## Study Last Summer's Disease Problems

## To Plan This Summer's Control Program

Summer is the season when you want your course to look its best, but it's also a time of increased stress on turf which makes disease more likely. "Summer's warm, humid conditions encourage such turf diseases as brown patch, dollar spot, leaf spot and pythium blight," says Todd Cutting, TUCO agricultural chemical technical extension field representative. "At the same time, the heavy play a course gets during this time places additional stress on the turf, making it more susceptible to disease problems."

That's why a superintendent who wants to keep his course free from ugly disease blemishes and himself free from golfer complaints - should carefully plan a program that will prevent summer diseases. "The best way to plan a disease control program for this summer is to go back and analyze what happened on your course last summer," Cutting suggests. He recommends that superintendents analyze these factors:

1) Which disease or diseases caused you the most problems last summer, and where? When did these problems first appear and can you pinpoint the cause? If you can answer these questions, you'll know what your most likely disease threat will be this summer, when you're most likely to fact it, and where. 2) The next step is to analyze cultural practices. Fertilization should provide minimum levels of essential nutrients; excessively high nitrogen levels may increase turf's susceptibility to such diseases as Fusarium patch and brown patch. Thatch levels thicker than a half inch also encourage disease development, particularly if the area is poorly drained.

Turf which remains damp for long periods of time is more susceptible to disease so it is recommended that brushing, poling or hosing be used to remove dew from grass blades. It



also is recommended that sand be used to improve subsurface drainage and aeration. Avoid planting foliage in areas where it will block movement of wind through the turf to dry off grass blades.

Avoid daily, light applications of water, particularly in late afternoon or evening. It is recommended that water be applied as infrequently as possible, but at a depth of six inches or more, with each irrigation.

By analyzing last summer's disease problems and where they occurred, it may be possible to pinpoint specific cultural practices that are encouraging the problems.

3) Use of cultural practices that discourage turf diseases often is not sufficient to prevent disease outbreaks because weather stress, coupled with the stress caused by heavy course play, cannot be controlled. "This is why a preventative program should include regularly scheduled fungicide applications every 7-10 days, continued on Page 10 when weather conditions favor disease development," Cutting says. "By analyzing last year's problems and where they occurred, you can select a fungicide that will be effective against those specific problems and plan applications in areas where problems are most likely to occur."

Cutting recommends use of a broad spectrum antibiotic fungicide such as Acti-dione, which is economical enough to allow a greater number of treatments than many other fungicides and is effective against major summer diseases. In addition, it is compatible with most insecticides.

"A successful disease prevention program should include both proper cultural practices and a scheduled program of fungicide applications before disease signs appear," Cutting emphasizes. "Planning and carrying out a total preventative program can minimize turf disease problems at a time of the year when your course needs to be in top shape."

Weakness or injury is most likely to develop in areas of the perimeter ring where other stress factors also come into play. Sharply contoured greens often develop this malady, especially where the mower makes it sharpest turns during th cleanup pass. Sometimes this problem can be resolved by recontouring the green so that sharp turns are eliminated.

Triplex ring symptoms often manifest themselves on greens only in entrance and walk-off zones, especially when traffic is restricted to narrow passageways by steep banks, sand bunkers or other obstacles. If the area around the green can be redesigned to provide several different entrance and exit channels, very often the triplex ring will disappear.

The presence of trees near a green may create enough extra turf stress to produce visual symptoms in the area of the perimeter cut. Too much shade, poor air circulation and tree root competition all weaken the resistance of the turf to the additional wear of the triplex mower. Removing or thinning some of the nearby trees in order to improve sunlight penetration and air circulation will usually help alleviate the problem. The trees should be root-pruned by digging a trench between the trees and green, placing tarpaper or some other heavy-duty material in the trench and backfilling.

There are many types of stresses which may have a detrimental effect on the health and vigor of putting green turf. By carefuly investigating the causes of this stress, adjusting mowing and cultural programs accordingly, and creating a favorable environment for plant growth, some of the problems associated with the use of the triplex putting green mower can be eliminated.

-James T. Snow, Agronimist

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