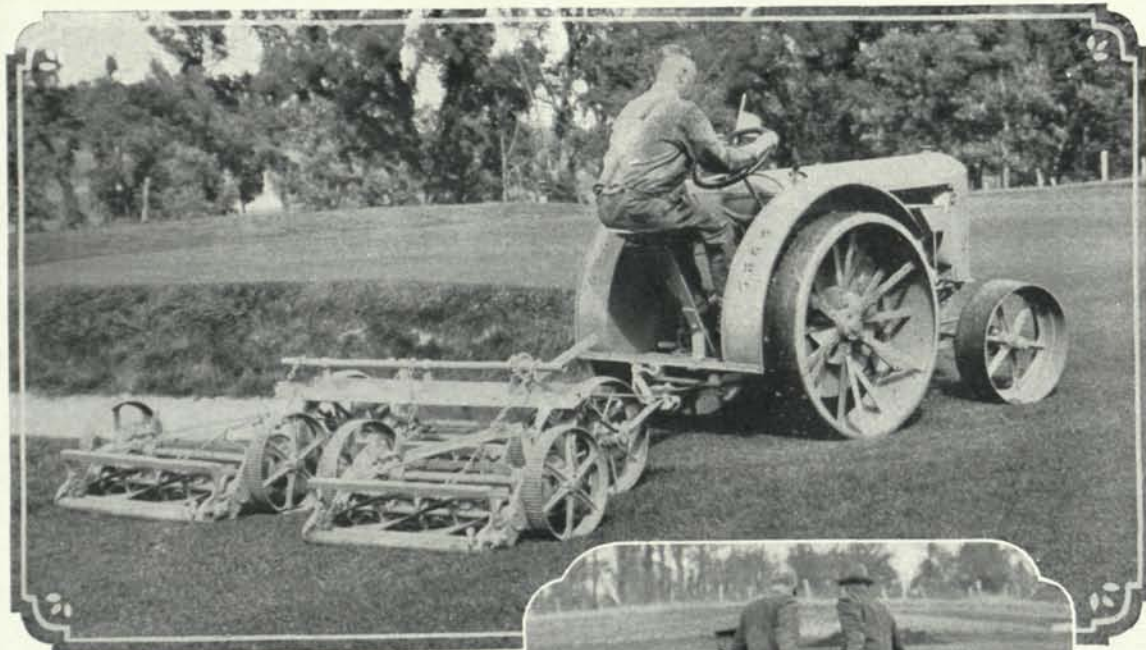


# (TORO)



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The new Toro catalog is now being mailed and should reach you not later than the 25th of this month. If it does not reach you promptly, write us immediately.

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# The NATIONAL GREENKEEPER

Official Organ of The National Association of Greenkeepers of America

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VOLUME III.

No. 11

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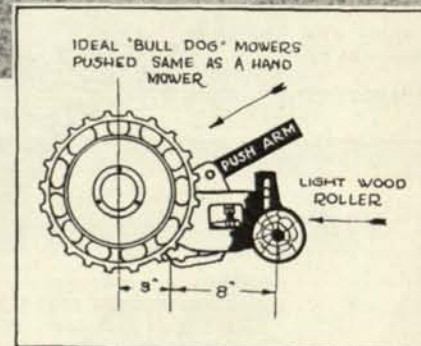
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no swaying



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# IDEAL GOLF COURSE EQUIPMENT



February  
1929  
Volume III  
Number 2

# The NATIONAL GREENKEEPER

*The Leading Journal of the World on Turf Culture and Golf Course Maintenance*

Official Organ of The  
National Association  
of Greenkeepers of  
America

## GREENKEEPING—Yesterday and Today

By JOHN MORLEY, President

*The National Association of Greenkeepers of America*

ABOUT fifteen years ago, there were scattered on God's green acres in various parts of the United States, a few hundred golf courses. The word "greenkeeping" was not generally known. About seventy per cent of the courses then in existence were under the direct supervision of "Professionals," most of them having received their training in the British Isles.

In most cases, the methods which they had been accustomed to, owing to the difference in climate and soils in this country, proved very unsuccessful. They were to a large extent handicapped because very little knowledge was to be obtained, even from Washington, as to what should be the best methods to pursue. There were not more than ten per cent that would qualify as the greenkeeper is known today.

In those early days while we were fortunate to be able to import good grass seeds from foreign countries for golf courses, we were lacking in our ability to know how to take proper care of turf and produce good results. It is

true that we had turf experts in those early days of greenkeeping; one of the leading turfmen being the late Fred W. Taylor of Philadelphia, who thought he had discovered that by mixing clay, bone-meal and cow manure in a cement mixer and placing them in layer formation in the making of a putting green, it would solve the problem of raising ideal turf. This method we



THE HIGHLY MODERN PEBBLE BEACH COURSE  
*This difficult layout is located at Del Monte, Calif. and will be thoroughly tested at the National Amateur Championship next September*

all know proved to be a failure.

### Equipment Scarce in Early Days

IN THOSE early days there were very few pieces of equipment suitable to keep a course in excellent condition. First we had to



cut the fairways with a one horse mower outfit. Then came the gasoline mower that weighed nearly a ton, with one single cutting unit. On an eighteen hole course, if we wanted to cut the fairways once in nine days, we were compelled to use two mowers, for one or the other was out of commission most of the time. Then came the sulky mower with three cutting units, drawn by a horse which had to wear iron or aluminum shoes. If the horses were not flat-footed, and the turf was soft, they would dig the toes of these shoes into the turf, leaving the fairways full of small holes.

About twelve years ago, golf in this country began to take rapid strides. And with this progress came improvements. But new courses multiplied so fast that it was impossible to secure enough men well versed in the art of greenkeeping.

To a large extent we were very fortunate to secure men who had at one time been well versed in farming and gardening. But they soon discovered that the methods applied to farming and gardening would not produce results for successful turf on golf courses. Each in his own way endeavored to find other methods, and with so many working along different channels, we gradually commenced to get information that tended to create better turf and better working equipment.

**Golf Courses Sprung Up Since the War**  
**S**INCE the World War, golf courses have sprung up in leaps and bounds, and from the few hundreds fifteen years ago, they now number over four thousand. Out of this vast number of men selected to take charge of these

courses, we have been enabled to produce a large number of successful men who are today well versed in greenkeeping. In the past few years "greenkeeping" has been placed in a position where it rightfully belongs, known as the Arts and Sciences. And instead of seventy-five per cent of golf courses, which were formerly taken care of fifteen years ago by professionals, today over eighty per cent of the courses are in charge of greenkeepers.

It requires from three to five years to produce grasses that will stand the wear and tear of the players, and to a certain extent it also requires the same amount of time for a pupil to acquire sufficient knowledge to make him rightfully known as a greenkeeper. With this in view, officials of new courses should take this under consideration. It also happens, during the early existence of a new course, that conditions are such that they often breed dissatisfaction among the members. No matter how hard the Chairman of the Green Committee and the person who has charge of the course try to

correct conditions, they still fail to obtain results, owing to the fact that the soils especially used in the making of putting greens were selected and cultivated by some of our golf architects to grow blue grass and clover instead of the various strains of Bents.

**Hire Greenkeeper Before Course is Built**  
**I** AM of the opinion that the time is not far distant, when the officials of proposed new courses, as soon as they decide to hire a golf architect, will at the same time hire an experienced greenkeeper, who will be under the

### **U. S. G. A. Thanks Morley**

UNITED STATES GOLF ASSOCIATION  
 GREEN SECTION COMMITTEE

766 Broad Street  
 Newark, N. J.

January 10, 1929.

Mr. John Morley,  
 Youngstown Country Club,  
 Youngstown, Ohio.

My dear Mr. Morley:—

I wish to thank you personally and on behalf of the Green Section for the most interesting paper which you read at the Annual Meeting.

It is, indeed, a pleasure to have you, representing the National Greenkeepers' Association, cooperate with us in the work we are doing. We are all working toward the same end and we wish you to feel that any work which we may accomplish is entirely at your disposal.

With renewed thanks, I am  
 Cordially yours,  
 Wynant D. Vanderpool,  
 Chairman  
 Green Section Committee.



supervision of club officials during the building of the course and divorced entirely from the architect.

Time will not allow me to go into the ramifications of some of the work I have witnessed, pertaining to grasses. I will merely mention to you two courses where the above named trouble exists. Every method known has been tried with practically no effect. Both of these courses sent samples of their soils from putting greens to one of the leading experiment stations conducted by the State of Ohio to have it analyzed. The answer they both received was to dig up several inches of soil and replace it with soil containing a certain amount of acidity, that the soils they had contained too much lime, or in other words, they were too alkaline.

I have always been at a loss to understand that when a new club is organized, and they have selected a site which often consists of one hundred and fifty to two hundred acres of land, which usually consists of two or more farms—where one farm has been kept in the pink of condition, the other completely run down—that after the new course has been constructed and ready for seeding and fertiliz-

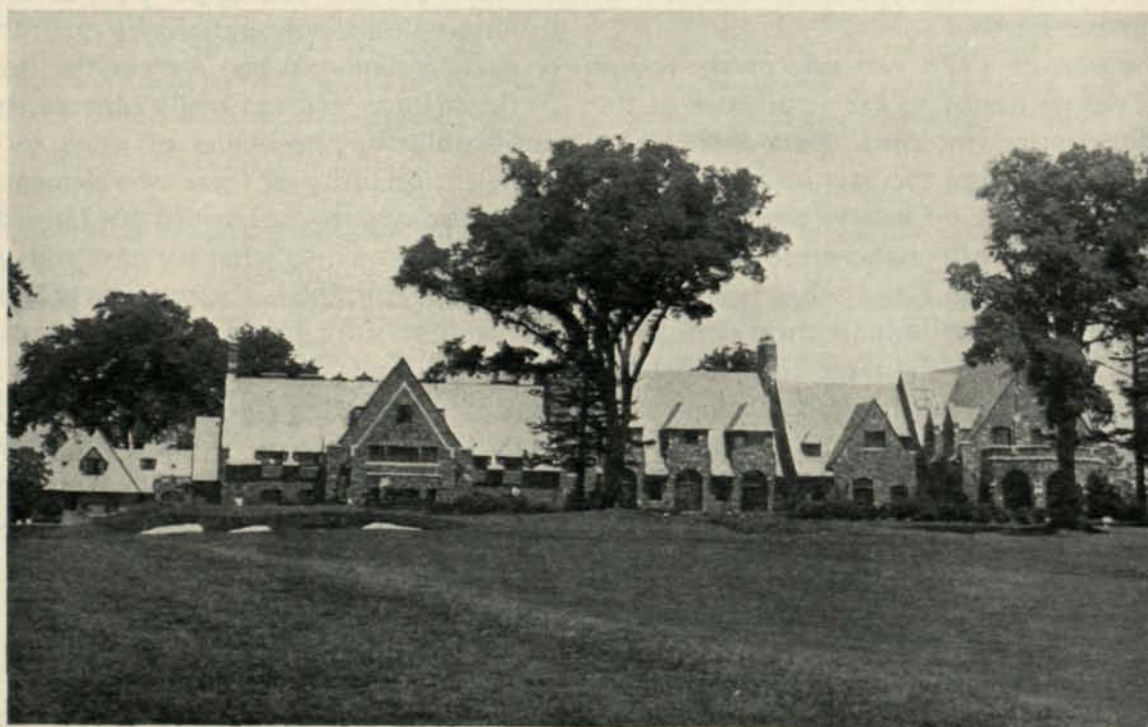
ing instead of giving the poor land more fertilizer and seed, and the good land less, in proportion, they usually give both the same quantity.

The greenkeeper of yesterday had a more peaceful mind, and although he lacked the knowledge and experience which greenkeepers possess today when he retired for the night, his sleep was usually quiet and refreshing. The greenkeeper of today, especially during the playing season, knows no rest or contentment. When he gets up in the morning and goes forth to take up his daily duties on the course, he never knows what Mother Earth "Nature" has in store for him. He knows if we are kind to her, she will endeavor to repay us.

But unintentionally we have tried to force Nature to give to us more than she could produce. And by so doing, we have brought upon ourselves diseases that we are unable to control.

#### Greenkeepers Are Studying Mother Earth

A FEW of the leading greenkeepers of today are commencing to dig into the mysteries of Mother Earth. They have been informed that fungi in the soil as well as those we often find on old stumps of trees when analyzed con-



THE WINGED FOOT COUNTRY CLUB, MAMARONECK, N. Y.

*This famous course on the shores of Long Island Sound will be the scene of 1929 National Open Championship*



tain nitrogen, hydrogen, oxygen, carbon, phosphorus, potassium, sulphur and iron. And we learn that to have good fertile soil, that these same elements must be present. Which makes some of us wonder that the nearer we bring the soil and turf, especially those on our putting greens to perfection, the nearer we are bringing them to destruction. And we see the results of several years of labor lost in a few hours by the dreaded brown patch and other diseases.

And as we stand upon one of these putting greens, our vision goes back to yesterday when we observed the grasses in the pink of condition. Today they are deplorable. You stand bewildered and sad. You look down the fairways and observe the grasses there are nearly all burnt up, for it has not rained practically for over four weeks. But all of a sudden you observe at a distance a certain portion of grass that is beautiful and green. Upon close observation, you realize that it is what is known as fairy rings and enclosed in this beautiful green turf we observe a number of toadstools. The fungi to this turf were beneficial. Those on our putting greens were detrimental. And we begin to realize that these fairy rings are given to us as a warning to keep close to Nature, Mother Earth.

The season of 1928 was one of the worst I have ever witnessed so far as diseases of the soil and turf were concerned. I am of the opinion the results during the past season will be a blessing in disguise. I believe that in the season of 1929 we will make rapid progress in knowing what is right and what is wrong to do, so as to lessen or eliminate these obnoxious diseases. Not all of the large brown patches that appear on our putting greens during excessive heat and humid atmospheric conditions are caused by parasites, but from fermentation of insoluble organic matter in the soil. We should endeavor to try and standardize the fertilization of our soils. To know what is best for clay, silt and sandy loams.

#### Maintenance Changed in Recent Years

**I**N RECENT years, golf course maintenance has been changed considerable. The put-

ting green mowers did not cut the grasses so close as they do today. We used to cut the putting greens every other day. Now we are often compelled to cut them twice a day. With the old style mowers, they used to leave ridges in the turf. Some will say that these putting greens were just as fast then as they are today. This is true in many cases. We used to roll them every day with a heavy iron roller. Then we commenced using the long wooden rollers.

Today most greenkeepers with the exception of early spring, with the improved mowing machines, don't need to use any roller at all. When we allowed the grass to grow long in former days and kept the blades down by rolling, we did not have so much disease, if any, on our putting greens. I admit that I am not an expert to give advice that others can with safety follow. My aim is to put others to thinking, that we may eventually come closer to the truth.

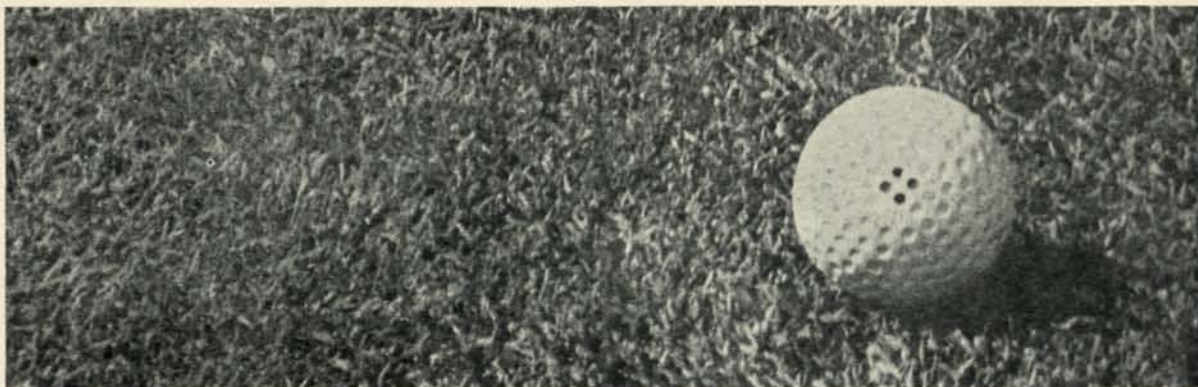
So let me quote to you this opinion. The closer that we cut the turf the stronger the roots become. The channels of the roots become larger, thus allowing the hair roots to force more food and water than the grass plant can consume. The blades of the grass are full of small pores. The upper part of the blade containing these pores inhales oxygen; the lower part, carbon. When we cut the turf close to the surface, you can easily observe that it is impossible for the blades of grass to obtain sufficient quantity of these two elements.

Yesterday golf courses did not have the water systems equal to what we have today. During a hot, dry spell, the putting greens often turned brown for the want of water. We used to use the old fashioned sprinklers watering six or seven putting greens each night. Today, with the high pressure pumps we now have, a large number of courses are watering their putting greens every morning before cutting the grass.

#### Do We Water Too Much?

**T**HE question arises—is this good or bad? Let us see. If the season happens to be dry and no rains for long periods of time, this system of watering very seldom goes into the soil





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*Special formulas for Tees, Rough, Bunkers, Polo Fields, Airports, Club or Private Lawns, furnished upon request*

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*The efficient work of the greenkeeper is easily apparent here*

more than three or four inches, below this depth you have created a hard pan and also prevented a proper capillary movement of water. This water that you give the soil contains a certain amount of air; this air is mixed after it enters the soil with gases which the soil contains. During humid weather, this air and gas cannot escape fast enough out of the soil, thus it raises the turf in irregular manner and the turf does not always come back to its former condition, unless rolled it creates an uneven putting surface, with this method of watering. I do not care what kind of fertilizers you use—the results are the same.

For illustration, let us take a fertilizer consisting of 9-5 and 2, that means 16 pounds of plant food out of a hundred available for the turf. If the filler in this fertilizer is organic matter, we have 84 pounds which the plant cannot consume. During hot, humid weather this organic matter commences to ferment, creating gases in the soil, that often becomes poisonous. This latter becomes united with the soil water, and later conveyed by the hair-roots to the grass plant.

Yesterday with the old time sprinkling system, we did not create a hard pan, and the poisonous material that accumulated in the soil and was held by humid conditions, got away in ex-

cess soil water through the drain tiles of the putting greens. I believe it is better to water heavy and seldom rather than light and often. For when you have abundance of water in the subsoil, you can allow, without evil effects, the surface to become dry, thus helping to draw more air into the soil and at the same time permit the energy from the sun rays to draw the water in the form of a vapor to the hair-roots of the grass plant.

#### Fertilizers Used in Early Days

**I**N THE early days of greenkeeping, there were very little chemical fertilizers used on a golf course. We were using nitrates of soda, cottonseed meal, bonemeal, sheep manure, and a few others. We believed it was necessary to have alkaline soils, especially for putting greens. We did not as a rule have the fine grasses like we have today, although we were able to obtain the finest of bent grass seeds. Nearly every time we topdressed our putting greens, which was mostly with humus which we had to buy, we generally gave each putting green about fifteen pounds of grass seeds. With a few exceptions most putting greens were a mixture of creeping bent, fescue, poa trivialis, poa annua, and often lots of clover.

Today the conditions of our soils for putting greens are reversed. Instead of being al-