

# Greenkeeping Yesterday and Today

By J. O. CAMPBELL

*Read at the 6th Annual Educational Conference of the National Association of Greenkeepers of America, held at New York City, January 19-22.*

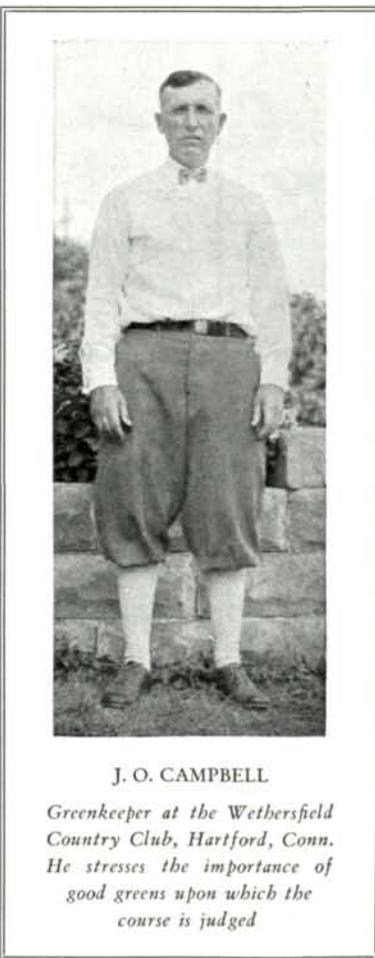
IT WAS suggested to me that the subject, "Greenkeeping Yesterday and Today," might be an interesting one to most of you. I am not an authority on anything, and what I am going to say, at least the greater part of it, has been said many times before. But I will try in as few words as possible to compare these two periods of time. I have no intention of going back to 1888, when John Reid laid the foundation for the game of golf in America.

Not so many years ago, any pasture or farm was considered good enough for a golf course. Now, before a tract of land is either purchased or leased, it is looked over very carefully, an estimate made as to the cost of building and maintaining a course on that particular property. There is, or should be, a golf architect employed. It is also a wise thing for the club to employ and have the greenkeeper on the ground. He should be there during the construction period. The reasons are obvious.

## GOLF COURSE IS JUDGED AT THE GREENS

THE judging of a golf course is done at the greens. For that reason turf is the principal and important thing on the course. Yesterday we used very few different strains of grass, mostly blue grass, red top, fescue and meadow grasses. Turf diseases were rare. Today over the greater part of the United States, especially in the north, the bent grasses have taken first place for putting greens.

Much is demanded today of putting green turf. The greens are either seeded or stolons. The seeded ones are of a mixed bent, usually South German. This produces an excellent turf, but does not de-



J. O. CAMPBELL

*Greenkeeper at the Wethersfield Country Club, Hartford, Conn. He stresses the importance of good greens upon which the course is judged*

velop a uniform color as do stolons. Another objection we find to using mixed bent is, some is non-creeping and does not form as matted and compact a sod as does true creeping bent. The velvet seed which is included produces a very fine leaf and stem growth, but is susceptible to brown patch and other turf diseases.

One of the best known seeded turfs is Cocoos or Seaside bent. It is distinctly a creeping bent, spreads rapidly making a very fine turf. Personally, I prefer bent stolons, either Washington or Metropolitan strain. In recent years a large percentage of the greens in this country have been planted by the vegetative method. This makes a green which is uniform in color, more resistant to brown patch, and a truer putting surface.

A good golfer is partial to these greens when they are properly cut and maintained. This same grass without the proper attention, produces a grainy texture, and is faster with the slope of the green, and not so fast in other directions. This is one of the problems the greenkeeper of yesterday did not have to contend with.

## TURF DISEASES TODAY ARE NUMEROUS

The diseases of turf today are numerous, principally large and small brown patch (the latter being called dollar or pepper patch), ring patch and pythium. The mercury compounds are universally used as a cure and preventative for brown patch. It might be called a specific for all fungus diseases.

There are several other conditions almost as destructive as the diseases, winter kill, snow mold, algae and scald being the most common. I believe

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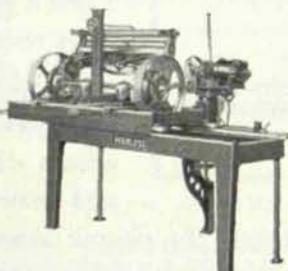
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these are mostly caused by poor drainage and improper contouring.

Then to add to our troubles of today are the insects, earth worms, and grubs. At the present time Japanese beetles and earth worms seem to be the worst offenders. Japanese beetles cause considerable damage to fairways and greens, especially the latter, as they prefer the soft soil for depositing their eggs, and the tender roots furnish especially good food for the grubs. Thanks to Professor Leach for the lead arsenate treatment, these pests along with the earth worms are easily kept under control.

I believe every new green should have the lead arsenate treatment during construction. As an illustration; three years ago I built a green, and treated the soil with lead arsenate before planting. I have never had any trouble with worms or grubs on this green, but this last summer, I visited a new course on Long Island. The owner and I walked up to a green. The first thing I noticed was that hundreds of worm casts had been mashed down and rolled out with the mowers. He thought the condition was caused by the balls hitting the green. If a little lead arsenate had been applied at the time of construction, the balls would never have caused this condition.

### FERTILIZING PROBLEM USED TO BE SIMPLE

FERTILIZING several years ago was simple compared with today. Barnyard manure at first and later on Sulphate of Ammonia was added, this was also used as a cure for all turf ailments. Today there are many brands of commercial fertilizers on the market, with new ones making their appearance frequently.

Sulphate of Ammonia has, and I believe always will hold its place among bent grass fertilizers. The nitrogen is readily available; it is a quick stimulant and has a tendency to eliminate weeds and clover. There can be no definite amount set to use. By testing the soil at frequent intervals, one can readily determine whether there is enough acid present.

Straight bone meal was at one time considered a very good fertilizer, but now it is used mostly as a base for other fertilizers. There are a number of ingredients in most brands of fertilizer, including blood, fish, bone, nitrate of soda, acid phosphate, potash, cotton seed meal, ammonia phosphate and Urea. Activated sludge is also used extensively.

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Low handicap players demand a truer putting surface than ever before, so it behooves us to remember our compost pile, as all commercial fertilizers known will not true up a green. The old methods used in making a compost pile have never been improved upon to any great extent. Every one of us has our own ideas as to the proper method of making compost. Lime was used extensively a few years ago; it was considered almost indispensable. Today it is used only for correcting an extremely sour or toxic condition of the soil.

#### MARKED IMPROVEMENT IN EQUIPMENT

**T**HE equipment was also simple a few years ago. Almost the first thing one saw on visiting a course was Old Dobbin coming down the fairway with an antique mowing unit behind him. Up until about 1921 the equipment used was horse-drawn, slow motion, single unit for fairways, ordinary farm mowing machines for rough, and high-wheeled, five-bladed lawn mowers for the greens and tees. The fairway rollers were cast iron or hand made of concrete. I have had the pleasure of destroying some of these old-type rollers.) They were not pliable to the contours of the ground. The same type were used on the greens except they were smaller.

Greens were rolled often and kept in such a hardened condition that it was almost impossible to grow turf. The first power mowers were of both the push and pull types. These types are still in use, but are being steadily improved, being built of better materials, have finer cutting qualities, easier adjustments and are much more easily handled. Today there is one make of putting green mower which is electric motor-driven. The roller type of putting green mower is quite popular.

We now have power sprayers, built especially for golf course work. Years ago fertilizers were broadcast by hand, partially mixed with soil or sand, the result being uneven distribution.

There seems to be a difference of opinion regarding the best method of watering. Some still prefer hand watering. I have had good success with traveling sprinklers. These sprinklers are placed on the green every other night at about 9 p. m. and removed at 7:30 a. m. They cover an area of about 80 feet in diameter and are placed to take advantage of prevailing winds, and to cover the mounds around the green. This method is satisfactory in this section during the hot, dry weather, but where

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### NO ECONOMY IN OBSOLETE MACHINERY

I do not believe it is economy to use, even in these days, obsolete and worn-out machinery. There are new labor-saving devices being perfected every year, and I think it would pay clubs to take advantage of this new equipment.

The beautifying of the grounds around the club house, seems to be one of the necessary things today. The improvement can be seen on a visit to almost any club, or a study of the illustrations in any golf magazine. This opens up a wide field, and gives unlimited opportunity for the greenkeeper to show his skill and knowledge along this line.

I would like to say just a few words about trees. A few years ago, they were ruthlessly cut down, no matter how fine a tree was, it had to go if it interfered with construction in any way. Now that is not true to such a great extent. There is a greater realization of their importance and beauty. Thanks to Mr. Martin Davey we are better able to understand their needs and care.

The greatest difference of all between yesterday and today is in the greenkeeper. Often the owner of the farm was employed at the time the club acquired the property, or he was a farmer living in the vicinity of the club. Sometimes he made a fine greenkeeper, often he did not.

### GREENKEEPING TODAY IS HIGHLY SPECIALIZED

TODAY greenkeeping is a highly specialized profession. The man who aims to stay in front must keep even or one step ahead of the times in order to meet new demands, which are greater in the field of golf than any other sport. His responsibility is greater than at any time in the history of golf. He is expected to be a turf specialist, have a knowledge of golf architecture, drainage, landscaping, plumbing, carpentry, entomology, botany, be an electrician and mechanic, as well as an expert accountant, and just for good measure be financial and marital advisor to club members, besides knowing how to get the most labor out of the smallest number of men.

Thanks to the National, State and District organizations, such periodicals as the NATIONAL GREENKEEPER, Golfdom, and the United States

Golf Association Green Section Bulletin, it is possible to know what is being done all of the time in every part of the country. Any man who fails to take advantage of these things is bound to lose out.

Today greenkeepers must know a great deal about construction. They are asked from time to time to build tees, lay out fairways, put in drainage, or rebuild greens.

#### PROPER CONSTRUCTION OF A GREEN

I WOULD like to tell you my idea of the proper construction of a putting green. After the location is selected, plow surface and remove top soil. Remove all stone to a depth of at least 12 inches. Lay sufficient drainage to a depth of approximately 24 inches, using 4 to 6-inch land tile, about 15 feet apart, laid with the fall of the land. It is best to cover the tile with burlap bags or a 2-inch layer of straw, refill trench, proceed to build up the green to about an 8-inch depth in the lowest level. This soil should be first-class top soil.

In grading, slope the green to hold the shot. The back of the green should be not less than 16 nor more than 24 inches higher than the front. This will take care of the surface water. The contouring is very important; this should not be abrupt but gently sloping, and irregular in shape. Cover with about 4 inches of good top soil, and two inches of compost mixed with arsenate of lead at the rate of about 6 pounds to the 1000 square feet, to grub proof the green. Rake and roll until a fine seed bed is completed. Then plant seeds or stolons.

Greens built this way are cheaper to maintain, and are less liable to develop brown patch or scald. Good drainage is the foundation of a good putting green.

Usually when the finance committee start looking for a place to reduce club expenses, they start with the greens maintenance budget. This does more damage in one year than a greenkeeper can repair in four. The cost of maintenance cannot be standardized; there are no two courses exactly the same, nor even two greens on the same course with identical requirements. That is one reason why the same greenkeeper at the same club over a period of years will invariably cut maintenance costs to a minimum. To do this he must have the full cooperation of the finance and Green committee. These problems were the same yesterday as they are today.

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