

It was discouraging to the members during the early spring and uncomfortable for me, but knowing I was right my heart felt lighter. I found during the season that where the grass had been killed, brown patch did not appear; this leads me to believe brown patch fungi is not in the soil but on the grass blades.

The second top-dressing the greens received was the second week in June. Incorporated in this dressing were the three necessary elements of plant food, namely, nitrogen, phosphorous and potash, at the rate of ten lbs. per 1,000 sq. ft. Later, after the nitrogen in the fertilizer had been exhausted, light applications of Ammonium Sulphate were used at the rate of one lb. to 1,000 sq. ft. every two weeks. This was enough to keep the grass in good color, and not cause it to form a too rapid growth. Turf fed in this way, I find, is healthy, and, if attacked by disease is able to more quickly recover, and again the danger of disease is lessened.

### Grass Like a Human

GRASS is much like a human; a person in good health is very seldom attacked by disease, but let the same person be fed irregularly and with improper food, sickness is pretty sure to be the result. It therefore stands to reason, grass which is cut every day requires to be fed regularly and intelligently. The last feeding should be done about the last week in August in the same manner as recommended for June. It is not necessary to apply nitrogen during the fall weather nor early Spring as the rains supply sufficient to keep the grass in a healthy condition.

The season of 1929 in Northern Illinois was more favorable for turf maintenance than is usually the case. There were spasmodic cases of brown patch, but I believe over-stimulation may have been the cause of a majority of the cases; in other words too much nitrogen.

I hope greenkeepers will not take lime too seriously but go slow and use good judgment in applying it. There is no doubt about its being beneficial if properly applied and sometimes it is necessary.

This year crab grass was not so plentiful with me. I believe the reason for this was that

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I sprayed the worst infested fairways with copperas and found no crab grass where the treatment had been applied. I understand that around Chicago district, crab grass was unusually plentiful, also clover. The summer was unusually dry which necessitated a long period of watering.

The fall weather has not been favorable for new seeding as early cold weather retarded growth. While the top growth has been retarded however the root action is very good; this should carry the young grass through the winter providing a winter like the last is not in store for us.

Summing up, the greenkeepers have had an easier season than they have had in several years, that is, from a maintenance standpoint.

### Disease Starts in the Fall

By GUSTAVE HANSEN  
Greenkeeper, Greenville Country Club  
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COMPLYING with our estimable president, John Morley's request, I shall try to sum up briefly my experience with diseased turf, also as much other "bunkum" relating to course maintenance as my experience allows me to draw a safe and sane conclusion on, and my time and ambition will permit, assuming that my readers will take the word bunkum for whatever they please as I find no such word in the dictionary.

Disease makes its appearance about this time of year, which is October 22, every year more or less in the form of circular, semi-circular, or slightly irregular areas about one foot or more in diameter, the affected circle usually about three to five inches in width with the remaining center of given area escaping uninjured. It

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seems to develop after heavy rainfall which is common here during October. This disease develops slowly.

The first signs are yellowing of the turf and later taking on a gray, dead, dried up appearance. Mercury compounds also corrosive sublimate at the usual rate do not seem to have much effect on this disease. My practice has been to apply Semesan, Upsulun or Corrosive Sublimate in the late fall to all our greens as a preventive of snow mold. I believe this helps some to control this disease but I believe perfect surface drainage and the removal of all snow and ice at the first sign of thaw in the early spring to be the solution of snow mold.

This first mentioned disease stays with the greens until growth starts in the spring and where it was severe last fall did not recover until after I tried mercury again in May with no results. Sulphate of ammonia failed to produce results. The soil would not absorb water. After applying Milorganite heavily to these areas and watering heavily with a hand nozzle I managed to heal. Since then I have had no trouble with this particular disease but am expecting the worst to come now in the near future. All acidity tests have been in the range of Ph. 4-5 @ 5 until recently a number of tests have revealed Ph. 6 @ 7 or near the neutral point.

My opinion has been that extreme acidity with excessive rainfall associated with the effects of sulphate of ammonia on the soil is responsible for this disease. While I am somewhat confused as a result of these late acidity tests I still believe our soils to be very acid. Hydrated lime has been applied to certain areas twice at the rate of ten pounds per one thousand square feet and I am watching the results.

I would very much like to have something through the "National Greenkeeper" from Doctor Montieth of the Green Section or fellow members who have had experience with similar disease.

This year has been very easy as far as controlling brown patch is concerned having had only two greens affected during July and August with large brown patch which I find easily controlled with Semesan. The continuous drought worked hardships causing certain areas to become hard and impervious to water. This soil is well supplied with humus so I can find nothing to blame but the effects of sulphate of ammonia.

#### Drought Causes Scald

AT TIMES the heat with the drought caused the turf, heavily fed with quickly soluble nitrogen, to take on what I would call scald. The bright vigorous grass turned pale much the same as often I have experienced from the mowers passing over tender grass in hot weather with a heavy hopper full of clippings throwing considerable weight on the front casters of the Pennsylvania Super roller. This however has not been serious, most always coming back to a healthy condition with the dawn and next morning's watering.

Arsenate of lead has worked wonders controlling earthworms. Just how much credit I dare give to this chemical for the absence of chickweed I have not yet decided. As I have a very little of this weed in two greens I intend to use it heavily on these little patches in the future and watch results.

Our greens are all Flossmoor creeping bent which in my opinion is the finest strain of bent in use on putting greens. It sure takes the cake in this section of Michigan and is spreading as I have directed construction and planting of this strain of bent at Cadillac, Michigan all on the merits of our greens here. I have yet to meet one golfer who does not compliment me and say finest I ever played or have seen. Mr. O. J. Noer says, "as fine as to be found."

Now, let us hear from more brother greenkeepers. Keep the association alive and boost. I expect to meet a lot of you at Louisville, Kentucky, in February.

#### Cleveland Greenkeepers Meet

The annual meeting and election of officers of the Cleveland District Association of Greenkeepers will be held at Hotel Hollenden, Monday, December 2, at 2:30 p. m.