Lead Arsenate Treatments

ONE of the most effective methods of controlling earthworms is the application of lead arsenate in the top dressing. Although the method was originally designed to protect turf from infestations of Japanese beetles and white grubs, it has proved to have other beneficial effects, among which is the control of earthworms. A total of 15 pounds of lead arsenate per 1000 square feet was applied to one series of fertilizer plots in 1928, the material being added with the top dressing in three separate dressings.

No harmful effects were noted from the use of lead arsenate, irrespective of the fertilizer being applied to the grass, and the earthworms were entirely eradicated by the treatment. In addition, the weeds were reduced over 50%, clover nearly 20%, and poa annua about 30% in the first year as a result of the lead arsenate. The treated turf maintained its color and vigor throughout the season.

Since this treatment has been observed for but one year, one cannot state definitely that similar results will always be obtained on weeds, clover, and poa annua. However, there is every reason to believe that it will continue to be a simple and effective means of controlling earthworms on turf as well as the larva of beetles.

The Fertilizing Value of Urea and Cottonseed Meal. In the original plan of the experiments with fertilizers, cottonseed meal and urea were not included. Because of their increasing importance, it seemed advisable to study the value of these fertilizers, and accordingly a strip of Metropolitan bent grass was divided into plots for these tests. The results are given in detail in Table 2.

Urea proved to be nearly as effective as sulfate of ammonia in making the soil more acid, whereas cottonseed meal had no effect. Neither of the new fertilizers was as effective in controlling weeds, clover and poa annua as sulfate of ammonia. In fact, Urea seemed to stimulate poa annua, a result which was entirely unexpected and not accounted for at the present time.

Cottonseed meal caused the grass to remain green later in the fall than either Urea or sulfate of ammonia, but like other organic fertilizers it proved very inviting to earthworms.

Tests of Other Fertilizer Materials THERE are many new kinds of fertilizer and fertilizer mixtures being offered for sale each year and it would be impossible to test them all without tremendous expansion of facilities. However, space was found along the edge of Field B, for testing three of these materials, Nitrophoska, Castor pomace, and activated sewage sludge.

Nitrophoska is a concentrated fertilizer containing 15% nitrogen, 30% phosphoric acid, and 15% potash. When this material was applied so that the same quantity of nitrogen was added as on the sulfate of ammonia plots, the two fertilizers seemed about equal in value. Since the test was begun in 1928, more time is needed to determine the long-time effect of this fertilizer.

As a fertilizer, Castor pomace compared favorably with other organic materials such as cottonseed meal, but it has not been of any value in controlling earthworms. Although the pomace of castor oil beans is poisonous to man when eaten, it apparently has had no harmful effect on earthworms.

The third material tested was activated

Table 2. Summary of Some Fertilizer Tests at New Brunswick, N. J. The Grass on the Test Plots was Metropolitan Bent and the Treatments had Continued for Two Seasons.

and a state of the state of the	Material Applied per 1000	Nitrogen Applied per 1000 sq. ft. per yr. (lbs.)	Acidity of Soil (1) (pH.)		Proportion of Turf Composed cf		Notes on Vigor	Earthworm
Treatment	sq. ft. per yr. (1bs.)			Weeds (%)	White Clover (%)	Poa Annua (%)	Nov. 10, 1928 (2)	Casts per 12 sq. ft.
No Fertilizer			6.2	100	15	13	poor	33
Sulfate of Ammonia	14.1	2.83	5.8	. 15	2	6	m to g	36
Urea	6.3	2.83	5.9	71	6	18	medium	32
Cottonseed Meal	44.5	2.83	6.2	56	7	9	good	81
Cottonseed Meal			6.2			9		81

(1) The pH. values give a measure of active soil acidity. 7.0 is the figure for the neutral condition. Figures lower than 7.0 indicate acidity, the lower the figure the greater the acidity (2) "g" means good vigor and color. "p" means poor vigor and color. and color.

"m" means medium vigor

PAGE TWELVE

The National Greenkeeper

sewage sludge. The sludge produced at Milwaukee is called "Milorganite" and this brand was used in the tests at New Jersey. Like other organic fertilizers, the nutrients contained are made available to plants upon decomposition and therefore its effect on grass is slow and extended. The test conducted in 1928 indicates that the fertilizer may be the equal of other organic materials, providing the nitrogen may be purchased at the same price.

Use of the Experimental Data

THE value of these experiments does not lie in the fact that one treatment has been found better than others, but rather in the fact that some of the various factors which go to make up good or poor systems of fertilization are isolated and may be studied independently. It is hardly possible to lay down rules for maintenance of golf greens that will apply over a large area having diverse soils and climate; but if the reasons underlying this or that treatment are understood, the systems of management may be varied rationally to suit the conditions at hand.

There are many other soil and plant problems to be solved before turf management advances from the empirical stage to one of reasoned practice. New experiments designed to solve some of these problems have been recently established at the New Jersey Agricultural Experiment Station, and results should be available in the near future. In the meantime, visitors are always welcome on the turf plots and the exchange of ideas will no doubt benefit everybody concerned.

Seed And Seed Markets

What the probable prices will be in the spring of 1930 BY E. E. PATTISON, Director International Seed Service, Inc., New York

NOW that the greenkeeper has finished his fall work, he has ample time to consider his spring needs and as most everyone will require some seed, it seems wise at this time to give information not only in regard to the source of supply, but to the trend of future markets.

The wise greenkeeper will see to it that his seed supplies are ordered from reliable sources and delivered in time for inspection and testing before seeding. He will also see to it that his orders are placed when the markets are favorable. In nine cases out of ten, early buying saves money.

The Bents

E VEN though the fall planting was not so large as originally estimated, due to adverse weather conditions, the carryover of bent seed of all origins is extremely small. One or two importers have some of the badly adulterated bent which came out of Germany and Holland last spring and it will undoubtedly be sold during the coming spring.

South German Mixed Bent

The 1929 crop of European Bent is not so large as the 1928 crop. It is slightly more weedy and will therefore take more reconditioning before shipment to America. From September 1 when the markets opened, until November 1, there has been an advance of 20c per pound. On the present market, today's price to the golf course for spring delivery should be approximately as follows:

70%	purē	\$70.00
80%	pure	80.00
90%	pure	90.00

New Zealand Colonial Bent or Brown Top

The 1929 crop of New Zealand Bent was slightly larger and of better quality than the 1928 crop. New Zealand being six months ahead of us in the Northern hemisphere, a great deal of the 1929 crop was used this fall.

In previous years there was some hesitancy on the part of a great many people in using seed of this origin, but from the results of some of the more adventuresome persons, it has been found that seed of this origin (especially that from the Southern Island) is adaptable to our conditions. In many ways, Colonial Bent is the most economical to buy. The seed is usually of higher purity and of lower weed seed content. Whether or not

DECEMBER, 1929

Colonial Bent greens will last as well as South German Mixed Bent, remains to be seen. We have heard the expression of several greenkeepers to the effect that in their opinion, Colonial Bent is more Brown Patch resistant. The golf club should pay for purchases of 99% quality made now for spring delivery approximately \$65.00 per 100 lbs.

Pacific Coast Bent

In talking to one of our official agronomists who has recently made a complete inspection and survey of the Pacific producing areas, one gathered the impression that the yield of the 1929 crop is somewhat larger than the 1928 crop. As everyone knows, the Pacific Coast produces two distinct species and three distinct varieties of one species, as follows:

- SEASIDE BENT—Agrostis maritima. Part of this production is distributed under a registered trade name. Part is sold by commercial reconditioners under the state inspection quarantine.
- 2. ASTORIA BENT—Agrostis vulgaris var. astoriana. This is a variety of the same species to which Colonial Rhode Island, Puget Sound and Prince Edward Island Bent belong.
- 3. HIGHLAND CROWN OREGON BENT—Agrostis vulgaris.

This is the same species as Astoria Bent but is not the same variety.

4. PUGET SOUND BENT—Agrostis vulgaris.

This is the same species as the above mentioned bent.

Prince Edward Island Bent-Agrostis vulgaris

In the U. S. A. this seed is identified botanically as *Agrostis vulgaris*. It usually comes into this country tagged *Agrostis Tenuis* as this name is the one used by the Canadian Department of Agriculture. It is understood that the production was at least as large as elsewhere.

Velvet Bent

There is such a small commercial quantity of velvet bent that very little space need be given. Part of the crop of Canada was a complete failure. This last fall there have been several greens planted vegetatively to velvet and the results so far have been most gratifying.

Kentucky Blue Grass

THE 1929 crop was so unusually large in both the Kentucky and Missouri producing areas that the prices for Kentucky Blue are appreciably under those which prevailed at this time last year. Present prices for spring delivery should run about as follows:

- 30 lbs. to the bushel 95/98 pure \$32.00
- 24 lbs. to the bushel 92/95 pure 28.00
- 21 lbs. to the bushel 85/90 pure 26.00
- 19 lbs. to the bushel 75/80 pure 24.00

The best advised authorities of course advocate only the first two qualities for golf purposes. In view of the present low markets, it can safely be said that the tendency will be upward and it would therefore seem wise to make reservations now.

From samples already tested, it seems as if the Missouri seed was of slightly better quality than the Kentucky seed. The low weed content of seed grown in Missouri is a principal item which favors the use of this seed.

Red Top

THE 1929 crop of red top is appreciably smaller and of lower quality than the 1928 crop. It is safe to say that it was only twothirds as large. This naturally has resulted in a higher market. It is understood that some of the most reliable seed companies are making reservations for the golf courses for spring delivery on the following bases:

> 98% pure \$25.00 96% pure 23.00 92% pure 21.00

90% pure 19.00 per 100 lbs.

A great many of the better advised authorities believe that prices next spring will be higher.

The Fescues

RED FESCUE: As generally known, most of the red fescue used by golf courses comes from New Zealand. It is gratifying to know that the 1929 crop from this origin, which has been coming to our markets since last July, has reached here with a satisfactory germination and it is believed that this fescue will have a satisfactory germination this spring. A warning, however, must be given because there are a great many wholesalers who (Continued on page 34)

Canadians Close Uneventful Season

BY J. H. EVANS Golf Editor, Toronto Globe

AFTER a season which opened in April and might proceed for some weeks longer, for

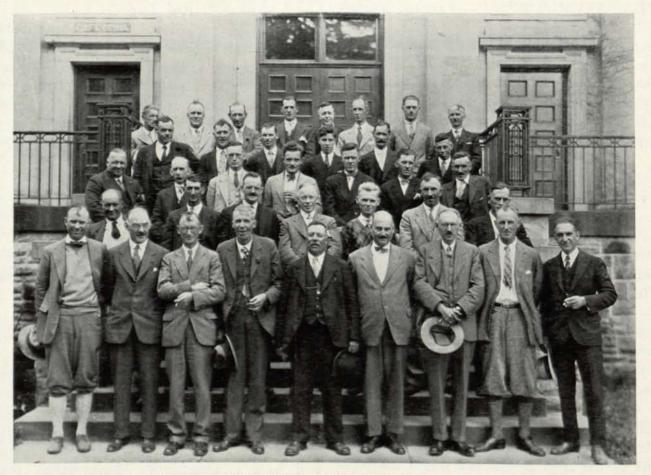
Canadian winters are becoming shorter in the more settled portions of the Dominion as each year passes, the Canadian greenkeeper has concluded his work for the year and retires to his home to give thought to the problems which may arise in 1930.

The season for golf in Canada might be longer, but for the fact that the clubhouses in Canada close in October, and as a consequence there is no army of discriminating golfers demanding a perfectly groomed course for their favorite pastime. From habit rather than necessity, club committees have shortened the season as far as the greenkeeper is concerned by bringing all matches to an end on October 1 and closing club houses by October 15, although beyond minor frosts and occasional rain there has been no necessity for it during a decade.

Paradoxically, 1929 was an anxious but uneventful year. It opened auspiciously, continued with normal conditions prevailing until June and then came the drought extending from coast to coast broken only occasionally by showers. The drought caused anxious moments, continued until October, but fortunately it left nothing in its wake.

Canadian Golf Makes Record

A RECORD for the game since it became a sport engaging the interest and the attention of thousands, was made during the season. On many courses in central Ontario.



CANADIAN GREENKEEPERS VISIT ONTARIO AGRICULTURAL COLLEGE This picture was taken during a visit to the Ontario Agricultural college, Guelph, and to the course which Arthur Cutten is building for his native city. Among the figures in the group are: Front row, Charles' Evans Jr., Chicago; Edward Mason, secretary, Lambton club, Toronto; J. Cameron, secretary, Scarboro club, Toronto; Howard Lloyd, course superintendent, Rosedale, Toronto; William J. Sansom, Toronto Golf club; Professor Tomlinson, Guelph; C. Wright, seed expert of the Dominion Government. Secretaries and greenkeepers of other clubs are also in the group.

Grass Seed Fertilizers Seeders Discers Greens Equipment Toro Equipment Grounds Equipment Rollers

When in Chicago visit our show room where you will see the largest display of equipment in the country. A Postal will bring our 1929 catalog.

J. Oliver Johnson, Inc.

World's largest golf course equipment house Morgan Huron Superior Sts. CHICAGO, ILL.

@ Reg. JOJ Inc, 1928

in western Canada and the east course, superintendents and their workmen were employed without interruption from June until October. On one course there was a half day lost in four months, (the Sabbath excepted) during this period. Similar records are to be found on the calendars of other greenkeepers.

Following his work of the spring, summer and fall with lecture courses at which the speakers were experts from Dominion and Provincial governments for the past six years, the greenkeeper may not pursue the same policy this winter. In an age, given over to the scientist. lock, stock and barrel, it may not be wise to criticize him and emphasize the eminent position held by Canadian greenkeepers working largely in a practical manner. But this may be the reason why the Canadian greenkeeper is considering the advisability of abandoning the annual winter lecture course, and why active members of the association will prefer to meet their fellows at the National Greenkeepers Convention in Louisville, Ky.

The brief history of the organized greenkeeper is illuminating. Six years ago, some greenkeepers formed an association for the general welfare of the calling. The association depended on bulletins secured from the United States government, periodicals and a great amount of practical knowledge. The ensuing year, the greenkeeper was adopted by the Royal Canadian Golf association and guided by an expert when he exchanged his views at monthly round table conferences. The expert was salaried by popular appeal to the mass of golfers.

Expert Advice is Dropped

 $T_{\rm HE}$ appeal failed to produce the desired results the next season, so the expert passed out of the picture, probably because golfers could not understand the necessity for his existence. The greenkeeper continued to carry on in a highly successful manner with occasional reference to an agricultural college for a report on a doubtful matter.

"We do not get much from them," is the frequently expressed opinion of the greenkeeper in response to the query as to the value of the lecture course and the well-meant advice

Register NOW for Turf Program

Good turf on greens and fairways is the soundest foundation for satisfactory golf. A systematic, scientific program of turf development is the only sure way to develop the perfect and permanent turf your membership demands.

First Step—A Complete Survey

Make every move count. A complete preliminary survey of the course, by specialists who *know* turf needs and how to meet them, will give all the necessary information. No mystery—just science and sound sense.

SecondStep-FollowDirections

The survey reveals the facts about your course. These facts are the basis for sane, sensible recommendations for a systematic program of turf development. Follow these recommendations—and know absolutely that everything you do is right—then you will have turf to be really proud of

Result-Economy, Satisfaction

Such a program of turf development is sensible, eliminates costly mistakes, gives positive, permanent results, improves playing conditions, and greatly lengthens playing seasons.

Our organization makes the survey and specifies the entire turf program, at a nominal cost.

Our booklet gives all the details-write for it today.

Wendell P. Miller and Associates 105 W. Monroe St., Chicago Consulting Engineers - Golf Course Specialists



of the expert. Perhaps it is the reason why the club secretary in many parts of Canada depends on the practical knowledge of the greenkeeper, and the greenkeeper has come to realize that constant association with his fellows is the sounder manner to develop his profession.

From the point of view of the greenkeeper, there has been little substantial development in the game in 1929. Two courses which will offer employment were built during the year. One is the gift of Athur Cutten, Chicago multi-millioniare to his native city Guelph, which with the hotel that Mr. Cutten is building in the city involves an outlay of \$1,-000,000. The course, modern in every respect, was laid out by Charles Evans, Jr., and should be open in 1930.

The second course is the Royal York, in Toronto, built to accommodate guests at the Royal York hotel which will open also in 1930. Mr. Cutten's gift to Guelph is expected to be the leading test not located in Toronto, Hamilton and Montreal and to fulfil the wants of golfers in the smaller cities and towns of central Ontario.

"Best Greens in Cincinnati"

Mr. C. A. Rich, chairman of the Green committee of the Western Hills Country Club, Cincinnati, says: "Since 1926 when we commenced reconstruction of our course I find that we have used 17 cars of

"WINDRIFT" Hardwood Humus

"Our members say we have the best greens in the Cincinnati District.

"By using the plain humus for our top dressings I believe we have found one of our greatest economies. The ease with which it is used without at any time delaying play upon our greens has greatly increased the efficiency of our operating force as well as eliminating our former expensive compost piles."

Put a few tons of "Windrift" Humus in your 1930 Budget. Do it now.

The Ohio Humus Products Company Box 95 London, Ohio JAMES A. SMITH, President



Louisville Opens Doors of Hospitality

Grand program plan for entertainment of greenkeepers and golf club officials who attend the Fourth Annual Greenkeepers' Convention and Golf Show, Feb. 4-7 1930

KENTUCKY HOTEL This splendid hostelry will be headquarters for National Greenkeepers' Convention in February

LOUISVILLE will throw wide open the famous doors of hospitality for the greenkeepers and golf club officials who attend the Fourth Annual Convention and Golf Show of the National Association of Greenkeepers of America, February 4 to 7, 1930.

This welcome message has just been received from Mr. Harry G. Evans, Secretary and Managing Director of the Louisville Convention and Publicity League, who writes as follows:

"The Louisville Convention and Publicity League subscribes to the old adage 'that all work and no play makes Jack a dull boy' and will entertain the 'maintenance department' of the world's greatest sport in the National Association of Greenkeepers of America. This splendid convention will be held in Louisville the first week in February, 1930. Every golf enthusiast in the 'good old town' will join George Davies, member of the executive committee of the association, in seeing that these veterans of the links will enjoy every minute of their stay in Old Kentucky.

"The greenkeepers will find that Louisville is not the 'biggest' town; yet it is large enough to afford metropolitan service and amusements while still within easy reach of the open country. It is not the 'richest' town, but there are few of its inhabitants who know poverty. In one respect it really stands alone —it is the 'friendliest' town, and it is the happy privilege of all its inhabitants to send visitors home knowing that 'Kentucky hospitality' is not merely a phrase but an established fact. "The hotel service of Louisville is unsurpassed. The accommodations of the various hostelries are ample to care for any convention that may be invited to the city. Service is of the best and the Louisville hotels maintain a reputation for 'even' prices—they are not affected by convention guests. An attractive feature of the hotel arrangements of the city lies in the fact that all the hotels are within a ten-minute walk of each other. All are in the center of the city and in close touch with the business, and amusement part of the town.

"Louisville has a generous equipment of golf courses. The three main clubs are the Louisville Country Club. The Big Springs Golf Club and Audubon Country Club. There are three municipal courses now in operation and one under construction which will be in use early in the summer of 1930. Besides these clubs, there are others in the suburbs which take care of the golf 'bugs' of the smaller localities.

"The club courses of the city are perfect specimens of the golf architect's art. They are nicely designed and well kept. These clubs all have full membership and all have waiting lists. The municipal courses are on

(Continued on page 30)



LOUISVILLE ARMORY Where the Greenkeepers' Convention and Golf Show will be held

PAGE SEVENTEEN

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

DURING 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 wellnamed "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

watch the greens

to see that they

were not getting

too much water. If

the greens were get-

ting too much

water. I watered

them every other

night and instruct-

ed 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

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-

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. What is Washington Bent? By W. P. FRAZIER, Greenkeeper Lost Creek Country Club, Lima, O.

IN 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. The National Greenkeeper

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,



CHARLES ERICKSON Veteran Minnesota greenkeeper

Minnesota 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 Stod-

ola, 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 riffled 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