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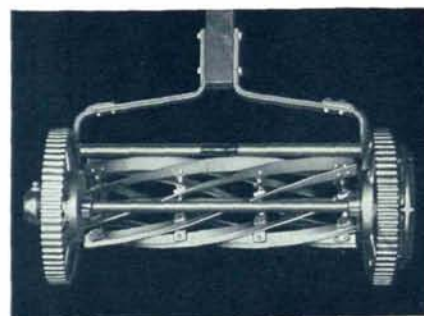
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The National Greenkeeper

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Cleveland, Ohio

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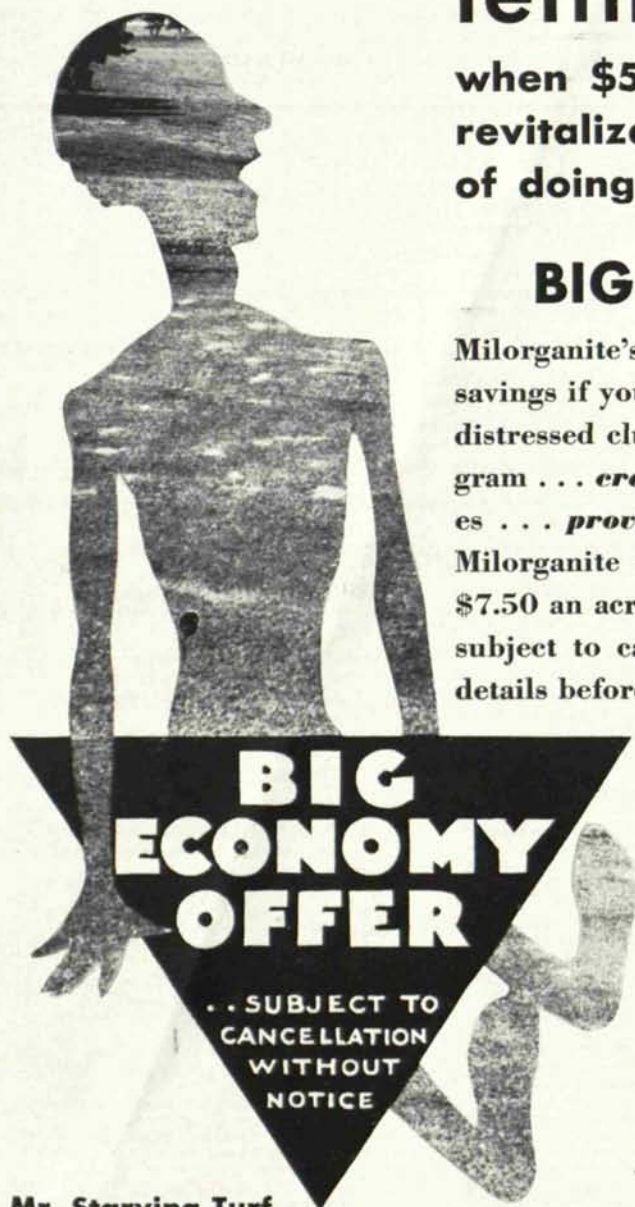
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SEPTEMBER

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VOLUME VI

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The NATIONAL GREENKEEPER

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My Experience With Fertilizers

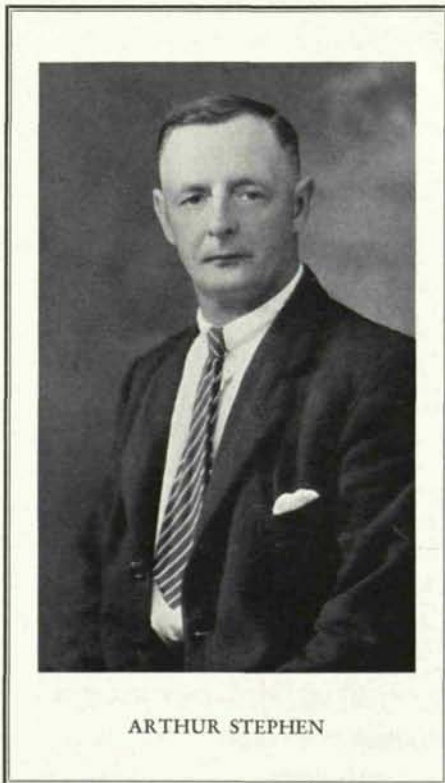
By ARTHUR STEPHEN, *Greenkeeper*
Erie Down's Golf and Country Club, Ltd.

EXCEPT in rare instances there is very little evidence supporting the plea for so-called "complete" or "balanced" fertilizers on fairways. Improved turf growth does not result from additions of plant food elements already sufficiently abundant in the soil. An economical and rational program is one designed to satisfy soil deficiencies whatever they may be.

The words "complete" and "balanced" carry an especial appeal and is usually supported by a misleading comparison with human feeding requirement. Because a balanced diet is essential to human well being, it is argued that plants required balanced feeding. So far the analogy is strictly true, but the fact that plant roots permeate a medium which contains abundant supplies of many of the essential elements is ignored. Feeding practices need supply only those elements which are deficient in the soil, whereas the human diet must be well-balanced to provide all the essentials of life.

Soils differ in available and total plant food content. If grass always required a complete fertilizer, it seems hardly reasonable to expect a "complete" fertilizer of one special analysis to prove equally satisfactory on all types of soil.

Truthfully speaking, it is easier to follow the lines of least resistance, apply a complete fertilizer and thereby correct soil deficiencies; but it is far more



ARTHUR STEPHEN

satisfying and certainly more economical to build programs on a sounder foundation, that is, one designed to overcome soil deficiencies, taking into account type of soil, previous cropping history, and the growth requirements of the particular crop.

PASTURE FERTILIZER TRIALS MISLEADING

THERE are a few turf fertilizer trials which give pleasing information applicable to fairway practices and which take into account conditions as they perform on a golf course. Considering these conditions we must have the type of turf best suited for the golfer. Using fertilizer practices originated for pasture turf on fairways is dangerous.

We must recognize that there are at least three outstanding differences.

On pastures, quick growth and heavy yields of grass lengthen the pasture season, but on the fairways this simply needs more frequent mowing. A slow and continuous growth is the ideal condition for fairways. The quick-acting nitrogen starts early growth on pastures, while the slow-acting organic nitrogen promotes a more even and continuous growth on fairways. On pastures, removal of the clippings by grazing does away with plant food losses, especially phosphorus and potash, but as fairway clippings fall to the ground and decay, they release all the phosphorus and potash, so the losses

are only that of nitrogen. This is often overlooked by turf experts and others.

Clover is highly recommended for pastures, so potash is used to encourage its growth, and on fairways clover is the last thing we want as it will not hold the ball up and it will not stand the draught in summer or the severe winters, thereby leaving ugly bare spots. So, when inspecting pastures this must not be overlooked. One should not get the wrong idea and think that they don't need phosphorus be-

cause you absolutely need it for new seeding, but it does not prove that it must be continuously used on established fairways.

NITROGEN IS THE CHIEF ELEMENT

Not only is nitrogen responsible for dark green color and active vegetative growth but it is the element which encourages grass to spread and form a dense tight sod, free from cuppy lies. Nitrogen favors a denser root structure and is not responsible for shallow root system. Over-watering the tight hard soil or cutting your fairways too close may be the causes of poor root system.

It is impossible to get a root system without nitrogen. The sole use of quick-acting nitrogen fertilizers produce a rapid lush growth which soon disappears or is taken up by the excessive leaf growth or is leached from the soil.

For the information of my fellow-greenkeepers I want to say that I have used milorganite because I have found that its organic material promotes uniform and long sustained growth of sturdy, wear-resisting turf. Its water insoluble organic nitrogen is slowly changed into available forms as needed by the grass. When weather conditions are right, effects from milorganite applications will show up in from ten to fourteen days.

If quicker results are desired, I would advise mixing the milorganite with sulphate of ammonia, and when the effects of the quick-acting fertilizer disappear, milorganite continues to promote and sustain growth, and as for mixing these two fertilizers, no time will be lost.

POTASH IS LESS IMPORTANT

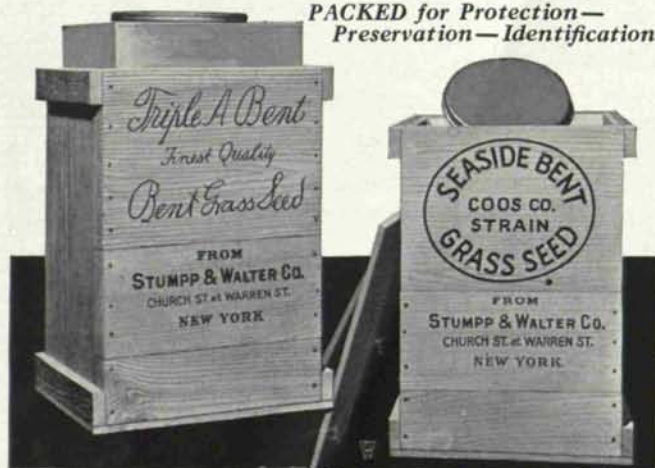
EXCEPT on peat, muck or sandy soil there is no reason to apply potash to fairways; as the turf experts have already told us, the quantity of potash is already in the soil. Another point which deserves consideration is that its use tends to favor the growth of clover which can be overcome by nitrogen feeding.

I would appreciate hearing from my brother greenkeepers regarding this article.

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Prospect of a Country Club for the younger athletic set has been much agitated recently and bids fair to develop into a reality in the very near future. The main promoters are members of the Texarkana Golf Club, who have secured a most desirable location at the park for a club house and golf links.

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Minnesota Boys Take Joy Ride

By L. J. FESER, Vice-president

Minnesota Greenkeepers' Association

ROCHESTER, MINNESOTA, is the medical center of the western hemisphere, and the way that the M. D.'s in that town operate has brought fame to the city. These medical men get pretty tired of cutting and sawing the human frames, and they hit upon the ideal relaxation of slicing and smashing rubber golf balls. This practice calls for a bit wider range than an operating room, so the boys got together quite a few years ago and formed the Rochester Country Club. They picked up a piece of land that required a few greens and tees and sand-traps placed here and there to make it one of the finest 18-hole layouts on this side of the Gulf of Mexico.

Minneapolis and St. Paul are the centers of the Minnesota golfing world, and most of the boys in the Minnesota association are drawing their pay checks from the clubs in this locality. Once every year our boys get tired of looking over such ordinary clubs as Minikahda, Keller, Town & Country, Interlachen, Golden Valley or Glenwood, and they get the itch to move on into the wide-open spaces. This year most of the boys were troubled with headaches trying to figure out a dollar stretching machine, so it was unanimously decided that we ought to consult the Rochester clinic.

Twenty of the boys signed up to take the treatment, but our good old secretary, Harold Stodola, got caught in a pre-tournament jam and was held fast. Harold is far more capable of telling you about that trip than I am, because he is our scribe, and I am



L. J. FESER

just one of those pinch hitters that relies on Lady Luck. However, as Harold couldn't make the trip, I hope that you will accept this report as being a more or less true account of our journey.

Ed Swanlund is the man who takes the blame for poor lies at Rochester C. C., but Ed sails around the course in the neighborhood of 80, so you can figure that the poor lies are not always found in the fairways. Matter of fact, after going around the course in 132 the boys considered that a poor lie on my part. Rochester is a real layout, and a mighty well maintained

course in any man's country.

Bear in mind that the Drs. in that town are used to cutting and the way that they practiced on Eddie's budget last spring has worried me so much that I am going to stay well at least eighty more years. They cut everything off of the budget but the ears, and trimmed them. But Ed has given them a course that looks like the height of prosperity. Plenty long, very good greens, damn sand traps and there will be a lot of golf ball trees in the outlying sections if those balls planted by our gang ever sprout and grow.

That is slightly ahead of my story, but I wanted to be honest about that part, and now we will go

back to Minikahda club, where on the morning of July 19, nineteen greenkeepers climbed into a chartered bus and sailed southward over 80 miles of fine paved roads not including detours that were not paved. Among the crowd that waved farewell to



MINNESOTA BOYS AT ROCHESTER, MINN.

Daddy Erickson's tool house was that more or less well-known character, Scotty McLaren. True to his race, he rode the middle of the bus to save all of the bumps possible.

The boys were very polite to each other as usual. Very few arguments that lasted over an hour, and very few men who did not have a part in the discussions. No black eyes were in evidence when we climbed off at Rochester, but Frank Anderson lost his set of clubs en route, and Emil Picha ate a very light dinner, so there must be some cause and effect in this old world.

Swanlund has the inside track with the chef at the club, and we certainly did take advantage of this opportunity. Everyone felt the Rochester C. C. excursion was one of the best. We didn't get into a formal discussion of greenkeeping problems, but

we all learned a few things that will be of some benefit to us in future years. Swanlund can show a lot of the boys a course that is enviable from the maintenance point of view, and he was very much pleased to do so.

A few light songs led by our vocal geniuses, Vic Larson and Leonard Bloomquist, shortened our ride back to Minikahda. Other events of this homeward trip are not for publication, but to our brother greenkeepers let me suggest that you grab some Minnesota boy at the Chicago convention next winter, and get the story straight.

This man was too busy to note all that happened on the homeward journey. I do remember that Rochester didn't get any operating practice on any of us, and for a severe headache I can think of no better remedy than a session with Dr. (?) Ed Swanlund, G. K., Rochester, Minn.

Comments from An Old-Timer

By JAMES O'NEILL, *Pro-greenkeeper, Cleveland*

WELL do I remember when I first reported for duty as a golf professional and greenkeeper at the Portsmouth Golf Club, Portsmouth, Ohio, in the year 1899. There were not many greenkeepers in those days. The professional had to take charge of everything pertaining to golf. In truth the farmer was the greenkeeper. I, for one, depended a great deal on his judgment as to raising grass and course maintenance. You gave him an idea, of course, of what you wanted and made him your foreman.

I remember at Portsmouth we had to build a hole through an apple orchard and still save some of the orchard. As I look back the entire orchard would not make one standard fairway of today. In fact, the whole golf course was laid out in a ball diamond and fruit farm combined and would not make the good golf holes of the present day. (No reflections.)

Because officers and members of the club worked just as hard those days for the good of the club, if not harder than they do today. The golf club was one happy family. No worries about bridge parties, dinner parties and teas. At Portsmouth we had two sand greens because we thought turf was too expensive at that time.

FROM MY FIRST BAPTISM IN GREENKEEPING Portsmouth I went to the Avondale Athletic club, Cincinnati, Ohio, and it was here I got my first baptism in greenkeeping. The course was

very much run down, but thanks to Mars Black and A. W. Shell, who were on the Green committee at that time, they worked with me in every way possible. In fact I have been in their homes until very late hours at night trying to figure how to bring our course back into shape with what money we had to spend at that time.

You may be sure we lost many members as Grandon Road Country Club, where the MacCormick Brothers were, was right up to snuff in every way; also the Clifton Club, these being the only other golf clubs in Cincinnati at that time. I went to Cincinnati on September 1, 1900.

Getting back to greenkeeping. We raked, cross-raked and then raked some more. And, brother greenkeepers, imagine the howl from the members when they saw how my greens were torn up. In fact I did not know whether or not I was going to get a contract for the following year or not.

I TOPDRESSING AND SEEDING DID THE TRICK HUNTED around and finally found some old rotten manure that I mixed with some good top soil and covered my greens about one and one-half inches with this mixture, sowing my greens with two-thirds of A grade redtop and one-third of Kentucky blue grass. Sowing heavy in the fall and a light topdressing with light seeding in the spring. That surely did the trick. High-powered fertilizers in those days were unknown.

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REG. U. S. PAT. OFF.

REG. U. S. PAT. OFF.

I remember in those days it was rake, shake and roll, but I must confess I never did believe in too much rolling at any time. We would not have so many hide-bound greens today if it were not for so much heavy rolling in the spring.

Well, imagine just how you would feel when the members start coming back to play and telling you how well your course looks, especially those whom we believed were lost to other clubs. And here let's mention to secretaries and chairmen of golf clubs, don't forget to give your greenkeeper a boost once in a while. It surely lightens the burden he has to carrying during a playing season. When I say burden I mean exactly that, regardless of weather conditions.

Now when I look back—while we seeded more often in those days our greens were very good, both for the old hard ball and the rubber ball when it came out. We did not water nearly so much those days. Two to three times a week depending on the time of the season.

As I mentioned before, high-powered fertilizers and fungicides were unknown. Good, old, rotted manure and top soil were used. A heavy dressing spring and fall with a light dressing in July. The manure discharged bacteria gradually and gave us a uniform turf at all times.

If we were bothered with brown patch, pepper patch, ferry ring, Japanese beetle or phythium I

had no idea of it. I will leave that for someone else to think about. True we had worms, winter kill and scald. Which makes me think of an instance that happened to me at Avondale pertaining to scald.

If it was not scald it may have been brown patch or dollar patch. At any rate my No. 4 green had a number of spots on it and they were increasing, so I gave one of my workmen a shot gun and put him to work nights to catch this particular dog or dogs. After the third night he still had no dog and the patches were increasing. I started doubting whether or not he was on the job faithfully and called his hand. The next night he had a dog at the side of the green with half of his head shot off. There was no blood on the dog or anywhere else as far as I could see. I still believe he found a dead dog somewhere and brought him on the course and shot him. At any rate, Tom, if you are still alive and see this article I will give you the benefit of the doubt, and the joke is on me.

I WONDER IF WE DO NOT WATER TOO MUCH
GETTING down to present-day greenkeeping and construction of golf courses I sometimes wonder if we do not water too much and I wonder if we give enough attention to the construction of our courses. A few tile here and a little surface drainage there would seem to me a saving of double the cost of ren-



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