

5—No, we have not, as we keep enough moisture and by using peat moss in the top-dressings obtain good air pore space.

Toronto Hit by Hot Weather

By WM. J. SANSOM, *Greenkeeper*
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HAVING received questionnaire for our NATIONAL GREENKEEPER, prepared by our worthy President, Colonel John Morley, I feel that it is our duty to try and tell the members of our clubs through our NATIONAL GREENKEEPER journal something about the problems we have had to deal with this season of 1931.

It undoubtedly has been a very hard season on turf grasses. Due to the very hot, humid weather and drought we have had very few courses, I venture to say, but what have had their own troubles—brown patch, scald and the webworm. Golfers as a rule do not know or understand how their greenkeepers try to cope with these unusual conditions.

No doubt there will appear in the NATIONAL GREENKEEPER some very interesting and educational articles of what Nature has handed to us this season if we will only write our own observations and our methods of treatment.

On looking over my records for this season for watering alone, fairways, tees and greens, starting on the 9th day of May and continuing up to the present time of writing, the 17th day of September, with no prospect of a let up in sight as yet. The latter part of June became very hot. On the 17th day of July we had a severe thunder storm with a temperature ranging from 85 to 100 degrees. Immediately after the storm, we discontinued watering until the 23rd and also four days in August from the 10th to 14th—surely a record season for watering.

Our courses around the Toronto District suffered most from scald although there was some brown patch reported, I have to admit that I did not see any brown patch until after treatment and the turf had recovered. But I did see plenty of badly scalded greens.

I was fortunate in not having brown patch or scald on any of my greens. But I did have scald on two fairways, No. 1 and No. 18. These fairways are pretty well enclosed with trees with very little

air circulation and a soil that is very sandy and which gets very hot. The two fairways mentioned looked very beautiful up till the third week in July. The turf being quite 30 per cent of *Poa Annua* took the scald very badly with the result that I have very little *Poa Annua* left in those fairways. I have let Nature take its course and have not used any special treatment.

Personally, I am of the opinion that over-feeding and over-watering does help fungus diseases. The only explanation that I can give for escaping both brown patch or scald on my greens was due to the fact that I was at that time using the Del Monte rake for my greens very freely and also making sure my greens were being very thoroughly poled with bamboo each morning.

My watering was done at night, starting at 9 o'clock and finishing at 6 o'clock. We get our water supply from the creek having no storage tank and pump direct to the greens and fairways. Therefore our water from the creek is always quite warm in comparison to the township water used by many of the clubs.

I believe there can be too much dope used in the way of fertilizers and chemicals for the production of a good healthy turf. Not so much, perhaps, the use but rather the abuse that tells the tale. When we consider and enumerate the list of fertilizers, inorganic, organic, humus and mushroom soil that is on the market it is a very easy matter to err on what we use. I have always stuck to the practice of not using any organic fertilizer during the hot summer months to set up or cause any fermentation. At the same time I am a firm believer in organic provided it is used in early spring or in the fall of the year—around the middle of September for fall and April for spring use.

Nature does her best for turf when the nights are cool with a normal rainfall. In the spring and fall nitrogen from an organic source is slowly released to feed the growing turf.

I can truthfully say that we have never had a case of brown patch and have never spent a cent of money on any chemicals for a preventative. I am old-fashioned enough to still depend on using a good compost for topdressing, believing that by building up a healthy soil we can produce a healthy turf.

I believe in aerating greens by a thorough raking occasionally, using a good two or three-year-old

compost two or three times through the growing season, enriched by an inorganic fertilizer, about a 5-12-2. The grass then gets a steady diet of natural food and is able to ward off most diseases through just being healthy. I use a little of Sulphate of Ammonia, mostly in liquid form, taking care not to promote too lush a growth to withstand a sudden spell of hot weather.

Pay strict attention to the watering of greens, not to create a water-logged condition. It does not harm a green to get a little on the dry side occasionally as its natural nitrogen is a valuable stimulant when used on soils in good condition but it should not be used entirely as a fertilizer. There is a great temptation on the part of a greenkeeper to use a little more which may prove detrimental to the grass and favorable to the various diseases.

A great deal of trouble is caused by inexperienced Green committees who have not the necessary knowledge themselves and are oftentimes carried away by high-pressure salesmen, who have this or that to sell that will make grass grow on a billiard ball. Club officials should get in closer touch with their greenkeepers and together work out a system to install for fertilization and not pay so much attention to what the high-pressure salesmen have to say. By doing so there would be less trouble.

Place confidence in your greenkeeper as by doing so you will accomplish what you set out to do, for in greenkeeping as in other things it is much easier to keep right than to make right.

Webworm Hits Detroit

By HIRAM F. GODWIN

Redford Golf Course, Detroit, Mich.

REFERRING to your questionnaire, the webworm or cutworm was quite destructive in places. I do not believe they destroyed greens so much, as most of these were arsenated for angle worms, but on lawns, whole areas were eaten off. Five pounds of lead arsenate applied either dry or in solution seemed to give full control.

Brown patch has not been particularly evident this season. Mercuric chloride or Semesan seemed to give full protection.

An occasional light dressing of Ammonium Sulphate along with a compost containing humus is the only fertilizing I use during the warm months of the year. My opinion is that over-feeding or over-watering does not necessarily affect the fungus, but it does get the grass in a soft condition, which makes the grass more subject to fungus attacks.

I have observed this summer several going to decided extremes in withholding water and fertilizer, much to the detriment of their greens. I consider the soil should be kept moist enough at all times so that the roots can replenish the plant-food removed in the cuttings and I like to keep sufficient available nitrogen in the soil for the plant.

Fifth question: My experience has been that if greens are properly watered, fertilized and top-dressed that no spiking or other tearing up of the turf is ever required.



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