Challenges and Issues for 1991

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Before we begin the new season, it is time to review some of the diseases and other turf problems I observed in 1990, as well as discuss other issues and challenges the golf course industry will face in 1991.

The prolonged cool, wet weather we endured in May of 1990 set the stage for serious outbreaks of take-all patch of bentgrass, caused by **Gaeumannomyces graminis**. This fungus is a soil borne root parasite that is favored by cool temps, wet soils, high pH, and in certain cases, sandy soils. In fact, the most serious cases of take-all patch were found on newly constructed (or rebuilt) greens and tees with sand rootzones. I also observed take-all patch on new bent fairways — either newly constructed or following Roundup renovation and overseeding.

The pathogen **Gaeumannomyces graminis** was once known as **Ophiobolus graminis**, and the disease was called "Ophiobolus patch". Since **G. graminis** also causes take-all of wheat and other cereals, the name take-all patch was adopted for the disease on bentgrass. You may recall that until recently Ophiobolus/take-all patch was found primarily in coastal areas of the US. However, over the last few years, take-all patch has been observed with increasing frequency in the midwest. Cool, wet springs such as 1990 will probably continue this trend.

Symptoms of take-all patch include a yellow or brown, circular patch of 6-12" in diameter, sometimes sunken or with green grass in the center (frog eye). Most often, plants in a patch are weakened because of root damage, but do not totally die out. Patches often appear first in June or July when higher temperatures place infected plants under heat or water stress. In a few cases, I have seen symptoms appear first in autumn, for example during an Indian summer weather pattern. The severity of symptoms fluctuates through the season as temperatures, humidity, and rainfall patterns change.

At present, control of take-all patch is very difficult with fungicide applications. Studies are underway to identify products and timing to optimize control. Symptoms can often be suppressed by reducing stress on plants, increasing fertility, and lowering soil pH with acidifying fertilizers such as NH_4C1. The disease is too spotty in occurrence and fungicide efficacy is too low for me to recommend wide-spread, preventative applications on new bent seedings. If you are unfortunate and find take-all on your bentgrass, then curative fungicide treatments with Rubigan and related materials may prove helpful.

Other diseases associated with the cool, wet spring of '90 included Fusarium path (a.k.a. pink snow mold) and leaf spots. Both are quite common and easy to control. However, another disease that occurred last spring which caused some concern among area superintendents was yellow patch (cool weather brown patch) caused by **Rhizoctonia** species (not **R. solani**). Symptoms include yellowing of foliage (primarily **Poa annua**) in an expanding ring. Sometimes the ring itself is only 1-2 inches wide. Recovery in the center of the diseased area is usually quite rapid and the disease often disappears with the arrival of warmer weather in mid June. If it becomes necessary, fungicide control may be achieved with Chipco 26019 and probably also Prostar (EUP only).

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Another serious problem that I have been observing in the District for the past few years is more related to management than to diseases, and is one that has serious political/public relations overtones. I am referring to the building, rebuilding, and subsequent management of putting greens. Many older clubs around Chicago have old soil mix greens with years of topdressings. Layering, drainage, and **Poa annua** contamination are major problems. Also, these greens often have contours or other design features (eg small size) that don't fit with today's management schemes or play patterns. So, after the requisite political maneuvers, the decision is made to rebuild. Unfortunately, that is only the beginning of the fun. Next, someone has to decide what kind of green(s) to build, how many to rebuild, who will design, who will build, etc., etc., etc.

General consensus is that a "soilless" green is the way to go, although I know of several soil mix greens that have recently been completed. Green construction technique remains a controversial topic. Sand or 80:20 rootzone greens (including the USGA design) can resolve drainage and compaction problems, but these types of greens can have troubles too, especially if shortcuts are taken during construction. Difficulties on new sand greens can usually be traced to irrigation, drainage and/or fertility problems. Also, new greens **must not** be rushed into play until they are mature (members and green committee be damned, if necessary!). Greens with low plant density, immature foliage, and no organic cushion are often forced into normal playing conditions (low cutting height, etc.) and become thinned, weak, and subject to **Poa annua** invasion. I have seen this far too often. Just Say NO ...

Finally, let's not forget we have other political and regulatory issues to address. Research over the next few years will attempt to further define the environmental impact of pesticides and fertilizers used on golf courses. Restrictions on pesticide availability and usage may be coming from the federal EPA or state and local agencies. We need to reduce our dependence on synthetic products for maintenance of fine turf by using IPM principles and naturally occurring organic products. At the same time, the public's perception of the inherent safety/toxicity of pesticides and the risk involved in their use needs to be improved. These issues have become emotionally charged and the situation can get blown out of proportion very quickly, as happened with Alar on apples.

Also, ground and surface water quality and possible contamination will be large issues in 1991. Presently, the IL Pollution Control Board is drafting the Proposed Groundwater Quality Standards as required by the IL Groundwater Protection Act which was passed in Springfield last year. If the final Standards are highly restrictive regarding pesticide and fertilizer contamination, the impact on agriculture (including turf management) in Illinois could be severe. Keep your ears open for more news on this front.

Robert Zimmerman and David McComb Receive NOR-AM Scholarships

John Turner, sales representative for NOR-AM Chemical Company, presented two $500.00 scholarships to Senior Robert Zimmerman and David McComb from Purdue University. Both students were recognized at the Midwest Regional Turf Conference held in Indianapolis on January 22, 1991. The annual scholarship assists turfgrass students in meeting their educational needs and their professed interest in turfgrass management.