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TORO GOLF COURSE EQUIPMENT

JUNE, 1929

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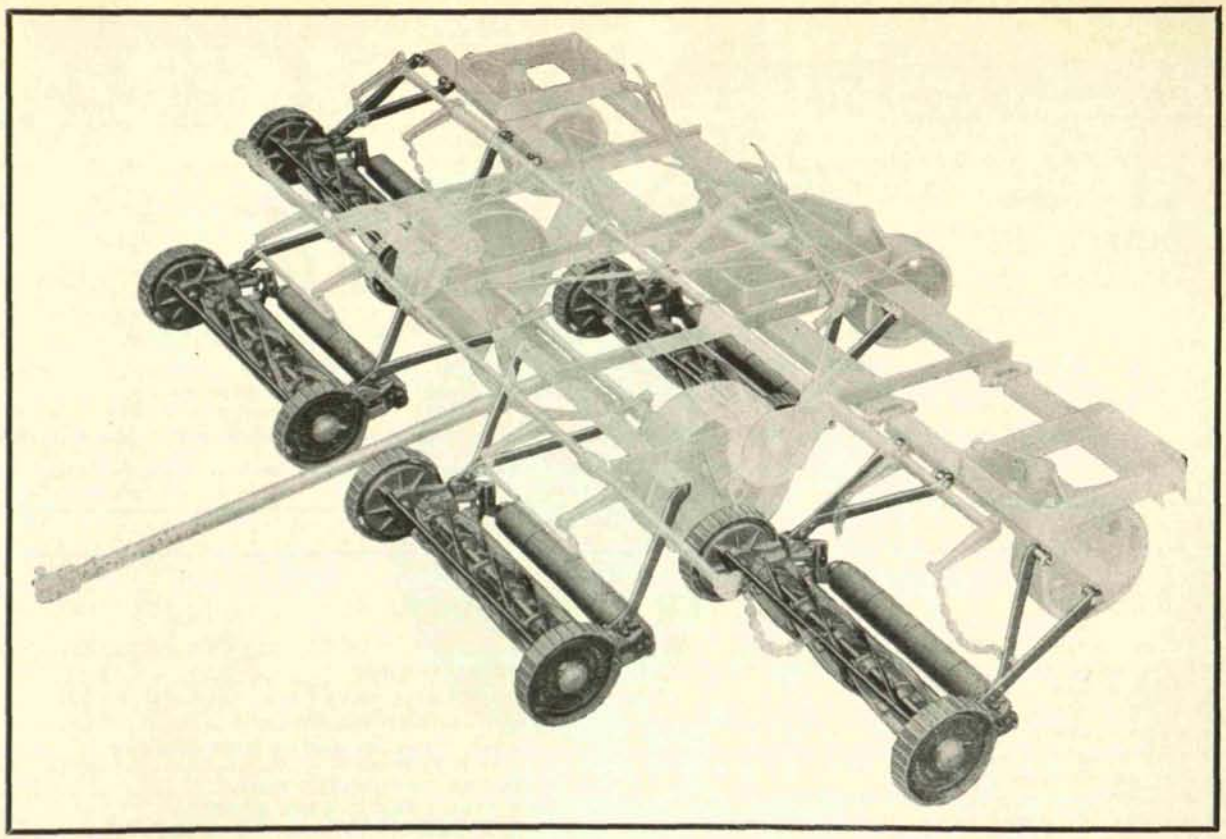

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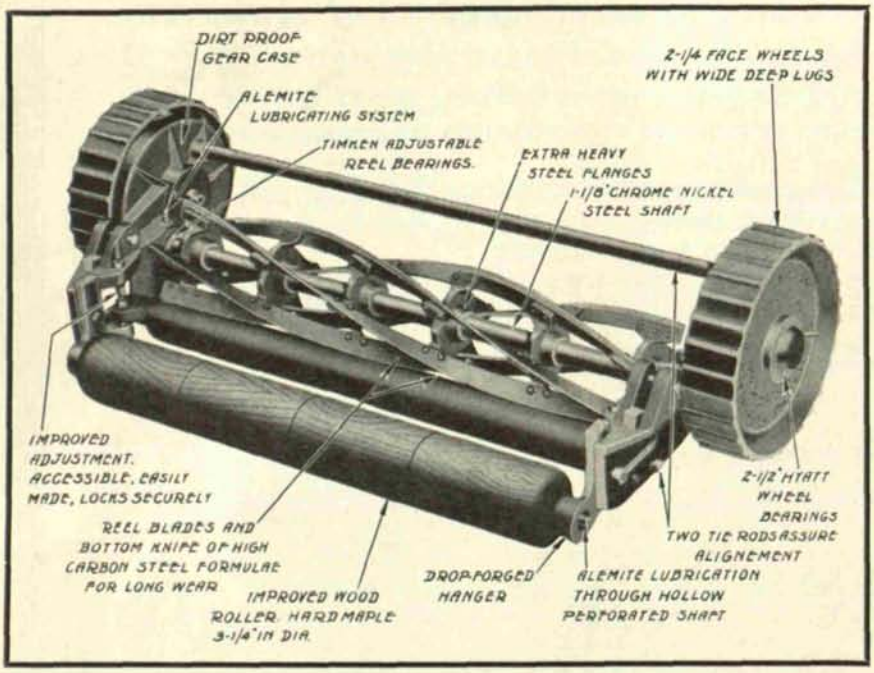

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IDEAL GOLF COURSE EQUIPMENT

June
1929
Volume III
Number 6

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

Soils I Have Seen*

By O. J. Noer, *Author of the ABC of Turf Culture*

GOLFERS are prone to be unreasonable and demand perfect putting turf irrespective of weather conditions. They invariably demand May turf during the adverse months of July and August. This is especially true when clubs possess elaborate establishments which necessitate high annual dues. Members pay to play golf and expect well groomed turf at all times.

During 1928 turf on many courses suffered disaster. Courses located in the belt extending from Washington across to Kansas City were badly hit, but even to the north the season tried the souls of experienced and capable greenkeepers. Old timers with thirty years' experience unhesitatingly say they have seen nothing like it in all their years of service.

O. J. Noer

It is said that new-fangled methods are the underlying curse and that a return to the so-called old time methods will work magic and dispel all turf ills. This is the easy method and in a measure true. But will these methods maintain standards of turf excellency demanded by present day golfers? Rivalry between clubs, and desire for perfect playing condition may prevent this. The present need is for a thorough overhauling and correct evolution of the basic factors underlying the development and maintenance of sturdy turf. This is really constructive. It will require time, painstaking investigation and must be adequately financed. In the meantime a review of the disasters of the past season may be helpful in avoiding, or at least lessening, future troubles.

Proper Diagnosis is Necessary

IN CONSIDERING turf ills, needless to say, corrective measures must be based on a proper diagnosis of the trouble. This is not always easy because of the multiplicity of factors involved in the growth of turf. Fertilizers will not effect permanent turf improvement if major injury is due to impervious water-saturated soil.

Lime in sand should not be blamed as the sole cause of weed infestation if the soil used in top dressing mixtures teems with viable weed seeds. Repeated applications of fertilizer to diseased turf serve only to aggravate the situation if previous over fertilization made the turf more susceptible to the ravages of the casual organism.

If varieties of grass adapted to local climatic conditions are used, then soil condition is extremely important. After all, a green is more than a place to grow grass. It must be able to hold the ball, and withstand heavy traffic during adverse summer weather. The importance of proper physical soil condition was brought out forcibly during the past season.

*Digest of talk delivered at the Buffalo meeting of the National Association of Greenkeepers

Soil Condition Most Important

SOIL is not simply so much dirt. It supplies the expanding turf with water, plant food and the entrapped soil air furnishes oxygen so vital to the life processes of the roots. Humus is the distinguishing characteristic of soil, and it is mainly the presence of humus which distinguishes the surface soil from the underlying subsoil. The existence and development of soil micro-organisms depends upon the presence of humus to satisfy their food and energy requirements.

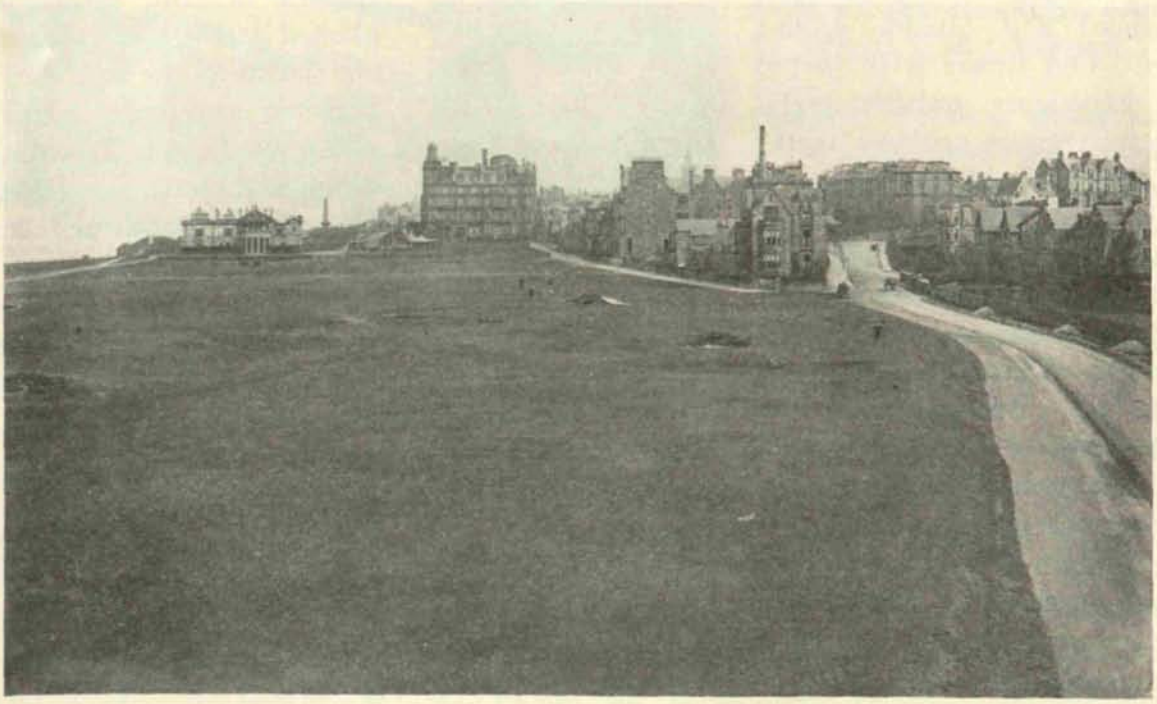
Fertile soils teem with these minute bacteria, ceaselessly working and constantly liberating available plant food. The most important characteristic of soil from the standpoint of greens is texture and structure. Texture refers to size of individual soil particles, and structure their arrangement. If the dominant particles are minute, free movement of water and air is impossible. Air is excluded, and desirable bacterial activity depressed, in water saturated soil. The troubles of 1928 demonstrated the importance of correct physical soil condition because of the abundant rainfall.

Sandy loam soil approaches the ideal, and a light soil is certainly preferable to a heavy clay. Sandy soils are usually condemned for their low plant food content and low water holding capacity. Both of these drawbacks can be provided for on putting greens. The open structure of such soils permits deep penetration of air and rapid removal of excess water.

Aside from any effect soil reaction may have on the growth of turf grasses, we know that extreme acidity favors the growth of fungi and retards the activity of some groups of desirable bacteria. Furthermore acid soils are usually more compact and tend to revert to a puddled condition. This is not a plea or brief for the indiscriminate use of lime because it is a fact that some courses with alkaline soil fared badly.

That soils must be adequately supplied with plant food elements cannot be challenged. Roots absorb soluble materials only, but soils never contain sufficient soluble plant food to adequately provide for an entire season's growth of turf, so it is necessary to make conditions suitable for constant release from insoluble reserves, or to add available plant food. When physical soil condition is correct, water and fertilization are probably the key to the solution of the troubles of 1928.

MAINTAINING the soil slightly on the dry side is better and will tend to check growth somewhat. The system of nitrogen feeding may need some overhauling. In the



THE 17TH AND 18TH HOLES, ST. ANDREWS GOLF COURSE, SCOTLAND

past, color and amount of growth have been used as the major criterion in determining need for nitrogen. Possibly sturdiness is really more important and probably this can be achieved by the rational use of nitrogen. Lighter applications seem in order. It is always possible to make additional applications but excess fertilizer once applied cannot be removed. It is folly to expect applications of phosphorus and potash to wholly overcome the detrimental effects of over-nitrogen feeding. Rational feeding is often all the correct solution.

Excess Water is Dangerous

EXCESS water not only conduces to rapid growth accompanied by weak tissues, but also affects bacterial activity in the soil. There are two types of bacteria, those which depend upon the presence of oxygen for their existence and those capable of existing and working in the absence of oxygen. The first type are the beneficial soil organisms.

In water-logged soils where oxygen is excluded these undesirable bacteria flourish and are responsible for unwonted and sometimes damaging fermentation. So long as the soil is well supplied with oxygen these organisms need not be feared for they fail to function. The significance of this fact is not generally appreciated.

From the standpoint of fertilization, nitrogen feeding is the all important consideration. The startling results produced by nitrogen fertilizers are evidenced by dark green color and rapid growth; which in excess is always associated with weak tissues. In some instances the startling improvement usually effected by quick acting nitrogen fertilizers prompted their use in vain attempts to revive sick turf. Unless conditions are right and the turf shows signs of recuperation such procedure may prove detrimental.

If over-feeding induced weak susceptible tissues, continued feeding only aggravates the condition and the result may be a continued round of trouble. Here again this must not be construed as condemnation of all fertilization, but rather as a plea for rational fertilization. During stress it takes courage to withhold or delay nitrogen feeding but there are times during the hot months when it should be done.

Hope for the Future

PREDICTIONS are dangerous and often damaging to reputations, but one or two points seem reasonably clear. The season of 1928 simply emphasized the well-known fact that the combination of abundant nitrogen, excess water, and relatively high temperatures produce rapid growth associated with weak tissues. If some of the troubles are to be avoided, practices which will produce and maintain sturdy turf during the hot adverse summer months must be accentuated.

Adequate drainage of heavy soils and the use of topdressing materials of suitable physical condition are fundamental. Extreme care in watering seems important to avoid excesses, and during the hot months may mean hand watering on greens blessed with low-lying pockets or surface runways. When sprinklers are used these areas frequently become saturated due to surface movement from the surrounding higher areas.

What About the Tariff?

New schedule shows 400 per cent increase in tariff on bent grasses. Will increase cost to golf clubs.

By JOHN MORLEY, *President*
National Association of Greenkeepers of America

ON TUESDAY, May 7, the proposed new tariff schedule was reported out of the House committee on Ways and Means, and while it contained no surprises it did contain the expected advances. In order that the reader may easily compare the present duty and those under the proposed new schedule they are tabulated as follows:

Articles	Present Duty	Proposed Dpty
Bent grass (all species)	2c	10c
Orchardgrass	2c	5c
Fescues (all species)	2c	2c
Rough Stalk Meadowgrass	2c	2c
Wood Meadowgrass	2c	2c
Ryegrass (all species)	2c	2c
White Clover	3c	5c

All other grass seeds not specially provided for 2c per pound.

From the above tabulation it is easy to deduct that the new schedule will have more effect on the price of bent than any other seed. This advance is undoubtedly due to the strong propaganda from our own states of Washington and Oregon.

Following is the information on bent grass furnished to the Tariff Commission by the U. S. Dept. of Agriculture.

BENT GRASS

Imports:	**1921-22**	**1922-23**	**1923-24**	**1924-25**
Pounds	96,000	106,000	348,000	258,000
		1925-26	**1926-27**	**1927-28**
Pounds		344,000	537,000	554,000

Production: (Domestic)

150,000 pounds (official estimate) in Washington and Oregon in 1928. Smaller quantity estimated for 1929. No figures obtainable for New England, but it is officially stated that the Department of Agriculture had difficulty in obtaining a few pounds for experimental purposes; the presumption in New England is small or negligible.

Prices: Wholesale per 100 pounds at Atlantic Seaboard points, spring of year

1923	**1924**	**1925**	**1926**	**1927**	**1928**
$225	$125	$55	$115	$55	$50

Prices from Mr. Edler, Hay, Feed and Seed Division, U. S. Department of Agriculture.

The new tariff is estimated to go into effect some time this summer so that the Fall buyers of bentgrass will pay for this additional duty.

As there are a great many wholesalers who are willing to book orders now for fall shipment on stocks already in this country and upon which only the old duty was paid it is suggested that the buyers of bent cover their Fall needs at the present time.

The newspaper correspondents from Washington tell us that the President is none too pleased with the advance on some of the items holding that some of the advances are outside of what could be strictly termed "limited increases."

Bentgrass being of such little importance outside of the golf world perhaps no one other than those interested in golf would feel moved to voice a disapproval of this duty increase, yet someone should voice a disapproval because the domestic production of bent is in no way large enough to take care of the domestic consumption. Besides this there is every reason to suppose that the Pacific coast bent is not as adaptable to some of our eastern conditions as the seed from Prince Edward Island and South Germany.

United States Tariff Commission
8th and E. Streets N. W.
WASHINGTON

Mr. John Morley
Chairman, Committee on Standards,
National Association of Greenkeepers of America
2248 Selma Avenue
Youngstown, Ohio.

Dear Sir:

Receipt is acknowledged of your letter of April 17 with respect to the tariff duty on bent grass seeds.

The Tariff Commission does not recommend rates on different commodities to the Ways and Means Committee, but we have cooperated with the Committee by making available to the Committee such information as we have on the various subjects.

It would be appreciated, therefore, if you would send the Commission any information and statistical data that have a bearing on the tariff problem of bent grass.

Very truly yours,
O. A. Juve, Chief,
Division of Agricultural
Products and Provisions.

April 25, 1929

The next largest increase is that of orchardgrass from two to five cents; but as very little orchardgrass is used by golf clubs except for "rough" purposes, this advance will play little or no part.

On most of the important grasses such as fescue and rough stalk meadowgrass the duty remains unchanged. We therefore will not see higher markets on these because of increased duty.

Another hazard *conquered!*

NOW BROWN PATCH IS EASILY CONTROLLED WITH THESE *TWO FUNGICIDES*

Greens blotched and scarred with brown patch have ruined many a par score!

Now, by the simple use of Du Bay Semesan or Nu-Green to destroy destructive brown patch fungi, you can quickly restore all diseased turf to good health and your club members to good humor.

Many famous golf courses rely on these two soluble organic mercury compounds to effectively prevent and control the disease. Their greenkeepers know that Semesan and Nu-Green, when applied according to the simple directions, kill brown patch fungi instantly, without the slightest injury to the finest turf.

Semesan, the original brown patch fungicide, gives excellent control of the disease under even the most severe conditions. It is especially recommended for use where the turf is in a good state of fertility.

Nu-Green contains the same effective ingredient as Semesan. It also has the added property of quickly restoring the diseased grass to normal health and color, even though the soil fertility is not suited to rapid recovery.

Although large brown patch is most destructive during the warm, humid periods of summer, small brown patch may develop earlier in the season. To prevent brown patch the greens should be treated with Semesan or Nu-Green before the usual spring appearance of the disease.

For prevention, use one pound of Semesan or Nu-Green in 50 gallons of water to 1000 square feet of turf by the sprinkler method, or 2500 to 3000 square feet by power sprayer. Full directions with package.

SEMESAN	NU-GREEN
5 lb.....$13.00	5 lb..... $9.00
25 lb..... 56.25	25 lb..... 37.50
100 lb.....220.00	100 lb.....145.00
300 lb.....645.00	300 lb.....420.00

Buy now from your Seedsman or Golf Supply House.

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Fungus Diseases and Why

A practical discussion of plant life in all its phases. How plants feed and live and die.

By J. E. Cannaday, *Chairman*
Green Committee Sedalia Country Club, Sedalia, Mo.

Editor's Note—With the approach of the hot summer months this splendid article by Dr. Cannady is extremely timely and of great value.

SURELY we learn more by comparing what we do know, to that which we do not know. Having had years of experience in the practice of medicine, and then taking up floriculture, and still later taking charge of the greens at the Sedalia Country Club, my only hope is, by reason of my experience in two other lines, which the average greenkeeper does not have, to provoke some thinking from a different angle on the part of greenkeepers.

The greenkeeper is concerned about the diseases of turf grasses for a very short period of the year. Whereas it is a never ending battle with the grower of flowers or vegetables, especially under glass. The florist is challenged continually to prevent the diseases of plants usually of a fungoid nature.

The losses to the floral industry would be staggering, if it were possible to make a definite accounting of the damage done by these diseases. Realizing that it may appear far-fetched to compare the diseases of animal life, and even man, to the diseases of plants, undoubtedly there is a very close analogy. By comparing the two, we learn that which will help us in both. Both the florist and the greenkeeper are vitally interested in two forms of vegetable life. One they want, the other they often get without wanting. The former is the grass, or turf, for the greenkeeper, the other, diseases which are of a fungoid nature, or probably all the results of the action of fungi.

GRASS IN FLOWER POT INOCULATED WITH BROWN PATCH FUNGUS

Animal vs. Vegetable Life

THE more we study the two classifications of life (animal and vegetable) the more we see that there is not the great differences from a physiological standpoint, that the casual observer usually thinks. One author has put it, "living matter is the same wherever you find it." Plants do the same work for their existence as animals. The physiology of both is very closely related.

Undoubtedly, we get a better understanding by comparison. In the plants the perpetuation of not only the life of the plants, but all animal life is a very beautiful illustration of the order of things and it is well for us to consider them. Both the florist and the greenkeeper are striving to keep in the same path.

The two forms of life which are of interest to the greenkeeper or the florist have one special distinction. One group contains chlorophyl, the substance in the leaves and tissues which gives the green color. The other does not contain chlorophyl. And they only live on the organic matter left by the action of chlorophyl in a previous generation of plants.