MANAGING PATCH DISEASES

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My experience with patch diseases has primarily been with summer patch (Phialophora graminicola) on fairways and greens. My first experience was in 1983 when temperatures were above normal all summer. Summer patch hit my fairways in late August, when the roots were short and the Poa turf was stressed out from compaction and constant watering. My second experience was the summer of 1987. This time it was on greens that were under stress from close mowing and hot, humid weather.

To give you some background on the Blythefield Country Club, our greens, tees, and fairways are 80% Poa annua. The soil on greens is a river bottom sandy soil mixed with a high percentage of peat moss. The greens will take water but not at a fast rate. The fairways have the same river bottom soil over gravel. This helps our drainage, but it also has its problems. The soil doesn't retain the nutrients so we have to fertilize more to maintain a good fairway turf. If we don't watch this nutrient level closely, the summer patch moves in. I think the disease is brought on by low fertility level, high soil temperature, and the amount of oxygen to the root zone.

I would like to talk about some of our problems with greens in the summer of 1987. Prior to '87, we had a slight decline in turf quality on some of our greens. They didn't respond well to fertilization, so we had trouble with ball mark recovery and producing a good putting surface. We got a serious case of summer patch and also thought we had symptoms of nematode damage on these greens. We sent in samples of the greens in two levels; the top 1 1/2", which is the 80%-90% sand top dressing layer, and the bottom layer, which was the original heavy mix. The result was positive. We were way over the amount of nematodes per 100 CC of soil in the top level. The count in the lower level was minor. We applied Nemacur, and the greens have responded well this year. In our case, the summer patch seemed to attack any areas that were under stress. The greens responded to fertilization very well in 1988.

Chemical Treatment

In the spring of 1988, we applied Rubigan at the rate of one ounce of powder per 1,000 square feet in April and 1/2 ounce of powder material in May. We were free of summer patch on greens until the first two weeks of August; we had some on our third green at that time. We sprayed the green with 6% of Tersan 1991, and it cleared up in seven days.

Conclusion

In my experience at Blythefield, summer patch moves in on any turf areas that are under stress from drought, high soil temperature, low nutrient levels, and lack of oxygen to the root zone. When it rained heavy amounts in the summer, I noticed on greens and fairways that the summer patch was worse following the rainstorm, so anything you can do to get more oxygen to the roots the better. In 1988, we went to two aerifications on greens, spring and fall, and spiked greens once a week in the stress periods to keep the oxygen and water moving down to the root zone. Last summer the fairways did well until the first two weeks of August when we got some summer patch. We sprayed Bayleton at one ounce per 1,000 square feet in May, July, and August. I think this helped to deter the disease some. We applied 3 pounds of nitrogen during the season and one pound in a dormant feed. I think the spray and fertilization combined with our other culture practices helped to keep the disease at a minimum.

The last area I would like to talk about is tees. Our observation at Blythefield has been that we get very little summer patch on tees. Why is this? In our case, tees are fertilized heavier to fill in divots. The tees are top dressed more for divot repair. I think the top surface gets more oxygen through our culture practices. It's hard to follow these practices on greens and fairways because of the conditions the golfer demands today.