

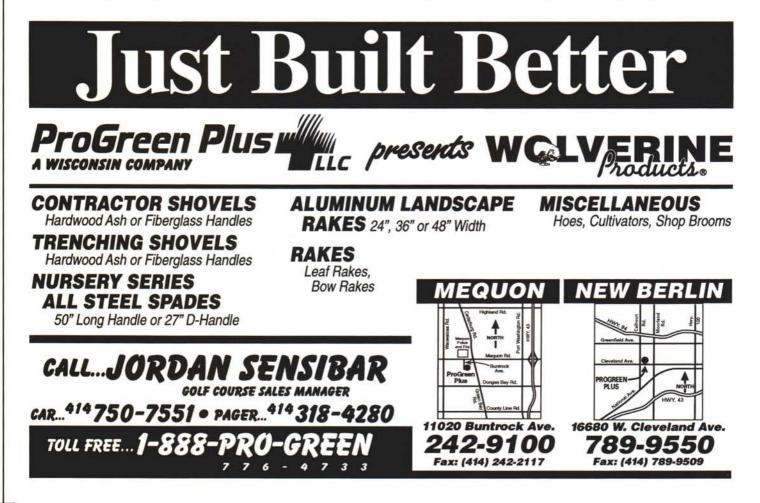
By Bob Vavrek, USGA Green Section Agronomist, North-Central Region

D elatively little midsummer stress  $\mathbf{\Lambda}$  to *Poa annua* playing surfaces occurred over the past few seasons on golf courses across the north-central tier of states. In fact, the summer of 1995 was the last time intense heat stress and disease activity caused extensive injury to turf throughout the North-Central Region. It seems that every three or four years, Mother Nature feels the need to teach a refresher course in Latin. Poa annua is Latin for annual bluegrass. Annual bluegrass, an annual plant that (1) germinates from seed during fall, (2) may or may not survive the winter in the North-Central Region, (3) produces a

flower (seedhead) during the spring, and (4) dies during the summer.

True, this life cycle is somewhat oversimplified because some plants will produce seed during summer through fall and seed germination can often occur all season long. Furthermore, some of the Poa plants in the playing surfaces dominated by Poa annua are perennial biotypes and a percentage of the stronger, annual biotypes might survive longer than one season under ideal weather conditions. The fact remains that many of the plants on greens, tees, and fairways at older golf courses are true annuals and weather conditions during the summer are not always ideal. When the annual types of Poa begin to die off during the midsummer, the best we can hope for is that they don't all die at once. Unfortunately, a considerable amount of Poa annua died on many golf courses within the span of several days during late July after an extended period of heat, high humidity, and sporadic heavy rainfall events.

Observations made at Turf Advisory Service visits indicate that the *Poa annua* in the collars, the immediate surrounds to greens and in the intermediate roughs appeared to have suffered the most during late July. Pythium and



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anthracnose were partly to blame, but direct, high temperature injury, wet wilt, and concentrated wear from carts and mowing equipment seemed to be equally responsible for the severe losses of turf on many golf courses.

Bentgrass greens on a number of relatively new golf courses were affected by the stressful weather as well. It was no surprise that the smallest greens and greens built in shaded sites where air circulation is limited were the first to experience problems. Furthermore, playing surfaces that were sodded last fall or this spring seemed to melt in the hot sun during July - in spite of frequent aeration operations.

I can tell owners, Green Committees, and the like that the greens never putt so good the day before they die. This year it actually happened at one golf course when the superintendent was instructed to push the greens to increase speed for the Club Championship during the hot weather.

Superintendents in the northern states tend to forget what superintendents in southern states simply accept as a fact of life. Namely, fungicide applications do not guarantee disease free turf when environmental conditions for the growth and development of a particular fungal pathogen are ideal. Thousands of dollars were spent this summer for fairway applications of various fungicides that, at best, protected the turf for only three to seven days.

The fallout after the devastation to turf that occurred this summer is not all bad. The smart superintendents have already come to the realization that they may have been putting a little too much faith in the power of pathogen prevention. Many more fairways, tees and greens will be aerated this fall. More cart paths will be constructed on high play golf courses. Antiquated irrigation systems will be replaced. Believe it or not, a few superintendents will be allowed to maintain greens at a higher height of cut next season.

**Reality Check 1999.** Timely fungicide applications are only one of the many important components of a sound golf course maintenance

program. When the natural, organic fertilizer hits the fan during an exceptionally stressful summer, fungicides will not magically transform weak, annual biotypes of *Poa annua* into Kentucky bluegrass or creeping bentgrass.

