The President of the National Association of Greenkeepers of America invites all hands to come to the big show at Hotel Sherman the first week in February.

Are You Ready for Chicago

By JOHN MACGREGOR

On January 31, 1933, the 7th Annual Convention and 6th Golf Show of the N. A. G. A. will be underway. ARE YOU READY?

Hotel Sherman, in which the entire program of lectures and exhibits will be held, is ready to accommodate all of the greenkeepers, golf officials, and their wives. Their large and comfortable rooms range in price from $3 single, $4.50 double, and $6 with twin beds.

When you arrive at the hotel go to the desk where you will find a member of the entertainment committee, which is headed by the genial Eddie Dearie, who will give you any information you may desire, and what this committee has in store for you during your stay in our fair city will be something to remember! As for the ladies—will they be crazy about the "Tarzan" who will look after their interests?

The entertainment committee has arranged a dinner dance at which the famous "Ole Maestro" himself, Ben Bernie, will appear with an all-star floor show from the College Inn.

You no doubt have had an opportunity to look over the Convention program which appeared in the December issue of the NATIONAL GREENKEEPER, and believe you will agree with me when I say that every man who attends the Convention will be richer in knowledge of the problems confronting him as every speaker is a recognized authority on the subject assigned him.

From reports which I have received this is going to be a Convention of record attendance. The fact that the World's Fair grounds will be open to convention groups at a very nominal charge has been the means of increasing the expected attendance.

Welcome!
Delegates to the National Greenkeepers' Convention

JAN. 31st TO FEB. 3rd 1933

Hotel Sherman

CLARK—LAKE—RANDOLPH and LA SALLE STREETS

Chicago
Fairway Irrigation

By CHESTER MENDENHALL, Greenkeeper

Wichita Country Club, Wichita, Kansas

FAIRWAY irrigation although a rather new project in golf course maintenance, is winning its way up to the top of the list of necessities on the modern golf course of today.

Only a few years ago the golfer was satisfied with whatever nature provided in fairways. The golfer of today is different. When he comes out for his round of golf he expects the fairways as well as the greens to be soft and easy under foot and covered with a thick mat of grass even though it may have been weeks since nature has provided rain. If his own club fails to provide these conditions he will likely look for a club that does.

In order that the fairways may be kept in this condition through the entire summer, fairway irrigation of some sort must be provided. It may be an inexpensive home-arranged affair or it may be a modern one-man hoseless system. Regardless of which it is, it most likely is regarded as one of the biggest assets the club has, and does more to increase revenue in all divisions of the club than any other single item.

Most every golfer is familiar with the conditions on a golf course where the fairways are not watered. In the spring everything looks fine, but when you make a closer inspection the grass is thin, and weeds are plentiful. The grass seeds that are sown come up to a good stand; dry weather comes along and the young grass withers up and dies.

During the summer months the grass is dry and crisp, thick and bunchy, then walking over these hard fairways is very tiresome and causes many a sore foot.

But on the course where fairways are watered the conditions are very different. Well-watered fairways become full fledged sisters to well-kept greens. The grass keeps that velvet green color all summer despite the long dry periods without rain. The young seedling grass is able to survive the dry weather and the fairways soon have a nice thick mat of grass, and then walking around the course becomes as much pleasure in August as in June.

TWO METHODS OF WATERING FAIRWAYS

There are two methods of watering fairways; they are known as the hose and the hoseless systems. The hoseless system is the more modern of the two; it is equipped with pop-up sprinkler heads permanently placed along in the fairway. When the water is turned on they rise up out of the ground and water the desired area, and then when the water is turned off they again pull themselves down out of sight. This system is the most expensive to install but the less expensive to operate, and does the most thorough job of watering.

With the hose system, outlets are placed along each fairway at intervals so that the entire fairway may be covered with a hose and sprinkler. The sprinkler selected should be one that will cover a large area. With this system men are employed to move the sprinklers at regular intervals.

WATER SYSTEM IS FIRST THING TO CONSIDER

When installing a watering system the first thing to be considered is the water supply. This may come from the municipal water supply or it may be pumped from wells or a lake. In case the water is taken from the municipal water supply it may be necessary to install a buster pump to bring up the pressure to a point where the sprinklers will operate satisfactorily.

If the water is to be taken from wells or a lake, pumps will have to be installed large enough to sup-
The results have been very pleasing. Our water comes from the city water supply, which makes it necessary for us to use a bolster pump to increase the pressure. The water is distributed over the course through two mains, one a five-inch and the other a two-inch. There are outlets along the fairways one hundred and fifty feet apart. We have thirty-five traveling Economy sprinklers each equipped with one hundred and fifty feet of \( \frac{3}{4} \)-inch hose.

With this equipment one man is able to water all the fairways in three nights. All the watering on the course is done at night so that there is no interference with play. In the morning the sprinklers and hose are all moved off the fairways into the rough and moved back on the fairways again at night.

In conclusion I will say that a good fairway watering system is as big an asset as any club can have in this period of reconstruction. It will increase revenue in all divisions of the club. It will help hold old members as well as encourage new ones.
Pasadena Is Optimistic

In compliance with request from President Morley as to how we met the depression of 1932, I will limit my remarks to observations of courses in general in this section, as I have been unattached for the past two months. It has given me a grand opportunity to visit a great many courses and take note of conditions on same.

By far, the largest number of courses are in excellent condition and in every instance those are the ones that have maintained their regular greenkeeper and regular crew. Of course, there has been some lowering of wages, but not of maintenance standards. With the lowering of wages 10% and the extremely low prices of supplies, it has allowed them to meet the conditions as they exist at the present time.

A few courses made drastic cuts in wages, even as high as 25% to 40%, then reduced the maintenance crew 50% and some even more. These are the ones that lost a goodly part of their membership and are having a mighty hard row to hoe at the present time. Some are on the fence and don't know which way to fall, just waiting for prosperity to return from just around that elusive corner.

Some let the club house manager and greenkeeper go and installed a general manager, and detailed one of the laborers on the course as messenger boy to deliver orders and report results. Some of these courses will find they bought a general manager with a handicap of 72 on a 71 par course.

In general, the courses in Southern California are in a healthy condition and our friends from the East and Middle West will find the same excellent courses to play on as they have had in previous years. Treat yourself to one or more of the four big events of the coming year—playing golf in Southern California, Pasadena's Rose Parade on New Year's day and the National Greenkeepers' Convention and the World's Fair at Chicago.

L. V. Thomas,
Pasadena, California.

Who Will Answer This?

Have been greatly interested in the articles on brown patch which have appeared in the Greenkeeper, especially results being obtained from the use of this new chemical mentioned in Arthur Bogg's articles. May I trouble you in going into detail about our new greens which were planted this fall, and to our grief have been greatly infested with this fungi.

I am manager and part owner and act as pro-greenkeeper of the Plantation Golf Club, Inc., of Boise, Idaho. The golf course is located along the river and as you may know our soil runs very much to an alkaline condition. However, we are little troubled with alkali, being able to grow good turf on nearly all parts of our course. This is due to a sub soil of sand and gravel which makes for good natural drainage conditions. We have constructed eight new greens which have been built from three to four feet high, and from the best of advice and because of natural drainage have laid little or no underground drainage.

We have in no way been greatly troubled with brown patch in our older greens and therefore we are quite certain that this disease has come in the seed, as nearly all of our new greens were affected. The first appearance of brown patch seemed to be noticeable about ten days after the grass was up. We got an excellent stand and a very rapid growth up to said time.

Upon first appearance of brown patch we immediately applied Semesan according to directions. Some greens we treated with the dust formula, others with the spray, and obtained very much the same results.

In most cases the disease has been killed and the greens have attained a normal green color, but the grass has made a very slow growth in comparison with that which has not been attacked. This may be due to the cooler weather that we have this time of year. In most cases we treated our greens two times and in some cases three, but still to some extent the disease seems to break out anew.

Our greens were planted to fescue and bent.

I will greatly appreciate your advice as to Semesan or other fungicides, and also advice about the new chemical mentioned in Arthur Bogg's articles in the Greenkeeper, and any further information you could give us that might help us in combating this disease.

Howard H. Tucker.
Turf On Polo Fields

By ARTHUR BOGGS
Superintendent of Grounds, Kirtland Country Club, Cleveland

The easily maintained polo field is the one that has been constructed properly and by that I mean good drainage, good sandy loam soil and seeded down with the best of seed.

A polo field should have practically the same soil construction as a putting green, the top soil should be of the same "inbetween soil"—neither loose nor sticky, a soil that will not pack but will expand after being pounded by the horses' feet.

You can drive a truck over a well-drained putting green and if the soil is of the right texture the wheel tracks will gradually disappear because the soil will expand back into its normal condition. There are, however, very few fields built that have the proper soil conditions but by top dressing each fall this condition can be remedied to a great extent, but at considerable cost.

One of our fields at the Kirtland Country Club was constructed on a clay loam soil and after the first three or four games it was rough and bumpy all the rest of the season. In order to overcome this condition we top-dressed with clear sand, which corrected this condition to a great extent, but we still have to disc his field each fall to level off the surface for the following year. Discing two or three ways is not only a good way to fill in the depressions but a fine thing for the turf as well.

WATERING IS MOST ESSENTIAL

The regular cutting of a polo field together with the application of water when needed, is most essential and the question of moisture is a deciding factor. We have tried both ways of maintenance—the dry field and the wet field, but have proved beyond a doubt that a damp or wet field is by far the best method. No matter how much wet weather we may have in the month of June in this district (Northern Ohio) we can still play polo without injury to the field—it is during the months of April and May when the damage is done by playing on a wet field.

During the dry period we always water the field the day or night before a game. In applying the water care must be taken to insure an even distribution because too much water in one spot is bad
for the horses. It is hard on them if they hit a soft spot and then a hard spot.

POLO IS A FAST AND DANGEROUS GAME

Pol o is a very fast game and a dangerous one—everything should be done to have the field in perfect condition and an even distribution of water is essential.

One of the worst things in a polo field is large patches of clover, which are very slippery. To guard against this condition we burn the field early in the spring with sulphate of ammonia by applying it in a dry form early in the morning, while the dew is still on the leaves, and the sun does the rest.

Early in the spring and through the month of June we cut the field one half an inch in height and as the dormant season comes on we raise the mowers to three-quarters of an inch cut.

Tamping the field after a game is another operation that does a lot for the maintenance of the field, if done properly, by a crew of men who are experienced. A field that is damp should be tamped back directly after the game and all divots replaced and any turned-under sod pulled out and tamped back. The depressions in the turf that you find after a game will in twenty-four hours nearly return to normal and especially after a rain or an application of water.

The maintenance problem will vary with the location, weather, kind of grass, soil construction and drainage. These all enter into the problem and will be the deciding factor in determining the cost of up-keep.

- February is the Seventh Annual Show and Convention Number of the National Greenkeeper.
- It contains the official program of the Show and Convention and is distributed free at the Registration Desk to everyone who attends.
- As an advertising medium it excels all others.
- Reservations for space will be received up to January 15th.
Minnesota Gossip

By H. E. STODOLA, Secretary

The December meeting of the Minnesota Greenkeepers was held at Glenwood Golf Course, Minneapolis. Carl Erickson is the greenkeeper and was our genial host. There were fifteen members present. The main subject of discussion was the wage question. The new budgets are being prepared for next year and cuts are being made right and left. During the last three years the budgets have been reduced and wages have been going down. Now they have reached the bottom and any further reduction will hurt and hurt plenty.

Twin City Wages Reach Bottom

The Twin City wage for golf course labor ranges from thirty-five cents to forty-five cents an hour, with a working day of seven and a half hours to nine hours. These men work from five to seven months a year and also lose time during rainy weather.

Golf course labor averages about three dollars and twenty cents a day in this territory, at the most eighty-five dollars a month, or six hundred and eighty dollars a year. That certainly should be a minimum for skilled labor like golf course help.

GREENSMAN IS SKILLED WORKMAN

work on a golf course is of a high type. Green-cutting is more than pushing a mower. A good green-cutter can tell if his greens are properly watered. He can detect disease or signs of disease as soon as he appears on his greens in the morning. He knows that he has to cut his grass at different angles each day to avoid wearing it away in one place. He knows how to adjust a delicate mower and how to take care of it.

He is dealing with grass which is a living thing and can easily vary from day to day. He can detect weeds and takes them out whenever he sees them. He knows each green with its failings and good points, and can be a great help to the greenkeeper who does not have time to study each green separately.

Cutting Fairways is Fine Work

Cutting fairways is a fine piece of work. The man must keep his tractor and mowers in tip-top condition to start with. He has to cut his fairways quickly and efficiently and still not interfere with the watering system. He has to be alert to do his work well and yet avoid the players.

You can go down the list and find that all men on a well-managed golf course are very skilled. On top of being efficient they must be neat and very courteous and understand the game and the players’ temperament. Good men never interfere with play or the players and to be good these men must be experienced and paid a living wage.

Therefore, we, the Minnesota Association, feel that the minimum wage scale on a golf course should be forty cents an hour and the budget will still balance and please all concerned.

MINNESOTA BACKS MACGREGOR

This Association is back of our new President and will give all the support they can for the coming Convention. Everyone present at the meeting pledged their support and presence at the Golf Show.

At our next monthly meeting we plan to have an agronomist give us a talk on soils and soil conditions. It is necessary that we put as much scientific study and practical discussion in our meetings as possible.

The next meeting will be held in the Log Room, Superior Golf Club, Minneapolis, Monday, January 9, 1933. Every member is urged to attend because it is the last meeting before the Convention.

Pacific Coast Gossip

By ARTHUR LANGTON

Several months ago the water rates in Los Angeles for golf courses were given a substantial boost, thus adding many thousands of dollars to the water bills of the clubs in the metropolitan area.

Recently it was decided to hold the Los Angeles Open Golf tournament this season only if the course of the Wilshire Country club could be obtained for the event; this because the Wilshire site was the only layout where such a tourney could be staged with the possibility of making any money.

Officials of this club refused to make their course available unless the heavy water rates were lowered. Long and bitter were the debates but finally the Junior Chamber of Commerce, sponsor of the tournament, prevailed upon water officials to capitulate.

As a result nearly everybody is satisfied. Bob Greenfield at Wilshire and all other greenkeepers using Los Angeles water receive the benefit of lower irrigation rates; the Chamber of Commerce gets its annual tournament; and the crack golfers of the country get a chance at prizes, which though reduced in value from other years, are nevertheless quite substantial.

WILSHIRE COURSE IS IDEAL

The Wilshire course is almost an ideal site for the tournament. It is centrally located with accommodations for handling large crowds; is an excellent test of
State has been interrupted by snowstorms, previously un-sleet, or rain. It is all moisture to the California green-ance because many course superintendents, short-handed on California. Golf on many courses in the Golden California, greenkeepers are exercising constant surveil-

Appreciate any information that might be obtained in EARL RANDLEMAN at the Los Angeles Western Ave-}


which is below sea level down near the Mexican border heard of in these localities. Even in Imperial Valley Southern California and which thrived on proteins. It is hoped by this method to increase attend-

It is reported that greenkeepers of Northern Califor-nia are meeting at night instead of in the daytime as in the past. It is hoped by this method to increase attend-

Northern and eastern states are getting the laugh on California. Golf on many courses in the Golden State has been interrupted by snowstorms, previously un-heard of in these localities. Even in Imperial Valley which is below sea level down near the Mexican border there has been a flurry of snow. But whether snow, hail, sleet, or rain it is all moisture to the California green-keeper and he is thankful for it.

Art Sutherland has been named as greenkeeper of the new public golf course being built by the Montana Land company in Long Beach. Work on this magnificent new layout is being rapidly promoted. The course will be opened early in the new year.

C. Groos of the Long Beach Country Club warns against the soggy "collar" prevalent in front of many greens. This collar, caused by superfluous water flowing from the green towards the fairway, is a stroke-maker and a constant source of dissatisfaction among the players. The condition may be alleviated, according to Groos by laying a tile drain pipe about six inches below the surface of the collar so the extra water may be led off in the most convenient direction.

**Michigan Greenkeepers' Meet at Lansing**

*By HERBERT E. SHAVE, Greenkeeper Oakland Hills Country Club, Birmingham, Mich.*

The Michigan Greenkeepers met at the Michigan Agricultural College, Dec. 5 and 6, to discuss a few of the numerous problems which their positions hold at present.

Mr. Mathews, president of the Western Greenkeep-
ers' Association, asked why and how certain places on a well-drained green including high and low places, could lose their color. Many opinions were expressed by the other members.

Next in line for discussion was the top-dressing of greens, and the methods and time required for this. This brought out a lot of hot arguments, but all were settled before any serious results incurred.

**Shave Talks About Fungo**

Herb Shave was asked to relate some of his experi-
ences of the use of "Fungo" on "dollar brown patch." His efforts had been successful and he said that he means to keep a supply on hand at all times, just in case of an emergency.

The uses of other fungicides, such as lime, corrosive-
sublimate, calomel, calo clor, and others were discussed. All were pronounced as being effective for the above case.

Professors Millar and Tyson, of the College, seemed to be very much interested in the talks.

**Lectures Were Excellent**

Tuesday, Professor Hallegan gave a lecture on "Land-
scaping Club-house Grounds and Golf Courses," discussing the types of trees and shrubs best adapted for this work. Questions and answers followed.

Professor Hudson's lecture on "Sod Web Worms," "June Beetle Grub," "Ants," and "Tree Caterpillars," was excellent. This is what the boys were waiting for and they absorbed it like the grubs absorb poison.

A trip was made to the experimental grass plots. Pro-
fessor Tyson then explained the soil and grass seeds used,
also actions of various fertilizers on each plot, and the results.

Professor Bradford spoke on tree pruning. A suggestion from Professor Millar on holding a two-weeks' laboratory course was laid on the table to be brought up later. In conclusion we agree that the Professors at Michigan Agricultural College are real fellows.

Indiana Greenkeepers' Elect Officers

By CARL A. RETZLAFF

The annual meeting of the Indiana Greenkeepers' Association took place December 10. This was held at the Lincoln Hotel, Indianapolis, and although we didn't have a very large attendance on account of a bad snow storm, those who attended seemed to enjoy the banquet and entertainment—at least, the meeting didn't adjourn until eleven o'clock.

The following officers were elected for the ensuing year:


Plans were discussed for attending the National Convention at Chicago, and from the enthusiasm shown, the Indiana greenkeepers will have a very good showing at that time.

Old Officers Re-Elected at Cincinnati

By GORDON A. MEYER, Secretary-Treasurer

The annual meeting of the greenkeepers of Greater Cincinnati was held at the Alms Hotel, Saturday, Dec. 3, 1932. All officers were voted in for the coming year, 1933, by a unanimous vote to hold all old officers.

As this was mainly a social meeting the regular routine of business was gone into. All told it was a huge success.

It was generally agreed by all present that the greenkeepers of Greater Cincinnati shall go to Chicago to the National Convention as a body. This probably will mean that we will charter a bus at Cincinnati for the trip.
News From The Southland

By MERLE ZWEIFEL

KENTUCKY

Forty-three thousand dollars is quite a bit of money for a municipal golf club to realize in revenue during the past year, especially when fee courses with cut price green fees cause the keenest kind of competition. But that is exactly what the city of Louisville took in on its municipal links last season and the fact that the increase was several thousand dollars over the previous year is something for public course operators to carefully note. And the man responsible for this is none other than Alex G. McKay, professional, architect, and greenkeeper at the Cherokee Golf Club in Louisville.

"Mac," as he is called—probably only known by his nom de links by the majority of Louisville's golfing public—has during the last five years built four golf courses at Louisville and one, the Shawnee Golf Course, has turned out to be a championship affair, the National Public Links Tournament being held there last July.

Mr. McKay took charge of Louisville links

Mr. McKay took charge of the municipal courses for the city of Louisville five years ago and at that time they were in very poor condition. With limited finances he laid plans for conservative improvement of the courses and began work redesigning and rebuilding the entire layouts. The first year he completely remodeled the Cherokee Golf Course, building eight new greens and turfing them with a standard putting green grass.

The second year the city of Louisville purchased ground for a new course, which was to be the Shawnee links. Mr. McKay laid out and built the Shawnee Golf Course which is 6,419 yards long, and also built six more greens at the Cherokee Golf Club. The third year he built four more greens at Cherokee, giving them eighteen new greens. He also rebuilt Crescent Hill and changed the entire layout, including a large practice green near the club house. Crescent Hill is a nine-hole course and one of the most popular with the golfers of Louisville.

Bent greens in perfect condition

The new bent greens have been in perfect condition at Cherokee Golf Club and Crescent Hill; they were not affected by brown patch nor web worms, however, at Shawnee Golf Club the greens were badly damaged by brown patch. That disease was finally brought under control by the continued use of Calo Clor and Semesan.

The greens suffered worst from webworms. Three greens were in a bad condition for nearly two months but arsenate of lead was used and the worms were checked on all greens but three. The greens are in good shape again now.

Mr. McKay believes in playing safe at all times. He has a large patching green which he keeps ready for any emergency that might arise. He also has a beautiful nursery of Washington Bent grass.

KANSAS

During the past five years a number of golf courses in the state of Kansas have changed putting surfaces from the old type sand green to the more modern Cocoos bent grass. At the present time another change is rapidly being made and that is the transition of grass greens from Cocoos bent to Seaside bent grass.

Apparently Seaside bent is becoming more popular every day and, although it has a slightly larger blade and can stand trampling well, it requires more water than the Cocoos bent grass. Kansas is the first state in the southwest to add Seaside bent to the list of grass putting surfaces, successfully proven.

One of the newest golf courses in Kansas to plant Seaside bent grass is the West Links Golf club, Wichita's most popular public links, owned and operated by Walt Angles of that city. Mr. Angles seeded nine greens to Seaside bent last fall and they will be ready for play early next spring. And Bill More, greenkeeper at the Meadow Lark Country club brought his new Seaside bent greens through the summer in fine shape. In his opinion they were not as subject to brown patch and other diseases as Cocoos bent.

Mendenhall used Seaside bent

Chester Mendenhall rebuilt No. 9 green at his Wichita Country Club and seeded it to Seaside bent grass last September. It is forming an excellent mat and will be ready for play at the first sign of spring.

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January, 1933