Heavy Rolling Means Healthy Turf By LAWRENCE HUBER Greenkeeper, Elks Country Club, Worthington, Ohio AFTER reading reports of so many greenkeepers in the November issue I felt that other greenkeepers should write their experiences too, so here is mine briefly.

Brown patch we had plenty, both large and small. On the large brown patch I treated the same as I have always done in the last six years. When it first appears I topdress greens with good compost and apply sulphate of ammonia the rate depending on how hot the weather is. Treating it in this way we found that the greens came back healthy,

On the small brown patch it was different, in fact the only green I had it on was the practice green right near the clubhouse where everyone could see it. I used on this green Calo-Clor but it didn't help it in the least. I tried my large brown patch remedy and it also didn't help. I finally laid it out in strips ten feet wide as an experimental plot and tried ten different fertilizers to find out which one would bring the green out the quickest. I won't take space to name all of the different fertilizers but the one that did the most good was cotton seed meal applied at the rate of one hundred pounds to five thousand square feet.

Weeds were not as much of a problem this year as before. Each man has three greens to look after and they took care of all the weeds this year satisfactorily.

I noticed that one of the letters from last month's magazine the greenkeeper said he had to take the heavy mowers off the greens on account of packing the soil too much. This is one thing in particular I wanted to say in my letter. We have in the last two years been using heavy roller mowers on our greens and this last spring we purchased three light roller mowers and I put the three heavy ones on one nine holes and the three light ones on the other nine. On the greens where we used the lighter machines the turf is more dense and healthier than on the ones where the heavy mowers were used. The water on three of our greens would stand in puddles and this last week I opened up the drains and found the only cause to be too much heavy rolling by these heavy roller mowers.



Greenkeeping Without Money

By J. M. RETTIG General Superintendent, Laramie Golf Club Chicago, Illinois

MR. MORLEY, I have your letter of October 1 on hand which I just received

the other day and am answering same regarding what work I have done on the course this season. I have an 18-hole course practically level. I could spend lots of money if I had it to spend. You see I have to work accordingly.

I had lots of brown patch and lots of worms and dandelions on which I used the mower, as I had no money to spend on sulphate of iron. On this course the fairways were under water all last winter, that is covered with ice as the drainage was poor, and as a result were about thirty per cent frozen out. So I seeded same with timothy in the spring and recovered about seventy per cent of the fairway.

I sowed one ton of timothy on the eighteen fairways with a wheelbarrow seeder and also did all the draining this spring which helped a lot. You see this soil cracks when the dry season sets in and the only way to remedy it would be to plow and sow with soy beans and red clover and plow under same when in blossom and seed in fall with meadow fescue and red top. That would stop the cracking of the soil.

You see I have only six men to run this course with and at that we had it in pretty fair shape. I had the greens in A-number 1 shape. It took about a week to knock out the brown patch—I used twenty quarts of air-slacked lime to fifty gallons of water and then flushed the greens with water. The next day I fol-



lowed up with six pounds of sulphate of ammonia to fifty gallons of water and again flushed greens with water, then topdressed with one-half yard black loam and one-half yard Torpedo Number 1 sand.

I generally water my greens in the morning. Each man waters three greens which takes three hours. This is done by hand. I have a sprinkler of my own make that throws fifteen times more water than ordinary sprinklers. I don't believe in night watering. I have been in the business since 1896 and was always wide awake—you know experience teaches. The trouble with most greens is they are watered to death.

There is only one remedy for brown patch and it does not cost much money. Take a fifty gallon barrel and add as follows: Ten pounds of salt, ten pounds sulphate of ammonia, ten pounds chloride of mercury and fill barrel with water and let stand for two days stirring it once in a while. Then use one gallon of the mixture to fifty gallons of water and your brown patch will soon disappear.

Greens Mowed Too Close

THE trouble nowadays the greenkeepers use everything they hear of. They cut greens one-eighth of an inch and the fairways too short. My idea is to cut fairways twice a week one-half inch high and greens one-sixth of an inch every other day and another thing a green should be rolled about once a week with a roller weighing about two hundred and fifty pounds. But in the spring use a one or half-ton roller as bent needs heavy rolling in the spring.

For my spring topdressing I use black loam. one yard sand, one-half yard, 10-6-4, fifty pounds to a green being sure to mix well. You can mix same with one-quarter inch of screen. To have good greens, fertilize only in spring and fall. After that topdress every four weeks, one-half yard sand and one-half yard loam, following up with six pounds sulphate of

ammonia to fifty gallons of water. Don't use any more than six pounds sulphate of ammonia or you will have to fight brown patch.

Why Kill The Worm?

NOW I will answer the worm question—I can kill them, but why kill the worm, he was made to help us keep the soil in perfect condition. Can anyone answer this question —what kind of soil have you when you kill the worm—is it as good as where he keeps working? Now it is a hard job to control him. Make a steel mat 4 x 4 and run over your greens in the morning—it will take you about twenty minutes for a green and it also helps your green because it makes the bent stand up.

About Mr. Grub, I had a few on several of my greens and having no money to buy arsenate of lead I rolled the greens with a roller weighing two and one-half tons and Mr. Grub was flattened out.

Here is a good motto to my fellow-greenkeepers-don't use everything you hear or read about; experiment with your soil and find out which is the best. You know all courses are not alike and the soil is not the same. Find out what you have. Always use good sharp sand on your greens as bent needs lots of air and don't cut too short or it won't be able to feed its roots; and don't fertilize too often or your bent will turn yellow.

I topdressed all my greens with Number 1 torpedo sand this fall—one yard to each green and put in sand, fifty pounds 10-6-4 fertilizer, but before I did this I ran a steel mat over them both ways so the sand and fertilizer could reach the roots. Now this is about all I did this season with hopes of better success in a financial way for next season. This winter when I have lots of time I will write you boys a long letter regarding my many years of experience on greenkeeping.

Snow Mold in Michigan By A. E. ARNOLD Greenkeeper, The Masonic Country Club Comstock Park, Michigan ANSWERING yours of Oct. 1st will say I regret I did not answer before the 12th of October, as I really intended to do. I have had a very busy fall owing to the pro-