

disposed of by under drainage, and there is an opportunity for the roots to advance between the grains, and absorb the plant food and moisture contained in them. Each aggregate acts like a tiny sponge which maintains itself full of water highly charged with plant food materials to be sucked out by the root hairs as they advance alongside them.

When new fairways are to be established on fine textured soils extreme care should be used in the preparation of the seed bed.

Plowing should be done when the moisture condition is such as to prevent the formation of clods. If plowed a season in advance of seeding the alternate freezing and thawing, during the winter improves granulation. If it is possible to grow a green manure crop and plow it under, the resulting humus will materially improve the soil structure.

Ideal soil conditions are most likely to occur in loam soils. These soils have some particles large enough to function separately, and others of medium size to form centers around which the smaller particles may cluster to form granules or crumbs. Thus there are a few large

pore spaces which facilitate drainage, and numberless small openings in which water is retained.

### *Turf Improves Soil Structure*

Practical men appreciate the importance of maintaining soils in good physical condition. When seeds begin to grow there is no direct connection between the seed and soil. The small amount of plant food contained in the seed is soon expended in the development of a root system. If the seed is placed in conditions unfavorable for free development of the first roots it may succumb. A mellow seed bed, with many pores allows the roots to grow unhindered and tends to place absorbing surfaces in direct contact with the soil grains. It is particularly important to have a mellow seed bed for turf seedings. The young grass seedling must forage for itself as soon as growth begins because of the exceedingly small amount of food contained in the very small grass seed. After the soil is once covered with grass, the turf aids in improving soil structure. As the roots grow and decay, the soil particles are wedged apart in some places and crowded together in others. The grains are finally cemented together into larger aggregates and the open mellow structure characteristic of virgin soils results.

## *"Getting Set for the Future"*

By FRANK OGG

Greenkeeper, Hillcrest Country Club, Kansas City, Missouri

I WAS born in Carnoustie, Scotland, and like most of the sons of Scotia I cut my milk teeth on a niblick. Therefore being brought up in an atmosphere of golf, I either played golf, talked golf or thought golf all my waking hours.

In 1911 hearing about the wonderful spread of golf in the United States I decided to leave the old country and come where golf has its greatest development.

My first position was with a large seed house in New York with which I was connected for some eighteen months giving me an opportunity to see all of the well known courses in the Metropolitan section. I found things considerably different than they were in Scotland. I found the courses more elaborate and I found a tendency not to rely as much on nature as is the case across the water, but rather to use man's artistry in enhancing natural effect wherever possible.

While I was with the seed company my brother, Willie, who is now at Worcester, Massachusetts came to the Dedham Country and Polo Club as Pro, requesting me to join him as assistant Pro, which I did.

### *First Experience with Bermuda Grass*

After being located there for several years an opportunity came to me to become Pro and Greenkeeper in charge of the course at the Ingleside Club at Atlanta. I had always taken a great deal of interest in greenkeep-

ing although I had no occasion to do anything of this kind at Dedham, the course having been established a long time and under the care of a competent man. I therefore welcomed this opportunity at Ingleside because I had ideas on the subject and I wanted a chance to put them into effect.

At Ingleside I found the grass thin due to lack of sufficient top dressing and found it very coarse which in that particular case was caused by an excess of moisture. This condition I began to correct showing a material improvement within sixty days and I believe the secret of good Bermuda greens lies in first finding if the proper variety of Bermuda has been planted, analyzing the soil conditions, and if the soil is such that it actually will grow good Bermuda and the Bermuda is the right variety it is only a question of care and time until the greens can be brought to the finest possible texture. In this particular case I ceased the use of artificial irrigation almost entirely, generally finding the rainfall sufficient. By carefully following this course of procedure in time I brought all of the greens to a condition of maximum effectiveness.

### *Ambition Aroused*

About this time Dr. E. P. Hinman of Druid Hills, who had been carefully watching my work at Ingleside, sold me on the idea that there was a big field for a man





From Left to Right: Charles E. "Chick" Evans, Al Espinosa, Jock Hutchinson, and Frank Ogg, Greenkeeper at Hillcrest Country Club, Kansas City. Right: No. 6 at Hillcrest, Planted with Bent in May, Playing in August.

who made a study of greenkeeping, and during the five years I remained at Ingleside Dr. Hinman mentioned this to me from time to time. He seemed to be somewhat impressed by the results secured, which, as far as I know, had not up to that time been showing in Atlanta or in that territory. The result was that I was offered a job of greenkeeping at the Tulsa Country Club, thus getting entirely away from the professional feature of the work. With an opportunity to devote my entire time to greenkeeping, and acting on Dr. Hinman's advice, I took the position.

At Tulsa the opportunity presented itself of finishing the construction work on the first nine, and I therefore had an entirely new course to work with. Unfortunately however, in this case the wrong variety of Bermuda had first been planted with the result that the greens were coarse and it was necessary to reseed them completely. This necessitated of course skinning off the greens and doing the job entirely over. Again I found too much water being used and insufficient top dressing applied. Attention to these two features in a comparatively short time brought these greens into shape. Bermuda grass makes a wonderful turf where climatic conditions determine its use, being a creeping grass, as one Scotchman of my acquaintance defined it, "A vine, not a grass." It repairs injuries very quickly, makes a thick, dense turf, which sets a ball up beautifully and while it has disadvantages on a putting green these disadvantages can to a great extent be corrected by intelligent care of

the greenkeeper. Like all the creeping grasses if a Bermuda green is not watched it will develop a distinct growth in one direction causing the player endless annoyance on account of the fact that the green will be so fast one way and very slow the other.

However it is not my purpose in this brief article to give instructions in greenkeeping, merely to write a very sketchy discussion of the subject, making the biographical end of it as brief as possible. If it appears that the personal pronoun is often used it is because it is difficult to write of personal experiences in any other way.

#### *Creeping Bent in Oklahoma*

At Tulsa I raised for the first time, so far as I know, in that latitude, creeping bent. This bent was sent to me by Walter Travis from Warren, Ohio; it therefore had had no opportunity to become acclimated before I planted it. At the time I left Tulsa for the Hillcrest Club in Kansas City the grass was doing excellently and so far as I know is still perfect. I believe the authorities in Washington advise that creeping bent cannot be successfully raised in that latitude, nevertheless there is the grass. I certainly do not claim any miracles, I merely state the fact. This was my first experience with this wonderful grass and of course I had to feel my way,

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although to a certain extent I was sorry to leave the club where my work had been much appreciated. However, I felt that I wished to come to the United States, where golf was gaining rapid headway.

#### *Starts in New York State*

Soon after arriving in this country, I secured a position on a new course being built at Mt. Kisco, New York, where I had charge of seeding all the greens and fairways. At this time I applied for the position as greenkeeper at the Garden City Golf Club. I started on the job in the spring of 1924, when everything was being rushed to get the course in shape for an early opening. There was also some construction work to be finished for the Open Tournament held every year at Garden City.

One green had to be built over, and as the approach to the new green was in the position of the old one, two greens had to be returfed. We had just five weeks to make our changes, and five weeks after we started the job, both greens were in play and ready for the tournament.

Since the first year, we have had a quiet time in construction work at Garden City, with the exception of altering half of one green, building seven large bunkers, and rebuilding a fairway.

#### *Controlling Brown Patch*

Our chief enemy is brown patch, and it seems to come earlier and stay later each season. Corrosive sublimate applied at the rate of one-third in two barrels of water to a green seems to give good results. During the hot dry weather, one-quarter of a pound is safer to use, and gives good control. We use a proportioning machine in applying such mixtures to the greens, which facilitates the work to a great extent. This past fall we had a severe attack of brown patch, even as late as September, when one naturally expects to be free of it.

#### *How Our Magazine Helps*

Brown patch attacks many courses here in the east, and I believe that by comparing notes through the pages of this magazine, greenkeepers will eventually overcome this trouble. Scientists are working for us, but we must make determined efforts ourselves to control the ravages of this disease, and what one greenkeeper has found out should be passed on to others. I hope to see all the members of the Association taking advantage of the opportunity our magazine offers them. It is the medium through which our problems may be discussed, so let's hear from *you*, Brother Greenkeeper.

### *"Getting Set for the Future"*

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nevertheless it has been my experience that unless climatic conditions are impossible any grass will respond to intelligent care.

At the Hillcrest Club where I am now located we have two bent greens on which we were playing sixty days from the planting and are expecting to put in more bent for next season.

#### *Good Greenkeepers in Demand*

It seems to me that greenkeeping affords a wonderful opportunity to the man who wants to buckle down, learn his problems and apply the same attention and intelligence to those problems that he would in a business, for example. It also seems to me and I can say it with all due modesty that a good greenkeeper is of the utmost importance if a course is going to be satisfactory to the members. The greenkeeper's work is seldom noticed unless it is wrong; it is seldom if ever praised no matter how good, but receives quick condemnation if the greenkeeper fails; so the greenkeeper must after all serve more or less through his love of the work and his joy in healthy turf, well kept traps and work well done. I do not mean to advise anybody how to conduct a golf club but I do believe the way to get the best results is to *get a good greenkeeper and then let him alone*. He should of course consult with the chairman of the Green com-

mittee on all matters out of the ordinary such as rebuilding greens, traps, removing or installation of hazards and things of that nature but in routine matters, if he knows his business, he can be trusted to handle them without interference.

It is my firm belief that this policy put into general effect would considerably reduce the cost of course upkeep because it would reduce a great deal of experimenting and thus save money.

#### *Study and Make Good*

Greenkeeping is a profession worthy of a man's best efforts, a profession which is not likely to be overcrowded for some time. There are available text books and courses of instruction from which an earnest man can obtain a great deal of sound, valuable information. These of course will not take the place of practical experience. There never will be anything to equal experience on the turf itself; nevertheless, a greenkeeper whose experience has been limited can add greatly to his fund of information by study and application of what he learns to the problems at hand. I know that it would have been of great benefit to me when I first went to Ingleside if I had had books to refer to.

Greenkeeping is interesting work. It is work that may well occupy the entire attention of any lover of golf.