Turf

CROP: Turf

LOCATION: British Columbia

NAME AND AGENCY:
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TITLE: TURF GRASS DISEASES ON CULTIVARS AT AGASSIZ RESEARCH STATION IN 1987

Stripe rust (Puccinia striiformis) incidence was high on some of the 72 cultivars of Poa pratensis rated in early spring and late fall. Traces only were noted on the cultivars Sydsport, Bristol and America while it was abundant on Midnight, Merion and Victa and severe on Dormie.

Red thread disease (Laetisaria fuciformis) was abundant on most cultivars of Lolium perenne and fine-leaved Festuca spp., except on the hard fescues (F. ovina L. ssp. duriuscula) which were nearly disease-free.

Fusarium patch and pink snow mold diseases (Microdochium nivale) were abundant on all bentgrasses (Agrostis spp.). Following 3 weeks of snow cover in February all bentgrasses not protected by fungicide were heavily damaged.

CROP: Turf

LOCATION: British Columbia

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TITLE: TURF DISEASES DIAGNOSED IN SAMPLES IN 1987

In 18 turf specimens examined for disease in the Cloverdale diagnostic laboratory, 4 showed pythium blight, 2 Rhizoctonia spp., 2 algae, 2 fusarium blight (one Fusarium poae) and 2 Drechslera spp. There were single samples showing slime mold and root rot caused by Pythium sp. In other samples damage was ascribed to poor cultural conditions. In the remainder of the samples no pathogen could be associated with the damage.

CROP: Turf grasses

LOCATION: Saskatchewan

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TITLE: NOTES ON SNOW MOLD OF RECREATIONAL TURF IN SASKATCHEWAN, 1985–87

METHODS: Golf courses in central Saskatchewan were examined in late April and May each year. Five courses were examined in 1985, four in 1986 and three in 1987. In addition, three golf courses from widely separated locations in northern Saskatchewan were included in 1987. Domestic lawns were also examined. Disease diagnosis was made on the basis of symptoms. Disease severity estimates were made using four categories: Trace < 1%; Slight 1–10%; Moderate 11–25%; Severe > 25%.

RESULTS AND COMMENTS: In Saskatchewan, Kentucky bluegrass (*Poa pratensis*) is widely used for fairways and surrounds, and bentgrass (*Agrostis stolonifera*) is used for putting greens. In general, greens are treated with fungicides in fall to limit snow mold damage. Fairways are not managed as intensively as greens and green surrounds, and are not as susceptible to snow mold damage. Green surrounds are generally the area most severely affected by snow molds. In the winter of 1984–85, an unusually early snow fall kept soil temperatures higher than normal throughout the winter. In 1985–86, the winter was severe, snow fall was minimal, and soil temperatures were low. The winter of 1986–87 was one of the mildest on record. However, a cold snap in November drove soil temperatures down before a snow cover developed.

In the spring of 1985, snow mold damage was generally moderate to severe on golf greens in central Saskatchewan. Damage was particularly severe (80%) at one course where the early snowfall had interrupted the fungicide spray program. Damage was generally slight to moderate on fairways and severe on green surrounds. *Coprinus psychromorbidus* was the most important pathogen observed. *Microdochium nivale* was equally important on bentgrass, but not bluegrass, turf. Trace levels of *Typhula* spp. were noted on bluegrass turf at Saskatoon. Damage to domestic lawns was moderate and recovery was rapid.

In 1986, low-temperature and dessication injury on golf greens was severe. Many greens were reseeded, or did not recover until well into summer. Snow mold damage on putting greens and fairways was estimated as trace to slight. *M. nivale* infection on bentgrass had been initiated early the previous-fall, and it was the principal pathogen observed on greens. Snow mold injury on surrounds, due primarily to *C. psychromorbidus*, was highly variable (slight to severe). Snow mold damage on domestic lawns ranged from trace to slight.

In 1987, damage to golf greens and fairways in central and northern Saskatchewan was generally slight, with moderate to severe damage on green surrounds. On one course in north-eastern Saskatchewan, the fairways were moderately affected, but there was no damage on the greens. This was a clear example of the efficacy of the fungicide application program. *C. psychromorbidus* was the principal snow mold pathogen, with *M. nivale* a distant second. Damage on domestic turf was slight.

CROP: Turf

LOCATION: Saskatchewan and Alberta

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TITLE: BLACK LAYER IN INTENSIVELY MANAGED AMENITY TURF

Symptoms of black layer, a soil condition where dark horizons high in sulphides of iron and/or manganese and other micronutrients develop in the soil profile, were noted on eight golf courses in Saskatchewan and two in Alberta in 1987. The soil condition was associated with yellowing, thinning, and in severe cases, death of turfs of Agrostis and Poa spp., particularly on golf greens. Surrounds and collars were also affected. Turf growing in sand, sand/soil and soil root zones showed symptoms.

METHODS: The frequency of black layer formation was recorded for golf greens on each course. The range of severity of turf injury (0 to 3 where 0 is no symptoms to 3 death of large patches) was noted on greens. Surrounds or fairways at each location were also examined. In some of the cases, core samples and samples from different soil horizons were. analysed chemically for major and minor nutrients at the University of Saskatchewan Soil Testing Laboratory.

RESULTS AND COMMENTS:

Saskatchewan: On six courses the number of greens showing black layer(s) in the soil profile is given, followed (in brackets) by sa = sand or so = soil mix rootzone and severity, 0-3.
(1) 18/18 (sa, 0–3). (2) 5/18 (sa, 1–3). (3) 4/18 (so, 1–2). (4) 3/18 (sa, so, 1–2). (5) 2/9 (sa, 1–2). (6) 1/9 (so, 0). A further two courses showed black layer profiles and in collars or surrounds to greens. One of these with a very high soil iron (460 µg/g) showed severe yellowing of ~~Poa~~ annua turf.

Alberta: Black layer in the soil profile was noted on greens on two golf courses in the Calgary area. In neither case were symptoms of grass injury seen.

Micronutrient Analyses:
Sample soil cores to 10 cm depth showed analyses for iron ranging from 37 to 460 µg/g and for manganese from 8 to 249 µg/g. In sand greens, when chemical analyses were made where the black layer could be clearly partitioned from the soil above and below it showed increased (up to 10X) amounts of iron in the black layer than in the soil below or above it.

Reference

Berndt, W.L., Vargas, J.M. Jr., Detweiler, A.R., Rieke, P.E. and Branham, B.E. 1987. Black layer in highly maintained turfgrass soils. Golf Course Management. 55(6): 106–112.