VOYAGER VILLAGE VIGNETTE

by THOMAS C. FISCHER
GOLF COURSE SUPERINTENDENT
VOYAGER VILLAGE COUNTRY CLUB

Voyager Village is a 6,400 acre recreational land development with an estimated 3,400 possible homesites, of which approximately 300 lots have houses on them. Another 300 lots are used as campsites with the remaining lots purchased for land investment or retirement. About 800 sites are available on the real estate market at present.

Throughout the 6,400 acres there are eight lakes with maintained beach areas and boat landings, a small ski hill, riding stable, airstrip, clubhouse, and an 18 hole golf course. The duties of the superintendent encompass all the activities of the Village.

As for the care of the golf course there is one program that I perhaps handle differently than most superintendents due to the high quantity of sand in the greens. When I first came to Voyager in April of 1978, the greens were aerified in the fall, a standard practice. During the following spring and early summer, the course would experience many isolated dry spots on the greens, and to the dismay of the golfers, the dry areas on the greens were aerified once again and then hand-watered for two weeks to ensure that the soil was thoroughly wetted to prevent recurring dryness. By this time it would be the first of July before the greens would be in excellent condition. My next approach was to use a wetting agent along with the spot aerifying to promote healing and re-wetting of the soil.
After doing the standard practice for two years I developed a better way of eliminating those isolated dry spots on the greens by waiting until spring to aerify. That next spring I aerified around the first week in May, before the isolated dry spots had a chance to form. After coring, I verticut the plugs, dragged them in for topdressing and then soaked the greens to ensure that they were thoroughly wetted. A week or so later, a granular wetting agent was applied at the normal rate over these dry areas.

This program was very successful. By Memorial Day the greens had healed and perhaps there were still a few problem spots but only one or two per green instead of 10 to 15 per green as in previous years.

I have been doing this procedure over the past four years and believe that it has helped tremendously. Other benefits from spring aerification are more sun time and less humidity for drying the plugs which also means easier cleanup, aid in healing any winter injury, and fewer complaints from golfers prior to a season of heavy play.

STOP PYTHIUM OUTBREAKS

by DR. R. C. BOWERS
TUCO AGRICULTURAL CHEMICALS

Advance planning can mean the difference between an attractive, playable course and one riddled with an unwelcome Pythium blight infection.

Pythium blight, caused by one or more species of the water-mold fungi Pythium, is considered one of the most devastating diseases that can strike a golf course. Under optimum conditions, blocks of unprotected turf may be destroyed virtually overnight by this rapidly-spreading disease.

"Conditions are ideal for Pythium blight development when the maximum daily temperature is 85 degrees F or higher, followed by 15 or more consecutive hours with 90 percent relative humidity or above, while night temperatures remain at 68 degrees F or warmer," states Dr. R. C. Bowers, Head of Plant Health Research and Development for TUCO Agricultural Chemicals. "However, fungal growth can occur from a minimum of 40 degrees F to a maximum of 100 degrees F".

One of the nation's "hot spots" for Pythium blight development is St. Louis, Missouri. "In this area, the Pythium blight seasons starts around mid-to late-June and runs through the first or second week of September," says Denis Barron, superintendent at Cherry Hills Country Club, Glencoe, Missouri, which is located near St. Louis.

"During July and August, our temperatures average 90 degrees F during the day and 70 degrees F at night, and we're constantly pressured by high humidity," continues Barron. Pythium blight, which attacks both warm and cool season grasses, is a double-threat to Barron, who manages an 18-hole course located in the transitional zone where conditions are suitable for both grass types. The 180-acre private club has C-1 (Arlington), C-19 (Congressional) and Penncross bentgrass greens and zoysia fairways and tees.

With 30,000 rounds of golf played annually at Cherry Hills, Barron can't afford to let Pythium blight gain an upper hand, so he follows a rotational program to prevent Pythium outbreaks while avoiding resistance buildup.

Water-soaked leaves with small, light brown, irregular spots and streaks signal a Pythium blight infection. "I'll see cottony growth- mycelium-on greens in the early morning dew," says Barron, who uses a microscope to help correctly identify the infection. If left untreated, Pythium blight attacks the crown and root area, killing the turf plant.

"In 1981, I applied Banol at the rate of 2.5 ounces per 1,000 square feet during the second half of June," recalls Barron, who used the systemic fungicide, which is absorbed by both roots and foliage, while it was still under an Experimental Use Permit. Banol received full registration for control of Pythium blight from the Evironmental Protection Agency in 1982.

"The first application gave me four to five weeks control and carried me through to August 1 when I applied a contact material. A second application of Banol was later applied and this carried me through the rest of the year.

"Last summer I used Banol and Subdue in a rotational program to avoid any possible resistance buildup. In late June, I applied Banol at 2.5 ounces per 1,000 square feet, and because Pythium didn't break, I skipped the contact application. However, I played it safe and used Subdue at one ounce per 1,000 square feet," continues Barron. "Each product gave me five weeks of protection, but it was unusually cool and pressure was light.

"Before we had Banol, we used to spray constantly during a heavy pressure year. We'd spray every week and sometimes every three days during intense pressure periods," recalls Barron.

"Now Pythium blight is definitely not the most important disease facing us because of products such as Banol and Subdue. With these two products, I don't worry about Pythium blight anymore."

For maximum Pythium blight control, Bowers suggests following a preventative fungicide application program. "Based upon weather conditions and disease pressure, applications should be made at 7- to 21-day intervals. Generally, three applications of a systemic fungicide, such as Banol, will suffice," notes Bowers, "since research shows that Banol's residual activity provides control up to 21-28 days. Pay particular attention to greens and fairways that have had past Pythium blight infections because living and dead grass plants, thatch and soil previously infected harbors mycelium and thick-walled resting spores (oospores). Under favorable conditions these spores can germinate within three hours and rapidly infect healthy tissue." But also beware of spread to new areas because, as Barron notes, "equipment and golfers' shoes can easily spread the disease to other areas, especially if you have excessive rain."

In addition to timely fungicide applications, follow good management practices. To discourage fungal activity, Bowers recommends that courses be adequately drained, clippings removed promptly, thatch maintained at less than one-half inch and proper fertility programs followed. Adequately drained and properly fertilized turf is healthier and more disease resistant.

"If you have poor drainage, Pythium blight often shows up in these spots," says Barron. "This is especially true," echos Bowers, "in low-lying areas where drainage and air movement are restricted."

High levels of calcium and potassium also tend to reduce the susceptibility of turfgrasses to Pythium blight. In addition to Barron's regular fertilization program which consists of 5 pounds of nitrogen and 3 1/2 pounds potassium per 1,000 square feet per year, he applies an extra 1/2 pound of potassium per 1,000 square feet in late May or early June. "This extra potassium helps ensure that my turf is as healthy as possible going into the stress months of summer", explains Barron, who maintains pH levels of 6.4-6.8 on older greens and 7.0 on newer greens. "I may apply extra calcium if soil tests indicate it is needed."

Irrigation is performed on an "as needed" basis. "Our watering program is designed to keep grass from being stressed, yet we do not overwater because that provides ideal conditions for development of Pythium blight," explains Barron.

If a Pythium blight infection has already started, Bowers suggests using a curative program. "By applying higher rates of Banol, the infection can be stopped and further spread prevented. In addition, if conditions favor Pythium blight development, Banol's one-day 'kick-back' activity may prevent disease symptoms from developing."

A total disease prevention program that includes regular fungicide applications and proper management practices can eliminate superintendents' worries while providing quality turf for golf enthusiasts.

EDITOR'S CORNER

July is always an exciting month. It brings about so much that we superintendents must relate to. Challenges are always just an hour or so away with the weather conditions. Heat and humidity bring stress to our "little grass plants". We all must adjust to it

continued on Page 7