

# How We Maintained Our

*A resume of experiences by America's most prominent greenkeepers.  
Practical stories by practical men*

EDITOR'S NOTE:—Stories omitted in this issue will be published in the January number.

## **Big Patch at Cincinnati**

*By JAS. THOMSON, Greenkeeper  
Cincinnati Country Club, Cincinnati, Ohio*

**D**URING the past summer I had two of the worst attacks of big brown patch I have ever seen. The treatment I gave consisted of dusting the greens with Bordeaux, then treated them with Semesan, also sulphate of ammonia which brought them back into good shape.

I haven't had any weeds this summer in my greens. I keep treating with arsenate of lead all the time. In the spring and fall I give each green from twenty to twenty-five pounds at each topdressing and around five pounds during the summer. Whether this has done away with the weeds or not I cannot say, but any other year we had always so many weeds. Last year I got rid of chickweed by dusting pure sulphate of ammonia using a salt shaker.

I have never been troubled with worms since using arsenate of lead.

We haven't started any new construction as yet.

## **Good Year At Lakeside**

*By ALFRED BULLER, Greenkeeper  
Lakeside Country Club, Lakeside, Mich.*

**I** MUST say this year I have had a very good year, not one complaint and a good year financially for the club. We had a little brown patch and we came out O. K. Not any more weeds than usual till September. Had considerable crab grass and chickweed, but raked same very hard and the use of arsenate of lead kept them down.

Construction work enlarging several tees and making many new bunkers and a great deal of tiling to do this month. I use mowrah meal for our worms and haven't had any trouble to speak of.

I went to our meeting last Monday, Sep-

tember 30 and we enjoyed ourselves very much and always get some good from them. Wouldn't miss them for anything, in fact I have only let two slip by in a year and have over one hundred miles to go every time and hope to see you in Indianapolis. November 25, I think is the date and also in February, 1930 in Louisville. Thanking you for the interest you take in our work.

## **Low Water Pressure at Pomonok**

*By WILLIAM JOY, Greenkeeper  
Pomonok Country Club, Flushing, N. Y.*

**I** AM a Charter Member of the National Greenkeepers Association and look forward each month to receiving my copy of the **National Greenkeeper**. It is certainly well-named "The Leading Journal of the World on Turf and Golf Maintenance." I enjoy reading what the greenkeepers all over the country do during the season.

Here at Pomonok, we have had very little brown-patch this season. This has come about, I believe, as a result of watering during the night. The club is located on the main highway about midway between Flushing and Jamaica. As we have no water of our own, we have to depend on city water. The nearby farms were using so much water that we found the pressure low during the day. And the farms had the advantage of being lower than the golf course.

The plan I hit upon to solve my problem was to assign six greens each to three men who began watering at eight in the evening and finished the greens at three in the morning. At three o'clock the sprinklers were turned on the tees until half-past five: this made up the nine-hour shift. The shift was changed weekly during the season of drought so as to even up the work for the men.

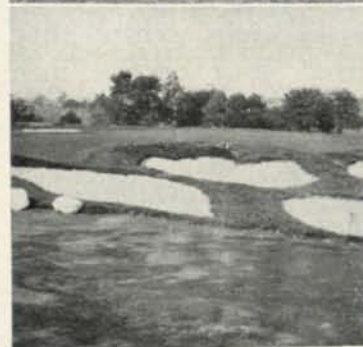
Of course it was necessary for me to closely



# Golf Courses In 1929

*How various problems of construction and upkeep were solved.  
told in their own language*

*Further contributions will be welcomed and should be mailed not later than December 10.*



WILLIAM JOY

*Lower photo shows view of  
Pomonok golf course, Flush-  
ing, N. Y.*

during the N. Y. Metropolitan P. G. A. Championship held here a few weeks ago.

During July and August I used no fertilizer. The course is in use most of the time. My plan of night-sprinkling avoided inconveniencing the players—this in itself is something worth working for. Great watchfulness is however required of the greenkeeper to see to it that the greens do not receive too much water. Our fairways are coming back well; we are seeding the bad places. And it is my opinion that there will be more fertilizer than seed used around this part of the country.

At another time I will be glad to write you about the construction work here at Pomonok. At this point it is a pleasure to mention the friendly co-operation of Pomonok Club members and the backing and encouragement I have received from Mr. William H. Green, Chairman of the Green committee.

watch the greens to see that they were not getting too much water. If the greens were getting too much water, I watered them every other night and instructed the men to water the approaches about thirty yards out from the greens on the intervening night. This plan worked admirably, and I may add that I had the pleasure of hearing many favorable comments on the condition of Pomonok greens

## What is Washington Bent?

*By W. P. FRAZIER, Greenkeeper  
Lost Creek Country Club, Lima, O.*

**I**N REPLY to your questionnaire regarding brown patch, am pleased to say that during the five years that I have been here we never have been bothered with brown patch; why I do not know, unless it is due to the construction of the greens. We have never used any manure on our greens, even in compost. If anyone cares to write me I will tell them the construction of our greens.

Our first nine holes were put out in the fall of 1924 and planted with Washington bent. The second nine in the fall of 1928 planted with Washington bent. There is as much difference as between night and day. What is Washington bent? This grass was purchased from two different places, one is fine and one is coarse, so which is Washington?

Regarding the location of greens. I do not think that has a great deal to do with brown patch. I have seen greens which are in the open have brown patch just as badly as those which were enclosed.

We have some weeds to contend with, but will have them more or less when you do not have some place to put your dirt so that the weed seed which is in the soil will germinate and then stop the growth by turning or heating. You will have more or less weed seed blown onto your greens during seeding time when they are covered with topdressing and next year you will have some more weeds, and about the only way you will get them out is to dig them out.

As to crabgrass, we have some around the edges of a few of our greens and I think it is due to our close cutting of the blue grass next to the bent which has not been as well taken care of as the bent, due to lack of fertilizer. As to chickweed it has never bothered us a great deal due I think to the use of arsenate of lead.



We have not done any new construction work except to complete what was started during the fall of '28. Our new greens were planted October 6, 1928 and opened for play June 6, 1929.

And fellow-greenkeepers if you ever pass through Lima, Ohio would be glad to have you come out to the club for I can talk better than I can write, this being my first attempt.

### Fencing the Golf Course

By CHAS. ERICKSON

*Greenkeeper, Minikahda Golf Club, Minneapolis, Minnesota*



CHARLES ERICKSON  
*Veteran Minnesota greenkeeper*

I AM a little lax when it comes to writing letters to the National Association of Greenkeepers, but in reading the last issue of your magazine it made me embarrassed to note there was nothing from this section of the country, with the exception of an article by one of our young greenkeepers, Harold Stodola, of the Keller Club, St. Paul, Minn.

with the exception of an article by one of our young greenkeepers, Harold Stodola, of the Keller Club, St. Paul, Minn.

It seems that the majority of the greenkeepers always seem so busy and have something on their minds. For my part I have not had any trouble at all. Everything has been going along nicely throughout the season. Have not been bothered with brown patch or weeds. We go over our greens every day and in that way we do not give the weeds a chance to multiply.

I have done quite a little work this season. We fenced in nearly our entire golf course, which is about 160 acres, and put up a wonderful fence with barb wire on the top, so it would be quite difficult for anyone to get in except by the gate. Have also done a lot of carpenter work. We built a house for the caretaker who is working at the club house, and of late we have put up a nice trap shooting house, besides doing some tiling which the county made us do. Taking it all in all, a person does not have to look for work on a golf course as there is always plenty to do.

Do not believe it is necessary to tell you how I do my work as all greenkeepers work under different conditions. We do not have the same soil to contend with, nor the same climate. So, I always do things in my own way and find myself coming to the front with my work. I have never been afraid of anyone looking at the beautiful Minikahda course, as it is certainly a real course.

I do not have to ask for money to go ahead with my work, or a man or two if I find I need additional help. I have a chairman who cannot be beaten in seven states. He has always told me that it is up to me (leaving all matters to my judgment) so I have always been careful not to abuse the privilege. However, I have visited at clubs where they have not had more than four or five men at the most and that certainly is not sufficient to take care of all the work connected with a golf course. I have found that they have had to be stingy about their help and finances in general, and still some of the members expect the greenkeepers to have the courses looking as good as those on which a great deal of money has been expended.

Every so often we run across one of these chairmen who will say, "I was over at such and such a course to play a game of golf and the greens were simply wonderful and the fairway was so good that you could have cut a putting green anywhere, and the bunkers were ruffled and they looked beautiful, and the long grass was cut so short that you could see the ball fifty yards away." It may be possible that the greenkeeper, of the course, that was getting "knocked" did not have sufficient help to make the course as wonderful as the one bragged about. Well, we have to stop and figure that in all probability the other fellow had all the help he needed, all the money he needed, so why shouldn't he have a perfect course. In one instance I told a man so and I only hope that he will read this article in some issue of your magazine.

### How I Plan My Work

GREENKEEPING comes very easy to me, but just remember that I have been at the same club for the past twenty-nine years, besides having eleven years of practice with the



Park Board of Minneapolis, so you boys can readily see that I have been a good sticker. I have always gotten along nicely with my employers and the men working for me.

I have organized my men so that they have their definite duties to perform. Three men cut the greens every day, for about five months steady—a total of twenty-one greens. They cut the greens every day as well as Sunday, using the Ideal and Toro hand mowers. First of all they pole the greens before cutting them. After the cutting has been done the men go to the tool house. They then lift the holes on the greens and weed them and do such things as they find necessary to do during the balance of the day. If they cannot find anything to do on the greens they go into the nursery, which also requires some attention. That also has to be cut and watered.

The greens are also watered throughout the night. A man starts in sprinkling at five P. M. and continues until one A. M. He covers nine greens during the night and this is done every night, whenever it is necessary. If it is not necessary to do the sprinkling he works through the day in the compost pile.

I have one man taking care of the tees, cutting, weeding, and watering them, top dressing and putting on sod whenever it is necessary. Another man tends the bunkers, which you know is quite a job—dragging—and if this doesn't keep him busy we find something else for him to do. This man does not have a steady job on the bunkers at all times.

I have one man who cuts the fairways three times a week during the growing season and in this way it is very easy for a greenkeeper to get along, providing you have reliable men, and I certainly have been fortunate in finding them so. Some have worked for me close to twenty years. I certainly take a great pride in my crew.

#### Do Not Overfeed the Greens

**I** NOTICE that some of the boys have been troubled with brown patch. I believe this could be remedied quite a little if they did not feed them so much. I know of some instances where the greens have been overfed and that is much worse than starving them. I have found that out from experience.

About two years ago one of my men put three sacks of Milorganite in with the compost and I did not know about it. I told him not to put anything on except just to top dress, as I knew what it was made of and that it was rich enough for that season of the year. At any rate, several brown patches appeared on the greens. I scratched my head and wondered about it. This year I watched him closely and told him not to put on anything except what I told him to and the green which has brown patch is as wonderful now as the others. So from that I know that greens can be overfed as well as starved.

It really is surprising how little fertilizer I have used for all of my greens this year. I used a ton and half of Milorganite early in the spring and have fertilized them five times with ammonia sulphate, which amounts to 2200 pounds. They certainly have been in good condition at all times. Have also top dressed them three times, but of course I have real compost. I am always careful with the soil—how it is mixed—and I always keep about two or three years ahead. Turn it over and see that the weeds are kept clean of the pile, which is the main thing; otherwise, I feel it is easier to pull the weeds up on the compost pile than it is to pull them on the greens, which is a slow job.

I have seen compost piles where the weeds have been three feet high and some of them have been over an inch in diameter. Just think of the amount of moisture the weeds are taking from the pile, which should be going to the greens instead. I always use a great deal of sand in my compost.

#### Some Bent Is Just Junk

**I** HAVE noticed that the bent greens do not stand up on some of the courses like they should. My opinion is that the members of the clubs, as well as the greenkeepers, were in too much of a hurry to get this bent grass started so they could have regular putting greens. I have seen bent that I wouldn't give two cents for. There was a little of this sold for Washington bent and also for Metropolitan bent. They give it the best names, but what is it today—nothing but junk. I have noticed



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in this section of the country how quick they were to "skin" the people and sold it for good bent. They certainly got fooled.

Now is the time to rip it out and put in some better quality bent. I have a lot of *Poa annua* in them, and I still have a few and I think just as much of them as some of the bent greens. My chairman certainly thinks they are better than the bent. I have four of the Washington bent and they have stood up fine and always look good, but I got this bent from our old friend Piper, from Washington, D. C. He was at the Minikahda Club twice and I had quite a talk with him and nobody else could sell me any bent, with the exception of one green which we changed over and I did not have enough at the time so I took his advice and put in enough for one green, which I should not have done as it isn't worth anything. Some day I am going to rip it out and put in some real strain.

We have a nursery of old strain which I picked up on the course, which is called Minikahda strain. It is wonderful—I have watched it for the past fifteen years and have found that it never turns in either cold or dry weather.

There is quite a bunch of greenkeepers in this section of the country—I imagine about twenty-two. We certainly have had a lot of fun. I happen to be the president of our little group. Last summer we took two days off and visited the courses in the small towns around here and gave them a helping hand wherever we could. Then we went to Duluth, had a nice dinner and played a good game of golf, in fact, we had a wonderful time. We are planning on meeting the next time in my tool house, which is modern in all respects and we certainly are looking forward to another good time.

## Ice On Greens At Chicago

By JOHN MACGREGOR

*Greenkeeper, Chicago Golf Club, Chicago*

THE end of the Golf season and golf course maintenance has come to a close for another year. We all like to elaborate on the bright spots but, want to forget or ignore the troubles and adverse conditions with which we had to contend during the season just passed.

Personally I have had my share of both. The past winter was a severe one for golf courses in Northern Illinois.

I believe every green in the Chicago district was covered with from two to three inches of ice which remained for more than two months; this meant they were sealed, and the grass naturally suffered for lack of air.

The grass on my greens go into the winter with never less than an inch of growth on them, usually more. I find under normal conditions when ice forms on the green the blades of grass can be seen showing through the ice, during the day. When the sun shines the ice melts a little around the blades and in a short time the ice has a honey-combed effect, thus giving a circulation of air to the grass and preventing winter kill.

My greens being about 80% "*poa annua*" came out of the winter with practically all of the *poa annua* killed out; only on high spots did it escape. The spring was cold and late with hoar frosts every night until the end of May. It was nearly June before any growth started so that it was hard to convince anyone that the greens would recover and come back in good shape without tearing them up and re-seeding. But we succeeded and the greens were better this year than they ever have been. I could do nothing but wait until the growth started; when it did I commenced feeding gradually and in three weeks they were fine.



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  
Greenville, Michigan

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**

**A**T 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.



## Heavy Rolling Means Healthy Turf

By LAWRENCE HUBER

*Greenkeeper, Elks Country Club, Worthington, Ohio*

**A**FTER 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.

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## Greenkeeping Without Money

By J. M. RETTIG

*General Superintendent, Laramie Golf Club*

*Chicago, Illinois*

**M**R. 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.

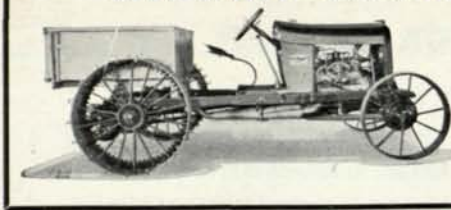
I had lots of brown patch and lots of worms and dandelions on which I used the mower, as I had no money to spend on sulphate of iron. On this course the fairways were under water all last winter, that is covered with ice as the drainage was poor, and as a result were about thirty per cent frozen out.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



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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-



gram we have in re-surfacing and changing sod on seven of our greens. As I have previously stated to you, we have twenty-seven holes on our grounds and all are planted with the old Columbia strain bent, which has been everything but satisfactory as a desirable grass for our greens. Our program is to change them all as soon as possible. Two of them were changed last fall to Washington strain, and seven are scheduled for change this fall, making nine in all. We have this fall planted enough stolons in our nursery to resod nine greens next fall. We plan on having all twenty-seven greens changed in the fall of 1931.

We have had plenty of trouble with our greens turning brown this summer, except the two Washington greens, which gave no trouble. Snow mold has been our worst enemy of the fungi for the past two years; we have been most seriously damaged with it.

Mr. Montieth of the Greens Section and Mr. Dahl of the University of Wisconsin have both come to my rescue on each occasion and rendered most valuable service in combating the disease. Mr. Dahl came Oct. 24 and treated with different chemicals on several test plots where the disease has worked. We are in hopes to learn a more definite treatment of snow mold next Spring.

Snow mold is working early with us this fall. I have found several greens already badly affected and have applied Corrosive Sublimate to them at the rate of 3 oz. per 1000 sq. ft. to those affected, and intend to treat all greens the latter part of this month with Calomel at the same rate as a preventive for the later attacks during December and January.

In the Spring I will gladly report the results to the "National Greenkeeper," if we have any demonstrations of noted value.

### A Bent Turf Garden

By FRED A. BURKHARDT, *Greenkeeper  
Westwood Country Club, Rocky River, O.*

ONE acre and a quarter in the finest bent—that is what we have planted at Westwood this year. This amount of bent sod would give us nine greens of six thousand feet each.

The spot picked out for the nursery was drained just as well as any green I have ever built. The place was covered with second growth fescue because the sod

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had been stripped before. This second growth was stripped off and it left nothing but the clay base. The clay was plowed and worked until it was very fine. Then 65 tons of hardwood humus, 186 yards of sandy garden soil, and 30 tons of sharp sand were worked into the clay by discing and cultipactor. One week of work on the land was sufficient to mix the humus, sand, and soil into the clay and it made one of the best seed beds I have ever seen.

The texture of the made soil is wonderfully light and fluffy and you cannot make it pack. There is a springing feel to the soil bed when you walk on it. The cushion that everyone wants in their greens but takes years to get is there before the seed is planted. I think in the future greens will be built to have the cushion before the grass is planted instead of trying to build that cushion after you have a stand of grass.

Four days before I seeded I worked into the soil 1400 pounds of 10-6-4 fertilizer. Then I seeded the plot with 300 pounds of the best German mixed and Prince Edward Island Bent that could be purchased. We planted this seed the 30th of September but we failed to get the usual Fall rains so we had to water the plot by hand.

The results have been wonderful—a thick and even stand of grass, healthy and strong. The young grass plants are along far enough now to stand the winter and next year I believe we will have one of the best pure bent nurseries in the country.

### Announcement

On and after November 1, 1929, the sale and distribution of the Royer Compost Machine, heretofore conducted by L. F. Mitten, will by mutual agreement, be conducted through The Royer Foundry and Machine Co.

All accounts contracted, before November 1, 1929, for machine or parts, are payable to L. F. Mitten, and should be addressed to Mr. L. F. Mitten, Shrine View Road, Dallas, Pa.

All correspondence after the above date, should be addressed direct to the Royer Foundry and Machine Co., 158 Pringle Street, Kingston Station, Wilkes-Barre, Pa.