

Don't Lose Your Turf To Leafspot

WHAT'S the number one turf-grass disease of the cool season grasses? Leafspot! Nearly every superintendent has experienced this sickly yellow disease on his course, grounds, park or cemetery turfgrass.

Carl Hoppnan and Carl Grassl are no exception. As superintendent of the Aurora Country Club, Aurora, Ill. and Park Ridge Country Club, Park Ridge, Ill., respectively, both consider leafspot their number one disease problem. Their battle to protect turf rages from first thaw to snowfall. Each has found that the best defensive plan of action involves the use of proven environmental protection chemicals and sound management practices.

Hoppnan sprays greens as early as February, reducing the amount of "Helminth" that has overwintered before it becomes active. By spraying while the ground is still frozen, Hoppnan doesn't gamble on applying

fungicides when the turf is soft and easily damaged by tractor tires.

"I spray the fairways almost as early as the greens," says Hoppnan. "I get out there before the conditions are right for 'Helminth'. We shoot for four sprayings on the fairways before June 1."

Grassl also aims for four applications of fungicide on his fairways during the critical leafspot period. Both men have centered their disease control programs around Actidione Ferrated or Actidione TGF for specific control of *Helminthosporium* and alternate with other fungicides in their routine spraying program throughout the year.

Hoppnan sprays greens and tees weekly through mid-October. Then he cuts spraying to a monthly rate until snowfall. Fairways are sprayed monthly at Aurora.

Grassl sprays greens every seven days and fairways twice monthly.

He supplements his program during stress periods with extra applications on problem areas and continues his program into early winter.

"You can't forget your program after Labor Day," says Hoppnan. "By spraying late into the fall, we eliminate quite a bit of 'Helminth' that would otherwise overwinter."

Grassl adds, "Why let the grass come back in the spring weakened from leafspot? A late spraying in the fall and early application in the spring will more than pay for itself in healthy turf."

Timing of fungicide application is important to both men. They spray greens on Fridays to "brace" the turf for the stress of weekend golf traffic.

These turf managers are convinced their programs are worth the cost of the fungicide. "No superintendent hesitates about the cost of fungicide treatments when he has a severe outbreak on his course," says Grassl, "so one should consider investment in a complete preventive maintenance program and eliminate the cost and anxiety of having to treat flare-ups."

"I went to a new program five years ago," says Hoppnan, "and my fungicide costs have gone up about 1/3. But I'd have been willing to double it for the control I have now. Fungicides are really the least expensive item in a total turf disease management program."

Both superintendents fertilize with low levels of nitrogen. High amounts of N make the grasses more succulent and therefore more susceptible to fungal infection. Extra N also makes for rapid top growth which is not necessarily needed in established stands.

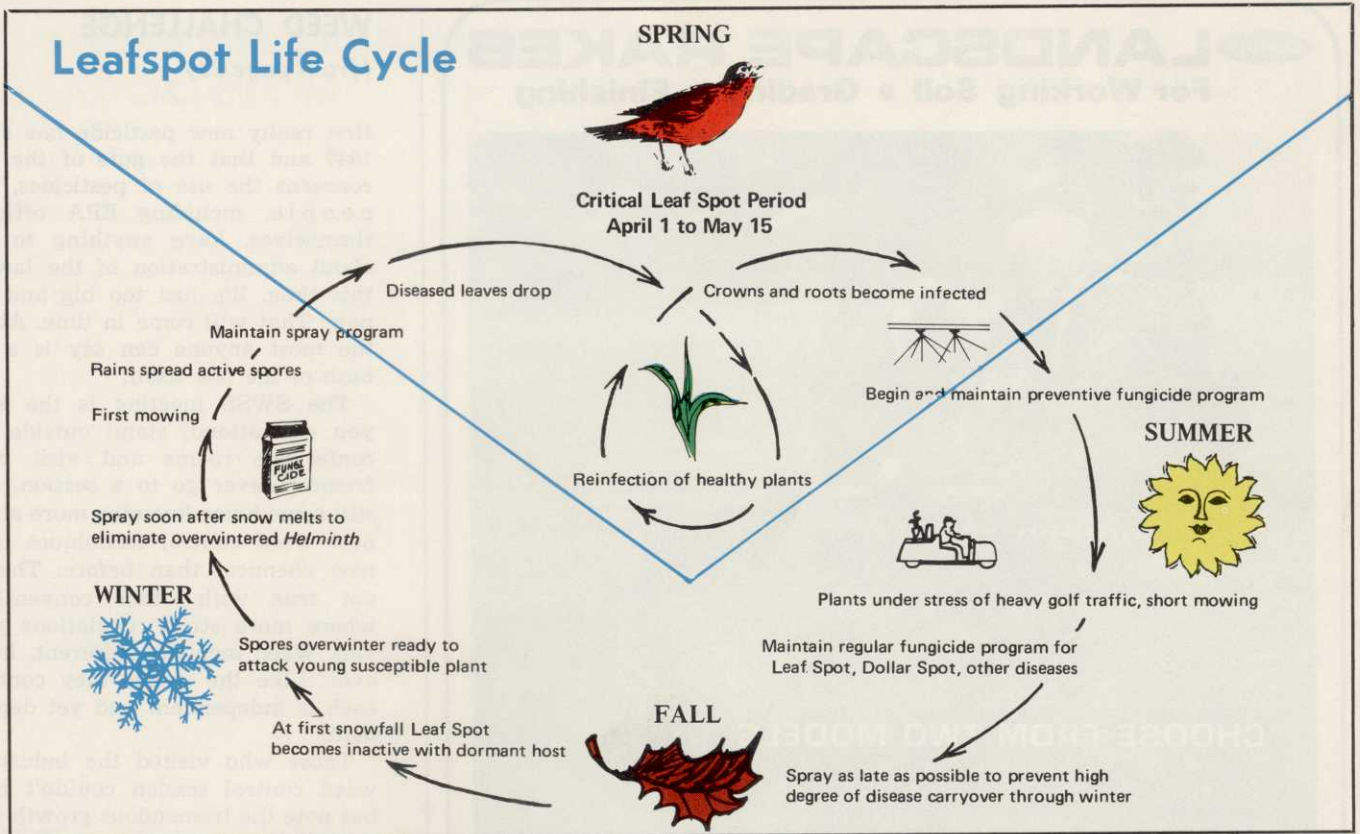
"Some turf managers confuse leafspot symptoms with nitrogen deficiency," says Hoppnan, whose course is predominantly bluegrass. "So when they add more N, they actually compound the problem instead of solve it. After nitrogen fertilizer is applied, the turf responds with a lush top growth. But, at the base of the plant, 'Helminth' is working on the older dead leaf tissue."

Hoppnan is also conducting an arsenical program for the elimination of *Poa annua* at Aurora and says that the low amounts of N help



Carl Hoppnan, superintendent, Aurora Country Club, Aurora, Ill. uses Actidione to control leafspot.

Leafspot Life Cycle



control the Poa since it requires high amounts of N to survive. With his arsenical-low nitrogen program, Hoppah has reduced his Poa population from 50 percent to less than 10 percent.

Hoppah applies fertilizer once in the spring and twice in the fall. His fertilizer plan is based on applying two pounds of nitrogen and six pounds of potash per 1,000 square feet. Phosphorous is omitted because it interferes with the action of the arsenicals.

Grassl's Park Ridge bentgrass fairways receive complete fertilizer applications totaling 2.5-1.75-1.0 pounds. The nitrogen-phosphorus-potassium mix applied to greens is 3.5-0.5-1.63 pounds per 1,000 square feet during the year.

The two men differ widely on turfgrass irrigation practices because of the differences in their grasses. Grassl sprinkles his bentgrass lightly every evening while Hoppah waters heavily three or four times per season for the best results on his bluegrass. Both, however, are careful to avoid standing water on poorly "ventilated" areas of their course since moisture and excessive humidity are conducive to leafspot development.

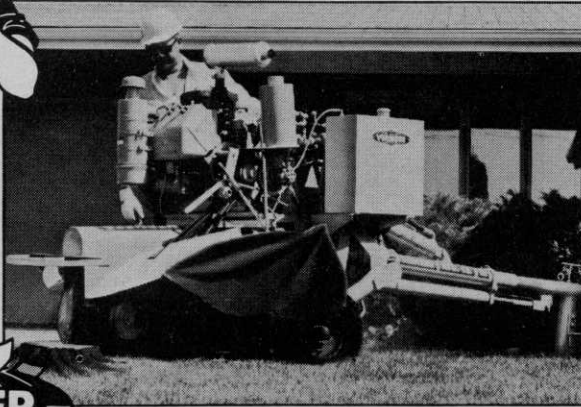
Grassl mows greens daily and
(continued on page 34)

Carl Grassl, superintendent, Park Ridge Country Club, Park Ridge, Ill. sprays greens every 7 days for leafspot.





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LEAFSPOT (from page 29)

tees three times each week to keep from removing too much of the plant at a time. By not scalping the plant, it is under considerably less stress and therefore less susceptible to leafspot in the early spring and fall.

Hopphan's fast-growing bluegrass fairways are clipped every day. "We never mow over 15 percent of the plant," says Hopphan, "Daily mowing makes the bluegrass grow lower and gives better ball height as well as cutting down the chances for leafspot and other fungi infection."

Leaf Spot is not restricted to bluegrass and bentgrass turf. It strikes almost all types of turfgrasses and

special care should be taken to seed a wide range of resistant varieties for best disease prevention insurance.

All recognized turf management practices can play a role in prevention of leafspot and other fungal diseases. Fertilization, disease control, variety selection, mowing, and irrigation are interrelated. Each must be an integral part of the entire turf management program. A superintendent who manages these "tools" will find his turfgrass in better condition for play. Effective management of a disease control program has paid increased benefits to Hopphan and Grassl. And environmental protection chemicals such as Acti-dione are helping other turf managers promote superior turfgrass culture on their courses. □



Grassl battles leafspot from first thaw to snowfall.

What Is Leafspot?

Because leaf spot often goes undetected until most of the damage is done, it is important for golf course superintendents and other turf managers to initiate a total preventive control program against this common turfgrass disease.

The leafspot causing fungi are host-specific pathogens, each attacking only certain non-resistant varieties of grasses. If the turf manager has sown a diverse seed mixture, the disease will likely attack only one type of grass and the rest will remain healthy. This is the reason that the disease often goes unnoticed until severe thinning of a particular grass variety has occurred.

Leafspot is caused by several

species of the *Helminthosporium* fungus. *H. Vagans* is the major causal agent in bluegrass turf of the northeast while *H. sorokinianum* is prevalent in the central states. On bentgrass, *H. erythrospilum* and *H. sorokinianum* are in central areas and *H. giganteum* is primarily confined to southern localities. Although the species vary, the symptoms, life cycles and results are similar.

The fungi attack the older lower leaves and basal sheaths and stems. Dark brown or purple spots appear first and "choke off" nutrients to the upper leaves, turning them yellow. The grass may die and severe thinning will result, allowing weeds a foothold. Frequently, the turf manager

will not notice the damage until thinning has occurred and the disease itself has subsided. In these cases, it is a common mistake to blame the damage on drought or weed encroachment.

Leafspot is most likely to occur between April 1 and May 15 when temperatures are cool and the turf is moist. It then appears again in the fall between September and November. Grasses are coming out of winter or hot summer dormancy at this time and are under stress, making them especially susceptible to the disease. *Helminthosporium* is present year-round, however, and can cause damage during cool, wet periods of the summer and fall.