

Superintendent takes preventive measures

■ An integrated management approach based on preventive disease control measures works wonders for golf course superintendent Scott Werner, CGCS, of the Lincolnshire Fields Country Club, Champaign, Ill.

Werner's success begins with a turf foundation based on proper fertilization. By stimulating a healthy turf, Werner believes he wards off diseases and weeds that usually accompany stress conditions.

"Our goal is a fairly moderate rate of growth," says Werner. "We don't want any excessive periods of heavy growth which stress the turf and detract from playing conditions."

The greens at Lincolnshire are fertilized every two to four weeks, depending on conditions. Werner uses low rates of N, which means he can make applications more frequent without paying for it with rapid growth.

The fertilizers are high in potassium, to promote turfgrass vigor and stress tolerance, and a healthier, more vertical and upright growing plant.

Soil problems—The golf course that is Lincolnshire Fields was carved out of what Werner calls "good 'ol central Illinois dark, heavy loam." It retains water, drains poorly, and is prone to compaction in heavy traffic areas. After a heavy rain, the ground becomes water-logged or the water just sits on the surface.

"The soil type has a great effect on disease problems, particularly pythium blight, which is a water mold disease," says Werner. "We have a difficult time controlling diseases in those areas that don't drain well."

Dollar spot and brown patch frequently appear on the course, and Werner does his best to combat them. Subsurface drainage tiles have been installed, and he aerifies often with a Cushman GA60.

When necessary, preventive fungicides are brought into play.

"When you detect disease," says Werner, "a certain amount of damage has already been done."

"Given the fact that we work around play schedules and golfers, it would take us days to treat for a widespread outbreak.

By that time too much damage is done. We feel we can be more successful, cost-effective and use less total fungicide each year by treating the course preventively."

Greens are treated on a two-week rotation. Tees and fairways are covered every three to four weeks.

Tank mixes—Werner tank mixes systemic and contact fungicides, using several different products that complement each other's strengths and weaknesses. Though he follows label recommendations, he prefers the low-end rates and looks for synergy between products.

Werner mixes traditional sterol inhibitors—such as Banner and Bayleton—with contact fungicides—Thalonil, thiophanate, Chipco 26019, Vorlan and Curalan. He says the results have been favorable, especially in terms of product performance and turf safety. Pythium control was exceptional after applying the combination of Fore and Aliette.

Werner is trying combinations of newer products, such as Eagle fungicide, a newly-registered systemic from Rohm & Haas Co.

Werner looks closely for effectiveness and turf safety in the products he uses. Length of control is also very important. If a product passes his standards, it must then be as cost effective as his current line-up.

The superintendent tested Eagle for three years as an experimental product. Werner compared Eagle in side-by-side comparisons with Banner, Bayleton and Daconil for dollar spot control, one of the worst disease problems at Lincolnshire Fields.

Werner recommends Eagle in the fight against turf disease.



Scott Werner and a view of Lincolnshire Fields. Werner considers product efficacy, safety and length of control.

"We need all the products we can to control diseases and prevent resistance," he says.

Cultural accompaniments—Werner balances management practices to encourage turf vigor and discourage disease.

Werner overseeds perennial ryegrass at a rate of 200 to 300 lbs. per acre for tees and fairways in late summer and early fall. The overseeding contributes to healthier turf at times of heavy disease pressure.

Spring verticutting toughens the turf for the heavy play that summer brings. Grooming reels or turf groomers also provide a very light verticutting with each mowing.

A new computer-controlled irrigation system is almost completely installed.

It uses an on-site weather station to accurately monitor loss from the turfgrass and soil.

With the data, Werner can determine his irrigation needs and schedules. During the stressful summer months, he can let the computer program each day's irrigation automatically. The coverage and control of this new system allows for more accurate and efficient irrigating, which uses less water.

New horizons in disease control continued on page 30



Spring verticutting prepares greens for heavy play at Lincolnshire Fields.

Taken as an integrated plan, turf aeration, fertilization and irrigation provides the best possible turf conditions, explains Werner.

All of which is important when you consider the speed with which a disease problem can grow.

"If we don't practice good disease prevention and control," says Werner, "in a matter of days an untimely outbreak of disease could ruin all our good work."

Social responsibility results in new 'vision'

■ Turf and ornamental chemical manufacturers must be able to adapt to the continuing changes in product regulations, market needs and technology as the start of a new century approaches.

Those changes include attention to programs for lower product rates, waste water reduction and innovative packaging.

Ciba Turf & Ornamental Products, for instance, has established "Vision 2000," which includes attention to social responsibility, environmental protection and economic growth.

"These elements will enable us to forge partnerships with green industry customers as we move closer to the year 2000," says company director Bill Liles.

Like many companies that manufacture control products for the green industry, commitment to exceeding regulatory standards is one of Ciba's self-imposed mandates.

One Ciba facility began a water recovery program and reduced waste water by 99 percent. Overall, company manufacturing facilities are well ahead of regulation standards which go into effect in 1998.

Membership—and involvement—in professional associations is a key aspect of some companies' commitment to the green industry. Ciba also co-sponsors educational programs such as the Audubon Cooperative Sanctuary Program for Golf Courses and scholarship funds for the children and grandchildren of golf course superintendents (the Legacy Awards).

Ciba and other manufacturers continue to offer products that can be used at low rates, while protecting soil and water resources. Low-rate products from Ciba include Banner, a broad spectrum fungicide.

Closed packaging systems limit user and environmental exposure to turf protection products during mixing. Ciba's turfPak is a returnable and refillable micro-bulk container.

Wettable powder and gel formulations in water-soluble packages are other innovations.



Ciba's Bill Liles: stresses training and continued education.

Economic growth—To ensure economic growth and a strong industry, product manufacturers go beyond simply supplying customers with a product. The next step is to provide customer and industry support.

"When a customer buys our product, they receive much more than just the packaged chemical," says Liles. "Included with that purchase is our guarantee of quality products, training and continuing education and nationwide industry support."

Liles urges customers to continue to support products labeled specifically for the green industry. Otherwise, he fears, "there is a serious risk that companies like ours will no longer be able to afford steep registration costs."

"The journey (a product takes) from test tube to market costs between \$15 million and \$30 million, and takes from seven to 10 years," Liles explains.



The 'turfPak' system as designed by Ciba limits pesticide exposure, speeds application time and ends package disposal problems.