

Selection and Planting of Evergreen Trees

N the September issue of THE NATIONAL GREEN-KEEPER details were given for the planting of deciduous trees. In general the details for planting evergreens are quite similar to those practiced in the planting of deciduous trees. There are many points of difference, however, and since evergreens are being planted generally every year, it is decidedly worthwhile to give considerable study to the requirements of the various evergreens.

Too often one sees beautiful and expensive plantings of evergreens declining rapidly, and one might say hopelessly, because too little consideration has been given to the plans for establishing the evergreen groups.

Fall planting of evergreens is practiced extensively throughout the country. Success often times accompanies this planting because during late August, September and early October is a period during which the evergreens are particularly inactive. Following this season is usually a period of rather rainy weather during which the roots have an opportunity to grow and establish themselves for the winter.

The best time for planting evergreens comes at a period in the spring, usually extending from the last of March to the middle of May. At this time the trees have gone through the rigors of winter and in a very short time will start into their early season growth, so that in a remarkably short time they can replace the parts destroyed and be in reasonably good health to continue on indefinitely.

Spring Planting Best in North

With the exception of the southern sections fall planting is not to be recommended. When one realizes the difficulties attending fall planting, it is quite obvious that spring planting is far better. Regardless of the care exercised in the planting operation, it is quite obvious that many of the feeding roots will be destroyed. When the roots have been destroyed, it is impossible for the evergreens to go into winter conditions full of

water. Since the leaves stay on the trees throughout the winter, great quantities of water are evaporated whenever the weather is at all mild and smaller quantities are given off even in severe weather. At the same time the ground is usually frozen which prohibits the absorption of additional water from the soil. Obviously the loss of water which the roots are unable to replace, has a tendency to cause the foliage and twigs to dry out to such an extent that death results. This so called winter killing is quite a serious trouble with trees which have not been disturbed in the fall. It is certainly logical to conclude the trees handicapped by the shock and damage of transplanting cannot possibly go through this critical period as successfully as trees without this additional handicap.

Fall Planting Better for South

In southern sections where the winters are not so severe and where the ground is not frozen during long periods of time, fall planting is recommended and is usually considered better than spring planting. In these southern sections the severest and most trying periods for trees are the exceedingly hot, dry summer months. Fall planted trees have an opportunity to become better established before this period than do spring planted trees.

Choose Locations Natural to Each Tree

Before planting evergreens, the most careful study should be given to the soil, the water and light relations of the location in which the trees are to be planted. When these facts have been determined, it is then necessary and essential to pick trees which will fit the conditions under which they are expected to live. It is not at all unusual to see pines planted in heavy, wet clay soil where they are more or less shaded by other and larger trees. Under such conditions the pines are doomed before they are set. They can neither survive with the heavy, wet soil nor with the shade which they have to endure. At the same time it is not unusual to see Arbor Vitaes planted on hot, dry, sandy knolls when their natural place to grow is in low swampy ground.

The list which would include practically all of the evergreens ordinarily planted, would be made up of the various pines, a number of varieties of spruce, a few firs together with one or two varieties of hemlocks. The white cedar group would include not only the white cedars themselves, but also the numerous members of the horticultural Retinosporas. The Arbor Vitaes with their many beautiful and attractive varieties, the junipers, a few members of the yews and the Douglas fir, would about complete the list. Although the larch is not an evergreen, it should be included in the list because of its close relationship with the members mentioned above.

The Pine Seeks the Sun

The twenty-five or more species of pine together with the hundreds of horticultural varieties make up a large proportion of the evergreens used for planting. Careful observations of the situations in which the pines do best is sure to impress one with the apparent thrift of these trees. Practically all of them flourish best on moderately dry, rocky, sandy and gravelly soils. Some of them, it is true, will do well in the richer, heavier soils, but in nature one always finds them doing best in the soils to which they are most suited. It is in such a location that they are able to survive and surpass other trees which may try to get a start. Another point worth noting, is the fact that one seldom finds a young pine tree doing well under other trees. With this fact in mind the only natural conclusion to reach is that the pine trees will not do well in the shade. With these facts in mind it seems that one could much more intelligently pick the spots where the pine trees would grow most satisfactorily. It certainly would be better than to just go out, dig a hole and put a pine tree in it.

Spruce and Pine in Close Relationship

In making observations of the spruce group, the most impressive feature is the fact that they are primarily a northern tree. The only time that one finds them in the south is when they grow so high in the mountains that the temperatures are approximately the equal to those of the more northerly sections. The spruces are as exacting in their light requirements as are the pines. In other words, one cannot expect a spruce to do well when shaded either by buildings or other trees. As a general rule the spruce trees desire a rich, well drained soil, although occasionally, especially with the red and black spruce, one may find them growing in soil which is almost swampy. However, even these which can and do adapt themselves to swampy ground do equally well when planted in the drier sections.

Choose Cool, Damp Location for Firs

Some of the most beautiful and ornamental evergreens are the firs. They are being planted more and more and justly so. The firs do best in rich, damp, cool soil. They will succeed quite well in swampy ground. Consequently when one desires the best possible results, one should select the location for planting the fir trees that is best adapted to the natural surroundings in which these trees thrive.

Hemlocks Do Well in Shade

One of the most widely planted of the evergreens is the hemlock. Fortunately it is one of the most desirable and one of the most adaptable to unfavorable conditions. It is difficult to transplant, but its beauty and grace amply pay for the additional care needed in successful planting. Fortunately hemlocks will do well in the shade and it is about the only evergreen that can succeed under these adverse conditions. It can adapt itself to moderately dry soil, but it does best in cool, rich almost wet places.

Plant Junipers Anywhere

It seems to make little difference to a juniper whether the soil is rich or poor, wet or dry, hot or cold; it goes ahead building itself into a decidedly worthwhile specimen.

Don't Overlook the Douglas Fir

The Douglas fir is one of the giant trees of the western coast which has been brought to all sections of the country because of its wonderful beauty. It makes its best growth in rather rich, deep, moist soil. When one plants it with the hope of securing a specimen tree of this variety, such a location should be selected for it. It is seldom advisable to make large plantings of this tree, but it is certainly worthwhile to plant a few as specimens for variation in the evergreen planting.

The Low-Growing Yew

Last and almost least, come the yews. They are not planted very extensively, but show such individuality it is often times well to have a few of them. They do best in cool, shady, moist places and although they seldom grow into trees, they have their mission to fulfill and are decidedly worthwhile when planted in the right place.

Summarizing the information contained in the preceding paragraphs, one might say to plant pines, spruces and junipers in the dry, light, sandy, poor soils where they have abundant sun light. Plant firs and Douglas firs in the rich, moderately dry places; white cedars, Retinosporas and Arbor Vitaes in the wet, swampy places; hemlocks and yews in the shady places. Of course it does not mean that these trees are so exacting in their requirements that they will not succeed when all of the conditions are not exactly as described in this article. For example, after a hemlock has once become established in the sun it does even better than it does in the shade and a pine tree does wonderfully well in a rich, moderately, moist soil. Occasionally one sees Arbor Vitaes doing well on dry, gravelly slopes. How-

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"I Don't Dope My Greens"

By FRANK W. CURRIER Greenkeeper, St. Thomas Golf & Country Club Union, Ontario, Canada

I READ in a golf magazine the other day from a greenkeeper that chemicals had become a necessary commodity to greenkeepers, but I beg very much to differ, and what is more I am very sorry to see such a ridiculous statement in print. Chemicals being used are the cause of all the trouble. Common sense should teach us that we cannot put chemical cures into the soil and maintain the natural substance. I never use any and I never see such a thing as brown-patch and winter kill as they call it. It is not "winter kill," it is summer kill.

As long as they use chemicals and dopes they will have their troubles. They are killing the greens in the summer and trying to cure them in the spring.

I also read another article of a greenkeeper watering his greens from 7 p.m. to 6 a.m. in the morning—well if I did that kind of thing I would never expect to have any greens at all. My best friend and the only thing I use is good screened compost and it carries me along smoothly all the time and I place our greens second to none. A little advice I want to give to greenkeepers is just try it out.

In the spring when you think you have winter kill on your greens, don't worry, and don't use any dopes, just rake the dead spots lightly, put on a little screened compost and sprinkle it lightly, but use no dopes. I never use them, and I never have any winter kill. I enclose a few pictures of our greens with explanation of the care they get. Number 3 green is natural grass, Number 11 is Colonial bent and Number 13 is Washington bent, and undoubtedly the best bent both in color, growth and standing the weather.

Number 3 green is natural grass, four years old, which is renovated with the usual amount of seed each spring —five to ten pounds to eleven thousand feet and top dressed with screened compost and sand three times a year, rolled once a week and watered for two hours each day covering the green fifteen minutes each move.

Number 11 green, Colonial bent, is two years old. The same treatment is given, minus the seed and not cut quite so close as the natural grass. Bent greens won't stand the close cutting without showing the runners which will look brown and spoils the looks of the green.

Number 13 green is the Washington bent from my own nursery—this green I planted this spring the first week in May, and I opened it for play on the Fourth of July, and the same treatment is used on this, rolled once a week, when watering move sprinklers every



fifteen minutes until covered and when the winter comes it will just get the usual top-dressing of screened compost, without sand and not rubbed in. I have no fear of the so called winter kill. I hope the boys will try my method and keep off the dopes.

Upper, number 3 green, lower left number 13, and lower right, number 11, at St. Thomas Golf and Country Club, Union, Ontario, Canada



A Chat With Our President

John Morley

I^N reading the various articles in THE NATIONAL GREENKEEPER, we should read them not merely to criticize, but to digest. What does not appeal to you, forget.

JOHN QUAILL of the Highland Country Club, Bellevue, Pennsylvania, is the new secretary of the Pittsburgh District Greenkeepers' Association. Now watch this district grow.

KEEP a scrap book and when you read an article that appeals to you stick it in the book. At some future time it may be useful.

WHEN the putting greens are firm and true, especially during the summer months, in order to give the members all the enjoyment possible while putting, don't topdress simply because someone else does. It is not always essential to do it. Try and avoid during extreme dry weather getting too much organic material into the soil. Of course we know that grass must have food, and this food must be well balanced. I used to think that by using only one fertilizer, sulphate of ammonia, it was all the grasses needed, but of late I have observed that they must have something else besides nitrogen. Nitrogen is the chief food for the blades of grass. The roots I learn need phosphorous, and if you desire a good color, grass must have potash. These three fertilizers must be well balanced, because if we use too much nitrogen it will have a tendency to make the grass too tender. If we supply the roots with too much phosphorous we are apt to encourage too many weeds, and if we get too much potash in the soil it creates too much clover.

STANLEY ALDRICH of Madison Golf Lakelands, Madison, Ohio has received a number of compliments for the fine condition of his course this season.

I HOPE that you have sent in to our secretary an application for a new member. If not our organization will be just like a person holding an important position. If we stand still we will commence to go backward, but by no means are we going backward. If you know of a brother greenkeeper who has not received a copy of THE NATIONAL GREENKEEPER just send our secretary his name and address.

A DDISON HOLLANDER is to be the greenkeeper for the new Mill Creek Park Golf Club, Youngs-

town, Ohio. When finished it will have 27 holes. Addison is now helping with the construction work.

IS corrosive sublimate used to prevent brown-patch on the putting greens good or evil? For instance take the putting greens in charge of John MacGregor of the Chicago Golf Club. He has been using three ounces to a putting green with success. His greens have been in excellent condition all season. This is the first season that I have used corrosive sublimate and by using three ounces to a green I found that about the first of August a serious burning of the turf resulted. It appeared to burn the poa annua more than the bent grasses. Another item which may be of interest, and may appear to be amusing is that prior to using corrosive sublimate, when the soil became warm after using sulphate of ammonia, the angle worms ceased coming to the surface of the putting greens which I presume is due to the fact that they do not like to work in soil that throws off a nitrogen gas. Since using corrosive sublimate we have on several of our putting greens every morning a number of worm casts. This leads me to believe that corrosive sublimate affects nitrogen fertilizers, and further, prevents the turf from holding its natural color.

WHAT has become of P. Francis Siciliano, formerly of the Inwood Country Club, Inwood, Long Island. Francis, send in some of your experiences for you certainly had fine putting greens while you were at Inwood. Do you still cover your putting greens with tobacco stems during the winter?

CHARACTER is the response of the will in the presence of temptation. Character is temptation overcome.

SCOTT TUPPEN of the Cleveland Heights Golf and Country Club, Lakeland, Florida has his putting greens planted with Atlanta Strain of Bermuda.

THE real convictions that uplift humanity and create the will to fight for a better future are lodged in the convictions of minorities.

NUMBER of greenkeepers would like to know why Mr. Robert E. Power, retiring president of the Ohio State Golf Association quit writing his able articles "What Golf Rules Affect the Greenkeeper." Mr. Power having been chairman of the Green committee of Westwood Country Club, Cleveland, Ohio for several years knows how the greenkeeper may help the player

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From The Viewpoint Of Local Associations

What District Associations of Greenkeepers are Doing

Greenkeepers Association of Southern California (Annual Meeting, August 20)

Our secretary, Mr. Marzolf, passed on the minutes of our annual meeting and as publicity man for our local organization I will give you what I can.

The annual meeting of the greenkeepers of southern California was held at the Indoor Country Club. Climatic conditions permit our holding meetings outdoors all the year round but this being entirely an executive affair the centre of Los Angeles was considered more suitable.

Open session was held until lunch time to permit members from distant clubs getting into town. But right after lunch the boys got right down to business. After all any business, and more especially the convincing of a man of his ability to hold office, is more easily accomplished after a hearty meal.

The following officers were duly elected: president, W. W. Stewart; vice president, R. S. Greenfield; secretary-treasurer, E. B. Marzolf; directors, W. C. Langton, C. H. Cavanaugh, K. Kretzschmar, G. Post.

Clubs as far south as San Diego and as far north as Santa Barbara were represented.

Mr. Langdon offered San Gabriel for our next meeting.

Following this offer up, a month later we sojourned at the above club and true to form our worthy host emulated his club's namesake and blew his horn. The music proved soothing to our thirst for knowledge as he spoke on the formation of soils in general and his beloved San Gabriel's soil in particular. His paper was all the more convincing because of its lack of flowery language, just one greenkeeper talking to another. Technicalities were nevertheless precise as his son is a student of geology.

San Gabriel's greens, tees and fairways were good to look on and although none of us had brought any clubs it was very obvious that golf there would be a pleasure.

Mountain Meadows, near Pomona, through invitation of their greenkeeper, Mr. Thompson, will have us look around their lay-out next month, when the subject of the relative value of peat humus and manure as fertilizers will be discussed.

Although a long way from the National Association we know and appreciate what you are doing and in consequence are with you.

If at any time you want any information on what is happening on the coast here just drop me a line.

> JAS. A. LYON, Flintridge Country Club, Pasadena, California.

Mid-West Greenkeepers Association

(Minutes-August 8, 1927)

A MEETING of the Mid-West Greenkeepers Assosociation was held August 8th at the Northmoor Country Club, Ravinia, Ill., and the Lake Shore Country Club, Glencoe, Ill., at 10 a.m.

The minutes of the last meeting were read by the secretary and approved. A discussion was held regarding the best means of informing the clubs as to the service the Mid-West Greenkeepers would be in position to render and it was decided that a form letter would be printed and mailed to all the golf magazines, presidents and chairmen of all clubs in the Chicago district and territories within a near radus of Illinois which would tell in detail the reasons for organizing the Mid-West Greenkeepers Association, how it is functioning and how it will be in the position to assist the greenkeepers by offering them the service and advice of a committee of qualified greenkeepers who would be pleased to visit their club and report course conditions.

The next order of business was the formation of an experimental station and it was decided to take this matter up in particular at a special meeting to be held on August 16th at the Great Northern Hotel, Chicago at 7 p.m. Plans will be formulated for this experimental station and the results of this meeting will be reported to the U. S. Green Section of the Chicago district at their next meeting. No cards will be sent out for this meeting. The next meeting of the Green Section will also be a joint meeting of greenkeepers and U. S. Green Section chairmen.

The members were then taken around the course of Northmoor and the visiting greenkeepers found Mr. Sherwood's course in excellent shape and his greens as fine as any of the best greens in the district. Mr. Sherwood is to be congratulated as he shows that he has his work very much in hand.

The members also visited the course at the Lake Shore Country Club and were taken around by Mr. J. L. Strauss, the chairman of the greens. This course was also found to be in very fine condition.

The next meeting will be held at the Bunker Hill Country Club, August 22nd at 10 a.m. and at the Tam O'Shanter Golf Club at 2:30 p.m.

> Respectfully submitted, ED. B. DEARIE, JR., Secretary.

Minutes of Meeting Held August 22, 1927 at Bunker Hill Country Club

MINUTES of previous meeting read and approved. Manufacturers' Day was discussed and it was recommended that it be observed September 15th at Briergate Country Club from 10 a.m. to 4:30 p.m. The following members were appointed as a committee to make arrangements: Mr. John MacGregor, president; Mr. Edward B. Dearie, Jr., secretary; Mr. Robert Farmer, and Mr. William Matthies.

The Mid-West Greenkeepers' Tournament to be held this fall was put before President John MacGregor who appointed the following members on a committee to make further plans: Mr. Alex Binnie, Mr. John Mills and Mr. Fred Ingwerson.

A letter concerning the welfare of our organization was read and it was decided to have it published in all leading golf magazines in the Middle West and to have a copy of it mailed to the presidents and chairmen of the greens committees of all clubs within a radius of fifty miles of Chicago.

Respectfully submitted,

Secretary.

Philadelphia Association of Golf Course Superintendents

THE regular monthly meeting of the Philadelphia Association of Golf Course Superintendents, was held at the St. David's Golf Club on Monday, August 8, 1927.

Most of the afternoon was occupied by heavy showers

of rain, but nevertheless a few of our members succeeded in playing eighteen holes of golf, while others sought the shelter of the golf house.

However, the spirits of the twenty-four present were rejuvenated when we sat down to a delicious dinner at 6 p.m.

The meeting was called to order at 7:40 p.m., with President Evans in the chair.

Mr. Howard Toomey, one of our distinguished members, was called on for a short talk, at the conclusion of which he introduced Dr. John Monteith, of the United States Department of Agriculture, Washington, D. C.

Dr. Monteith addressed the meeting for a period of approximately one hour. In the course of his talk he described conditions prevailing on golf courses in different sections of this country. He spoke particularly on the brown-patch situation. He mentioned that calomel has been developed to ascertain just what mercury compound is most effective against this disease.

To control large brown-patch he recommended that a full dose be used, namely, one ounce of Bi-Chloride of Mercury with two ounces of calomel, but as a preventive use only half of this dosage.

He also told us Uspulun and Semesan contains about sixteen per cent of mercury and Calogreen about eightyfour and nine tenths per cent mercury.

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The Market Place

FOREIGN buyers for American made golf course equipment have been more numerous than ever this year. During the past few weeks the Pennsylvania Lawn Mower Works has shipped mowers to the Philippine Islands, Australia, New Zealand, Japan, South Africa, Dutch Indies, Germany, the Hawaiian Islands and Cuba.

One of the Pennsylvania Super fairway mowing outfits was installed some time ago on the grounds of the Oahu Country Club in Honolulu, and the Staude tractor is furnishing the power.

ANUFACTURERS in general are reporting excellent business for this year, which is only another proof that golf is becoming an industry in this country. The American business man has no time for a noon-day siesta, and little for afternoon tea, but he always finds time for a game of golf.

THE Peerless Lawn Mower Sharpener, manufactured by Fate-Root-Health Company, at Plymouth, Ohio, is undergoing some important changes in design, and their new model will sharpen both hand and power mowers. The feed of the machine is to be increased,

and it will be equipped with a rapid reverse feeder and a complete new mower support for holding putting green mowers and gang units of the roller type.

These new improvements are of vital interest to our members, and inquiries relating to them will be cheerfully answered if letters are addressed to J. S. Seville, in care of the company. Have your name on their list for one of their new circulars to be mailed to you as soon as they are printed.

"T is an ill wind that blows nobody good"—according to K. E. Goit, Sales Manager of the Toro Manufacturing Company.

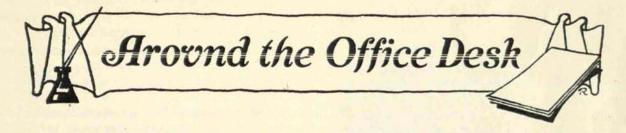
In a recent letter Mr. Goit reports that while fairway mowers were not used very much this summer on account of the hot dry spell, the sales of fairway sprinklers showed a great gain over previous years.

He also states that the most pertinent subject before practically every 18-hole country club today is the need of a fairway watering device, and the inquiries on this class of material are running heavier than at any time during the past several years.

Unless present indications fail, it looks very much like every new club in the future will have provisions made for a fairway watering system at the time of laying out the course.

NE of the most prominent firms O of golf architects in the British Isies is Colt & Alison, one of the partners, Captain Alison, being particularly well known among our readers. Mr. Colt devotes practically all of his time to the designing and building of golf courses in Great Britain, and is considered an expert greenkeeper, as his work includes the establishment of turf and regular inspection of his golf courses for a long period after completion. He writes us under date of August 25, "I have to thank you for forwarding to me some copies of the NATIONAL GREENKEEPER, which I have read with the greatest interest. Not only have the articles such as the ABC of Turf Culture, Golf Course Irrigation, etc., been of great value, but the advertisements have interested me very much. I am by this post writing to some of your advertisers for particulars about their machines."

ED. B. DEARIE, Jr.,



FIRST, member greenkeepers out of employment, who have had southern experience, please write this office, giving complete history of experience, and references.

THE death of Charles R. Huddle, greenkeeper at the Crestview Country Club at Wichita, Kansas, has occasioned innumerable letters of sympathy from our members, and while they are too numerous to mention here in detail, we will quote from one received from

A. M. Esterline, of the Delaware Country Club, Muncie, Indiana, "I am in sorrow to hear of the death of one of our members, Mr. Huddle. I was away from home, or would have sent my Death Benefit fund sooner. This fund is one of the best things I have ever heard of, and I hope that our payment was of some real assistance to Mrs. Huddle."

FROM the Lake Polk Country Club, at Temple, Texas, J. C. Jenkins, who is in charge of the

course, writes, "I have never failed or forgotten to read THE NATIONAL GREENKEEPER since the first copy I received, and I want to thank you for the good information I have read therein. I have only nine holes, but have grass greens, not like the majority of Texas courses that have sand greens. I am a Scotchman, only five years in this country, and have spent four summers here in Temple. I have built seven greens and am on my eighth now. I have got lots of nice little hints from your magazine on greens construction. The climatic conditions here are so totally different from over the water."

Here is a concrete example of the appreciation felt by a young greenkeeper, who is laboring under entirely different conditions than prevailed in his home country.

OUR good representative in Canada, Vice-President H. Hawkins of the Lakeview Country Club, Port Credit, Ontario, asks us to send the magazine to Harry Simpson, of the Quebec Golf Association. Mr. Simpson has offered to introduce the association and the magazine to the next monthly meeting of the Quebec greenkeeper's. We already have some Quebec members, and we shall look for more activity in that district in a short time.

FROM way up north in Alberta comes a message from W. Mayne, in charge of the Jasper Park Lodge golf course of Jasper National Park. Mr. Mayne ap-

I'm the handsomest man stepping out on the links, No matter what every other man thinks; My cap is the latest and brilliant in hue, My hose is esthetic in yellow and blue. My bag is the finest one you ever saw, In looking me over you can't find a flaw; Every one of my clubs was made by the pro, And he says they're perfect, so that must be so. My stride is determined, my stance is sublime, I follow the rules and take plenty of time.

HANDSOME IS-

I follow the rules and take plenty of time, I build up my tee and its really no joke, There is plenty of power behind every stroke!

My mind is not burdened with one single care, There isn't a soul on the course anywhere; I don't see why I should have trouble at all, But murder will out, boys,—I can't hit the ball! —By Gertrude A. Farley. plies for membership for himself and also for his assistant. Twenty-seven years' experience at greenkeeping is Mr. Mayne's record, and we are proud to add his name to our membership list. There is a depth of meaning in the good wishes he extends to our association, a recognition of its value to the greenkeeping profession. which is backed by many years of service in keeping greens.

HENRY A. MILLER,

greenkeeper of the

Barrington Hills Country Club, at Barrington, Illinois, is a member young in years, but he expresses his opinion of the establishment of our Death Benefit fund, as "having this fund is a mighty good thing, for it is a great help to a family which may be in great need of it." Funds immediately available at a time when the bread winner of a family has passed away, cannot fail to be appreciated by those he leaves to face the world without him. Think it over, brother greenkeepers, young and old. When you join the association, do not fail to become a member of the Death Benefit fund.

WHEN a greenkeeper has established a local reputation for good greenkeeping, he soon finds himself called upon to give his advice to other clubs in the community. We know of many instances, where with the full consent of his own club, a greenkeeper with a fund of good knowledge and practical experience, has assisted several neighboring greenkeepers in bringing their courses up to a degree of perfection.

A letter recently received from Wilhelm Peters, manager and greenkeeper of the Highlands Golf and Country Club, of St. Joseph, Missouri, states, "I am very busy at the present moment, as there are several courses around Kansas City I am undertaking. I intend to send a story for the magazine, and if I can will do so within the next couple of weeks." Mr. Peters has had many years' experience as a gardener and a greenkeeper, and our readers will find some good advice in what he has to say.

TO be of service to mankind is one of the paramount reasons why we are placed upon this earth. Many times the editor of THE NATIONAL GREENKEEPER has been asked how it is possible to secure such articles as appear in our magazine. It is no secret, and is growing to be less and less of a problem as time goes on.

No organization is any stronger than the interest of each individual member thereof. No member of the National Association of Greenkeepers of America is spending his time in pulling bricks out of the foundation. Instead he is laying them carefully in line, and cementing them into place with a material you will not find on sale at any price. No amount of money will buy it, and no man on earth can do without it. It surrounds him in life, and lives after Death. It is a privilege, and a debt. It is Brotherly Love.

We repeat that the reason why our members write their stories for this magazine, for other members to read, is no secret.

The Best Greenkeeper In The World

Cannot maintain perfect turf unless his course is well drained

Think It Over

WENDELL P. MILLER Golf Course Drainage Engineer 403-5 East Broad Street Columbus, Ohio



Local Viewpoint

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He answered various questions put forth by the members on various turf and soil conditions.

The meeting then, on motion, adjourned at 9:10 p.m.

E. T. YOUNG, Secretary.

The Cleveland District Association of Greenkeepers

(Meeting, September 12)

A HOLIDAY spirit prevailed among the greenkeepers and chairmen of Green committees of the Cleveland district, when they started from Number 1 Tee of the Kirtland Country Club, Willoughby, at 2 o'clock on September 12.

The question, should greenkeepers play golf, was answered by a unanimous yes. Hitherto unsuspected prowess on the part of some of the Cleveland district greenkeepers was exposed at this tournament. Kirtland is what is known as a difficult course, with a par of 70, and many champion players have acknowledged its challenge to their skill.

Following the tournament, dinner was served at 6:30, and during and after dinner an informal discussion was held covering some of the problems of the clubs represented. One of the most interesting discussions was started by L. M. Latta, a member of the N. A. G. A., who owns and keeps the course of the Braeburn Country Club at Copley, Ohio. Mr. Latta said that when he bought the land for his daily fee course at Copley, he had considerably more courage than knowledge of what a golf course ought to be.

He has had plenty of advice, some of which he followed, and much he later found to be subject to correction. He asked as a particular favor if THE NATIONAL GREENKEEPER would kindly publish the correct method for building a putting green, in ABC language, working from the unbroken ground up to the finished product. Greenkeepers present volunteered to get together and contribute to this magazine an ABC talk on putting green construction, so that not only Mr. Latta, but others uninformed will derive benefit from the information.

A report of the Greenkeepers' Convention held by the U. S. G. A. Green Section at Washington on August 29 was given by M. H. Wilson, Jr., chairman of the local Green Section, which was intently followed by all present. The item of most interest was the experimentation now in progress at Arlington covering the application of metallic mercury in the control of brown-patch.

A vote of thanks was tendered the officials of the Kirtland Country Club for the courtesy extended to the assembled group. The chairman of the Green Committee, E. P. Bruch, the greenkeeper, M. D. LaMoreaux, and the superintendent, Arthur Boggs, were heartily congratulated upon the splendid condition of the Kirtland course.

A B C of Turf Culture

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the same as the ammonia produced by decay of organic nitrogenous materials.

As is well known both the above materials increase soil acidity and thus their use aids in the control of clover. *Nitrate Nitrogen*

The main source of nitrate nitrogen is nitrate of soda, often called Chili saltpeter. Nitrate nitrogen is the form preferred by most plants, but as we have already seen all other forms are converted to nitrate in the soil.

Nitrate nitrogen is water soluble and quick acting. It must be used carefully because of the danger of burning turf grasses.

The general use of nitrate containing fertilizers now on the market is being discouraged on turf grasses. They tend to make the soil less acid and encourage coarse grasses, weeds and clover. Their continuous use also has a bad effect on the physical condition of heavy soils.

Sources of Phosphoric Acid

The commercial sources of phosphoric acid are limited. Bone meal, acid phosphate and ammo-phos are the chief materials, although basic slag is extensively used in Europe.

Any of these materials can be used without danger of burning the turf except ammo-phos. Bone meal and basic slag are very slow acting and also contain considerable lime so they unduly encourage clover.

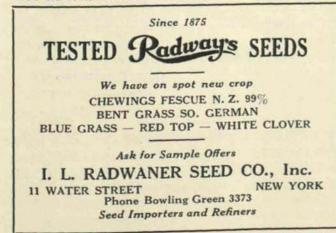
Phosphoric acid is fixed in the soil and hence can be used without danger of loss by leaching.

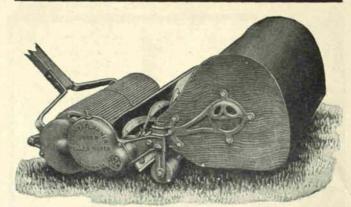
With the exception of ammo-phos all phosphate fertilizers tend to make the soil less acid due to the liberation of lime, when added to the soil. The effect is least with acid phosphate. Because of the greater availability of the phosphoric acid, it is better to use acid phosphate than bone meal on new seedings.

Sources of Potash

The main source of potash is mureate of potash, derived from the Stassfurth mines in Germany. It is water soluble and liable to burn the turf. Potash fertilizers increase soil acidity and are not subject to loss by leaching because the clay and humus in the soil hold the potash and gradually release it to the soil solution.

Since potash is the least important of the three plant food elements it need not be further considered.





Why Did St. Andrews Choose Super Rollers?

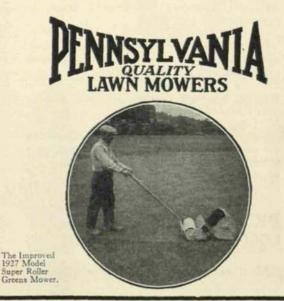
First, the Greenkeepers of the famous courses at St. Andrews, Scotland, learned for themselves that the PENNSYLVANIA Super Roller Mower is really pounds lighter than other mowers of its type; that its 18-inch swath is close-cut and ridgeless; and that its PENNSYLVANIA Quality construction insures perfect lubrication, accurate adjustment and long life.

Then, having convinced themselves that the Super Roller fully meets the exacting requirements for which it was specially designed, they recommended it as standard greens equipment for both the old and the new St. Andrews courses.

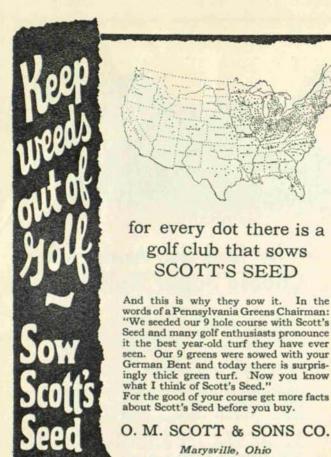
Our new GOLF CATALOG, giving many reasons why the Super Roller, the tractordrawn Super Fairway Quint, and the other PENNSYLVANIA Golf Mowers are used on so many leading courses, will be sent promptly on request.

And a Super Roller demonstration on your own greens will convince you, too, of the advantages of this precision grass-cutter.

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Say you saw the ad in The National Greenkeeper



(Continued from page 14)

course from the players' standpoint. The need of trimming and grooming will be better observed from the tees than anywhere else.

Should Greenkeepers Play?

ALEX McWHINNIE, Brown's Lake Golf Club, Burlington, Wisconsin.

THOUGH not absolutely essential for good greenkeeping, to have a knowledge of and play the game is undoubtedly a valuable asset. It enables one to grasp details better and see things from a different point of view than in the ordinary way. If I may advise, then get into the game, boys, and keep from getting rusty.

> W. D. CHINERY, York Downs Golf Club, Eglington, Ontario, Canada.

I THINK every greenkeeper should play golf and also should encourage playing among the greensmen. By so doing one can always see things to be done that would never be noticed by walking over the course. It is the little things the players notice most, or at least I find it so. My chairman is for it. By all means play golf.

> ERICH W. PAHL, Interlachen Country Club, Hopkins, Minnesota.

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Some of you have seen Bent Nurseries, we wish you could all see ours.

More than five hundred greens will be planted with our Improved Washington Strain of Creeping Bent this fall.

Every bag of stolons furnished will be from absolutely clean nursery rows, free from clover and weeds and less than one year old. Not a drop of artificial watering or an ounce of fertilizer has been used on our nursery stock. You know what that means.

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"When there is a better strain of Bent, we will grow it."

A LTHOUGH there are many first class greenkeepers who have never played golf, I believe it would be of help to them in the constructing or re-constructing of a golf course. It would show him the lay of the hole from a golfer's point of view and from this point alone it would be of a great advantage to him to understand and play the game of golf. Playing an occasional round of golf, there are many things that the greenkeeper may observe that may otherwise escape his atention.

> JOHN McNAMARA, Pittsburgh Field Club, Pittsburgh, Penna.

E^{MPHATICALLY} yes. A greenkeeper playing occasionally is bound to see things needing attention quicker than a non-golfer. He is then able to see and understand everything from the player's point of view.

> JAMES MUIRDEN, Ridgewood Golf Club, Lockland, Ohio,

I BELIEVE a greenkeeper should play golf as often as possible. I do, and I can find more little things to be taken care of in one round of golf than walking over the course all day, and you know what you are working for.

> ARTHUR JENSEN, Fargo, North Dakota.