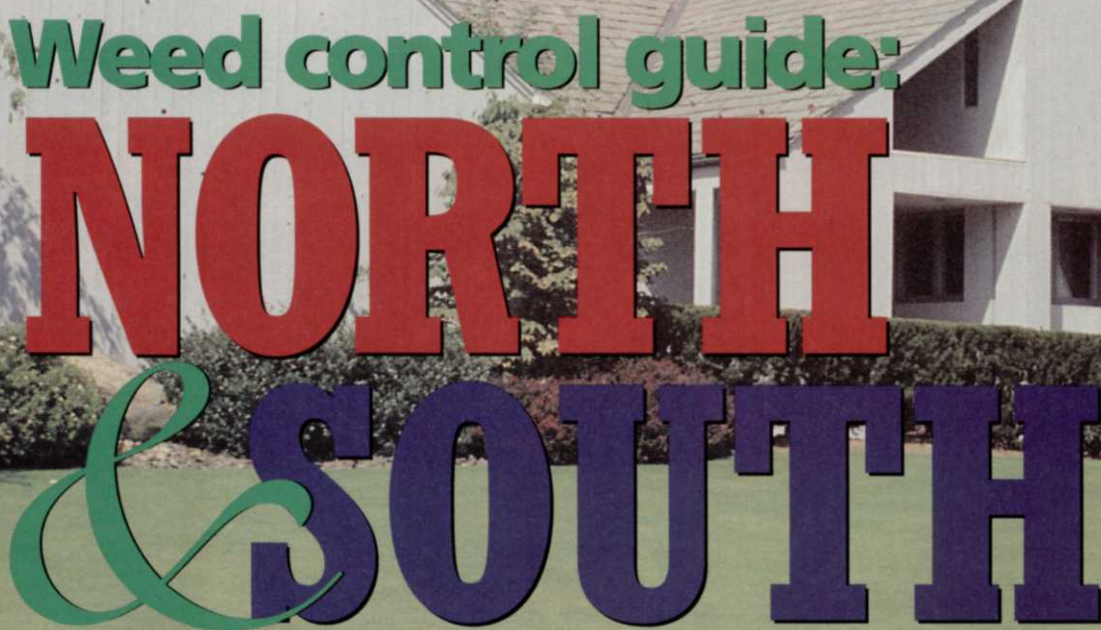
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Weed control guide: **NORTH** & **SOUTH**

Up North, you don't have to kill *all* the weeds

How many weeds will customers tolerate? That's a good question to ask when planning control strategies.

by TOM FERMANIAN, Ph.D./University of Illinois

The keys to weed control is deciding on a maximum number of weeds that are tolerable and designing a management system to achieve and maintain that goal. It is certainly possible to hold weed populations to about one or two percent of the turf area. For some turf areas, larger populations of four to 10 percent are more practical.

IPM

Integrated Pest Management is one way to control a variety of turf pests. IPM combines sound cultural practices with occasional herbicide applications to manage weeds. In an integrated program, primary care areas such as mowing, fertilization and irrigation should be designed to maximize the turf's competitive potential and minimize the most troublesome weeds. Secondary practices such as cultivation, mechanical control and sanitation can also be used to reduce or manage weeds.

Mowing

Unfortunately, the most persistent weeds have adapted to low mowing heights and frequent mowing. A mowing strategy should be developed to first minimize its impact on the turf and to reduce weed growth. Mower blades should be adjusted and sharpened to reduce potential stress on the turf.

Adjust mowing frequency to remove less than one third of the leaf blade surfaces, and to provide maximum turf regrowth. Mowing also affects other potential pests such as insects and diseases that might eventually thin the turf and allow weed development. Some weeds, particularly tough-