Whew! Enough is Enough

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One major problem (which there were many) during the summer of 1995 was brown patch. We encountered many superintendents complaining that the brown patch fungicide used, did not work or the length of control was shorter than expected. In an attempt to address some of the reasons for disease control failure, let's review the major factors necessary to enhance brown patch severity.

For brown patch to occur, the pathogen needs to be present which in this case is *Rhizoctonia solani*, a soil born pathogen which is ubiquitous on many golf courses. The second important factor for disease development is favorable environmental conditions which in the case of R. solani include night temperatures that exceed 68 F and high humidity (prolonged periods of leaf wetness). Thus, conditions of high temperatures, humidity, and rainy periods will enhance disease development. This year, these conditions were present from early July through the remainder of most of the summer (this article was written during the week of August 21st and no change in weather was yet observed). Normally in past years where we have had conditions favorable for brown patch we see breaks in these conditions which can slow or arrest disease development. This year, environmental conditions have remained favorable continually for weeks.

The third factor, is the condition of the plant. This year we had a cool and extremely wet spring. Excessive top growth resulted in some cases in scalping from mowing which resulted in plant energy being used to regenerate tissue growth at the expense of root growth. In addition, wet soil conditions were not conducive for root growth resulting in root systems that were not as fully developed going into the summer. With the arrival of high temperatures and rain drenching storms in the middle of July, we observed rapid decline of root systems. Sustained high temperatures (we measured soil temperatures in the mid 90's to low 100's and canopy temperatures as high as 108 F on "healthy" turfgrass) and high soil moisture resulted in the plant being defenseless to the colonization of R. solani and the spread of the disease. Given that conditions were so favorable for disease development and so detrimental to turfgrass health, chemical control of this pathogen at best was difficult.

Chemical Control

From a research perspective, the summer of 1995 has been a great year to evaluate fungicides for brown patch control. Given the conditions present during 1995, these are some of the observations we have found.

★ In general, systemic fungicides applied preventative (applications before conditions were favorable for disease development) provided much better control than when applied curative.

★ Contact fungicides (chlorothalonil, mancozeb) provided the best curative control but maximum control period was less than 7 days.

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★ In general, the best control was achieved with mixing two brown patch controlling fungicides together such as a contact with a systemic.

★ And yes, some products were not very effective.

Additional factors that may contribute to a reduction in control include:

★ incomplete fungicide coverage through inadequate gallonage

★ management practices that induced additional stresses to the turfgrass plant.

In the time we have been at Ohio State University, we do not remember a summer where conditions were so conducive for brown patch for so long. Hopefully, next year we will have a more "normal" year.

Credit: "Divots" 9/95

"Ingenious Solutions to Solve Problems"

Excerpts from the "Verdure" 9/95

A problem which we've all encountered when repairing irrigation breaks is how to stop the constant dripping during the gluing process. Sure, we've isolated the leak, and we're using wet-dry cement, but I still feel more secure when I can fix a leak without any water interferring. During their time together at Bartlett Hills, Joel Purpur and Kevin DeRoo read a blurb about using bread wads to temporarily clog the leaky pipe while cementing. A scientific formula was ... well, ... formulated: 1/2 loaf Rainbo White for 2½" pipe, wadded tight and stuffed into the opening, repair quickly, and your plug leaves the system as very runny dough. Kevin notes that you should always be prepared with a full loaf, along with some peanut butter and jelly, as irrigation repair does give one an appetite.

I spoke recently with Ed Fischer at Old Elm Club. His problem was, now that he provides Gatorade on the course in cooler houses, the bees are a menace. Bees also are a problem around tee ares where water coolers and litter baskets are placed. Ed's solution, which was seconded by Dave Schlagetter at Indian Hill Club, was to staple a Bounce fabric softener sheet to the cooler house. For some reason, bees are repelled by this, and success was achieved. I learned another solution, especially if an event calls for kegs of beer or fountain drinks to be set up outside — Fill several cups (clearly marked "Do Not Drink", as most bees can't read) with Coke, topped off with a few ounces of dishwashing detergent, and place them near (20 feet or so) the bar area. Bees attack it, drink it, then end up belly-up in it.

Okay, I can't resist — one final problem: Poa annua infestation on golf courses.

Solution: This summer.