GREENKEEPERS CLUB OF NEW ENGLAND

NEWS LETTER

The words of the good are like a staff in a slippery place.

--Hindu Saying

DECEMBER

1936

This NEWSLETTER is published monthly by the Greenkeepers Club of New England, and sent free to its members and their Green's Chairmen. Subscription price ten cents a copy, or a dollar a year.

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At this time we wish to express our appreciation to all who have contributed to make the NEWSLETTER better throughout this past year. Then, too, let us add our greetings of this Season to all the rest and wish for YOU a very MERRY CHRISTMAS!

And here are greetings from the president of the Massachusetts Golf Association:

"At this time of year it seems particularly fitting for the Massachusetts Golf Association to extend through the courtesy of your NEWSLETTER, the Season's Greetings to your association and all its members.

"It would be repetition to go into the various details of our appreciation for the work which your organization had done for the betterment of golf in New England since its inception, but you may rest assured that we realize full well the value of your efforts.

"Many of our clubs are indebted to you for improvement in the condition of their courses made possible through your many efforts in educating and keeping the interest of the Greenskeepers directed toward betterments.

"We are interested in the effort you are making through the Legislature to obtain appropriations for experimental work at the Waltham Field Station. This experimental work cannot help but be of substantial value to the clubs in this district and may well extend its influence further.

"We wish you success in this endeavor and assure you of our support in any way in which it can be properly given.

"Wishing you and your members a pleasant Christmas season, I am

Yours sincerely,

Erastus B. Badger,
President Massachusetts
Golf Association."

Recent letters from Prof. H. F. A. North bring greetings to his New England friends. He tells us that his work with the Green Section these last six months has largely been concentrated on brown-patch, weed control, and the use of dyes for brightening up greens in case of emergency. The Green Section has found that sodium arsenite and crude arsenic acid are very inexpensive and potent materials for killing clover, buckhorn, chickweed and many other weeds. (This work will be summarized soon probably.) In speaking of the use of anilene dyes, Prof. North says, "The success of the job at Philadelphia for the Army and Navy game seems to clinch the experiment as that was very successful." We hope for continued reports from the Green Section!

A recent letter from Dr. V. T. Stoutemyer of the Iowa State College tells us that their annual greenskeepers conference at Ames will be held on March 1 and 2, 1937. Prof. L. S. Dickinson and Herb Graffis will be among the speakers.

We understand that the Bass River Golf Club in East Dennis, Mass. has recently installed a new fairway watering system with Buckner valves and equipment.

One member writes that possibly there is too much "dumb acquiesance" by the membership of our club as a whole. Is that true? Does our membership need some stimulant (not alcoholic) to bring out the BEST, that we need to keep the club progressing? We welcome comments!

SCALD

By Guy C. West

As part of the experimental work conducted in 1936 by the Greenkeepers Club of New England with the cooperation of the Massachusetts Golf Association, I have made a study of scald on putting greens. One reason why this subject was assigned me for study was that I have had some trouble at various times with scald on the fourth green at the Fall River Country Club, and thus various methods tried to eliminate the trouble fell in with the study.

The term "scald" has been used by turf men at various times to mean many things. It has been used loosely to mean nearly anything that browned or killed the turf with the exception of brown-patch. Fertilizer and chemical burns have often been termed scald. The dying of Poa annua has often been called scald. The maintenance of Poa annua is a study in itself, as excessive heat and humidity often will drive out the Poa annua content of a green, leaving the bent thin and poor. Poa annua requires careful watering and fertilizing during the hot weather.

The "scald" that is generally known by this name is the browning, or trouble which results from an excess of water, organics, inorganics, heat and humidity at a given spot in a green. Heavy rain followed by a hot spell will cause this trouble, more so if there is an excess of fertilizer present. Too much organic fertilizer during hot sultry weather when soil is wet is liable to cause this scald because such conditions cause the excess of organics to break down at a rapid rate, liberating a large amount of nitrogen when the grass is least able to withstand such a heavy application.

In this type of scald, the turf may at first turn bluish, and will show every footprint as the golfers walk across the green. There may be an excess of water below the surface of the green while the top quarter inch may be dried out. Damage here may be caused partly at least by the lack of air around the roots, and the roots in top quarter inch may need water in small quantity.

Treatment During 1936

As part of the study, the treatment of fourth green during the year should be included. This green has a southerly slope and exposure. On the other three sides there is a growth of hardwoods, preventing air circulation over the green. Sod consists of Washington bent with some fifty percent of Kernwood velvet, which has been plugged in over several years, and is now the predominant grass. Two Winters ago we cleaned out the undergrowth on the three sides and thus gave a little more chance for air circulation.

In studying available literature on scald I found that Dr. Monteith in 1935 had said that a lime deficiency had in his opinion caused a lot of scald, so in late March we applied a hundred pounds of magnesium limestone to this green. April, late in the month, we applied a hundred pounds of Milorganite and fifteen pounds each of sulphate of ammonia and nitrate of soda with compost. Fertilizer during the Summer was limited to small doses of the latter two monthly, or in general when needed, as we never apply fertilizer according to the calendar. Fall fertilization added a hundred pounds of a 6-6-4 complete fertilizer.

Watering during the season was done mostly in the early morning, altho spot watering along the bank of the green was even done in some cases during the day. In general, we tried to use the water needed and no more.

We tried during the year to use some of the suggestions which I am appending as aids to a no scald program. We had no scald on this or any other green during the year. I believe that in this particular we were fortunate, and do not believe that scald may be prevented in toto by these suggestions; however, thru them I believe that scald may be lessened. Scald may come to some extent from weather conditions not under our control; but the severity of the scald in many cases may be governed by things under our control, such as cultural methods.

Aids To Scald Control

Air circulation: in general a good circulation of air helps to prevent scald. Fans are actually being used with success in some cases.

Rational watering: do not water by schedule, and do not over water; water when and as much as needed.

Drainage, both sub-surface and surface; these are of the utmost importance. Dr. Leach reported that "all portions of greens able to rid themselves quickly of surface water during a rain-

fall were free of scald". Some greens which are badly scalded yearly may need actual rebuilding to give good drainage.

Fertilization; care should be taken not to over-fertilize, especially with organics, during periods of hot weather.

Lime deficiency; a pH of around 6 seems to be best in most soils. Application of small amounts of lime may help in some cases.

Turf nursery; a good supply of greens sod in the nursery will make any scald damage less of a catastrophe.

Remarks

Dr. Leach wrote for Golfdom sometime ago, "scald results from an excess of water, organics, inorganics, heat, and humidity at a given spot in a green". By eliminating such of these factors as are in our power, and minimizing others as we can, thru drainage and air circulation, and cultural methods, we are able to go a long ways toward prevention of scald.

THE FROLIC

The annual Ladies' Nite and Greenkeepers' Frolic was held at the Sudbury Town Hall on November 21st. In spite of several disappointments relative to place and plans, the committee worked hard to make this affair a success and there seems little doubt that their efforts were not in vain. Several innovations from last year's program proved of interest. Among the invited guests were President of the N. E. Section, P. G. A. Leslie Cottrell and partner.

A CONSTRUCTIVE SUGGESTION

"I think one of the greatest things which can be done by the greenkeepers and greens chairmen which would be of assistance to the golf equipment and supply dealers, would be the encouragement of a plan or a policy of anticipating all of their wants as early as possible and placing their orders accordingly. I can't for the life of me see why so many golf clubs wait until about the 15th day of April to order a set of flags for their opening on the 19th of April, and I could quote to you many other instances throughout the year when this buying on a hand to mouth basis is not only embarrassing to us but often times brings up delay and inconveniences to the clubs which could easily have been overcome. In this connection I might advise you that it has always been our custom to place 90% of our spring stock orders with the manufacturers during the months of December and January and to accept delivery on this material starting in February. In fact today I am placing our order with the manufacturers for our entire spring needs of flags, and we will have these all in our stock no later than the 10th day of March. If we were to wait until about the first of March to order these flags, we would be mighty fortunate to have them on hand here by the first week in May. I don't think the greenkeepers realize the tremendous amount of help that their cooperation and early anticipation would bring to us. I am sure that I speak not only for all the golf equipment and supply dealers but for the manufacturers as well, as I know of no business that is as hazardous in determining your sales as this particular industry. It should not be so, and there is no question but what this hazardous sales possibility plus the last minute rush is responsible for a large part of the high prices necessary to the golf trade."

The above is part of a recent letter to this office from one of our advertisers. We believe that the suggestions in it are well worth our attention. Too few greenkeepers and green chairmen appreciate the vast amount of business that the supply houses must rush out just before the season's opening because the clubs have put off their ordering until the last moment. A little more attention to this point, getting the orders in earlier, would help us all.

Incidentally, we welcome such constructive suggestions from any of our dealer friends, or any of our readers. Such suggestions that are deemed to be constructive will be printed, with no names attached.

THE FROLIC BABY arrived at 11.56 P. M. Saturday, November 21st to the Arthur Andersons of Brae Burn. Phyllis Marie weighed 6 and 6, and we understand is a lively model!

Nearly time for Winter study, and the mail brings us news from Prof. Lawrence Dickinson of the advanced school for greenkeepers to be given this Winter at the Mass. State College. Here is a part of a letter which Prof. Dickinson is sending the alumni of his former schools; it explains the new advanced school:

"The advanced school will be organized as a distinct unit, and the material given will be distinctly advanced both as to technical information and professional attitude. The student will have time for the actual study of problems in a comprehensive manner, and adequate instruction has been provided to give individual attention.

"In order to help the graduate who cannot arrange to be away for the full ten weeks, two five-week courses are offered, and a certificate will be given for each course. Each course has a required subject and seven elective courses. Certificates will be awarded for 10 credits and no one should take more than 15; also there is no guarantee that a course will be given for only one student, so in sending in your application, please indicate second choice of subjects.

"In addition to offering these advanced courses, we will welcome any alumnus who can spend a week or less with us and we will try to give him some special attention, though as you know, we have a very full schedule."

DECEMBER MEETING

The December meeting was held at the Waltham Field Station of the Mass. State College. Following an important business meeting, the club was welcomed to the Station by its Director, Ray Koon. Director Koon expressed the wish that this meeting be the first of many more meetings to be held at the Station. He introduced two of his staff at the station to speak briefly of some of the work which is being done at the Station.

Mr. Robert Young spoke on soil testing, mentioning several methods, acidity, nitrogen, phosphorus, potash, magnesium, calcium and aluminum. Many samples sent in for soil tests are unsuitably wrapped; waxed paper or clean glass containers are best for samples for acidity tests. Mr. Young also touched on the work which has been done with fertilizers.

Dr. E. H. Guba reviewed the work which has been done with fungicides for the various plant diseases. He has been working on plant diseases for some twelve years as they affect vegetables, flowers and orchards, but to date has had little experience with grass diseases.

Considerable time during the day's program was spent in talking over the proposed appropriation for turf work at the Field Station. If the large number of turf growers who can easily reach this site can get together, there is little doubt that this appropriation will go thru the Legislature. There are some 200 clubs within 50 miles, many parks and cemeteries, ball grounds, and thousands of home owners. All these turf growers need some advice at various times; and this spot is a handy one for this vast number. The staff of the Station now is available for some assistance, and with the proposed bill will be augmented to give the assistance needed. Be ready when called upon to do your bit to push this bill across, you turf growers of Massachusetts!

KENT'S COMMENTS

Vocal communication from point to point on golf courses, is the latest stunt devised in your commentator's woodshed laboratory!

On Nov. 12, 1936, Chester Smith, and Sherwood Moore, my "embryo Greenkeepers", heard me speak, more than half a mile away. The conductive properties of the irrigation system were used to carry a telephone message.

No batteries or outside electric current was employed.

Only a short piece of wire was used to make connections to the pipe line shut-off valves, and ground.

The device weighed only two pounds, and could be carried in a coat pocket.

While still in the experimental stage, this development is expected to be a boon to course maintenance and operation.

Nearly every day, during the golf season, it is necessary to get informa-

tion to and from various parts of golf courses, and get it quickly.

Such things as maintenance orders, emergency, paging players, locating a doctor, and avoiding congestion on holes will soon be simplified.

Scores, and hole-by-hole tournament play will be known at the club house, in a few seconds' time.

A considerable amount of 'monkey wrench' type scientific trials and investigation has been done, and your correspondent wishes to acknowledge the technical advice and assistance in this work, rendered by Messrs. Leslie Uphoff, and Paul Zottu, prominent Electrical Engineers.

Full details will appear in an early issue of GOLFDOM Magazine.

C. K. Bradley.

WINTER SEEDING

A Practical Procedure, Not a Gamble

For many years certain practical-minded Superintendents and Greenkeepers have followed Nature's centuries-old example of sowing seed in Winter. Their results have not only been very satisfactory, but have served to conquer doubts in the minds of laymen who believe such practice to be the acts of fools.

Nature's examples are everywhere. Weed annuals, such as Crab Grass and Chickweed, usually die at the first frost, and millions of their seed go into winter refrigeration. Again, the layman who possesses a flower garden has often observed the early spring appearance of petunia, batchelor-button, sun-flower and other seedlings where the year before such flowers predominated. The vegetable garden, neglected in the fall, surprises the grower in the early spring with lettuce seedlings, young tomato plants, and other representatives of last year's crop. Grasses are no exception to this natural law.

Theory collaborates with Nature. A recent experiment maintained throughout the winter of 1932-3 at the Mass. State College gives interesting results. Four sets of over 20 different grasses and White Clover were formed by using 200 seeds from each variety. A germination test of one set was run immediately. Of the three remaining, one set was placed where rain and snow would contact them directly; the second, in the laboratory under normal temperatures; and the third, beside a register where extreme high temperatures prevailed. Future germination tests in mid-April of 1933 showed the following (1) Germination of most basic, nurse, special purpose grasses and White Clover maintain their high percentage throughout the Winter, if stored under low temperatures; (2) Storage under normal temperatures affects the germination percentage of certain grass seeds markedly; (3) High temperatures and humidity have the effect of killing the life of most grass seeds and White Clover. This information may be taken for what it is worth.

There is no fast rule whereby one may determine the exact time to start Winter seeding. However, let this be understood: Through practical experience and example one may seed anytime after the soil temperature has reached a constant of below 45 degrees F. Winter seeding may be done on the snow or when the ground is clear. The only advantage in the former operation being that the sower can more readily see where the seed has fallen and no guide lines are necessary.

Winter seeding plays a particular role in Cemeteries and Athletic areas.

Areas prepared too late for Fall seeding may be sown now without fear of germination. If the soil is workable, the procedure is identical to fall preparation. One suggestion: Where the area slopes rather severely, rake lightly up rather than down to the grade after seeding, and do not roll. Where snow has come to stay, Nature will cooperate and complete the seed-bed after the sowing by spring heaving. This firms the soil particles about the individual seeds to aid in proper germination.

Athletic Areas

Winter seeding is a revelation to the Superintendent whose athletic areas are small, and an asset to the larger institutions. How often has this question been put. "Jim, why can't we have a real turf on our foot-ball field without all of these weeds and bare spots?" Jim cannot always give a satisfactory answer, but he knows that if the basic grasses could be given half a chance to establish themselves, that factor would help. The weed host is his greatest competitor.

The Season's Greetings

Modern Service

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Winter seeding gives the grasses equal, if not a head start over the weed annuals in the Spring. The weeds, being natural cowards, are easily crowded out to a surprising degree. Soon after the last game the best procedure is to top-dress the area, if it is an established field, with good garden loam at the rate of about 1 yard to 3000 sq. ft. to even all minor undulations; sow a bona fide Athletic mixture to the degree necessary; and cover the seed by light raking.

Where top-dressing is impractical, rough and even the surface with rakes or a light meeker harrow before seeding. Though the weather permits, never roll the field after seeding. Such an operation would be adding insult to the injury already caused by the heavy traffic of fall play. This rule applies to baseball, polo fields and airports.

Winter seeding is second only to Fall Seeding. As students of turf, we are convinced of that and furthermore, that it is far superior to Spring Seeding regardless of the amount of maintenance available.

—Turf Topics.

FEEDING TURF GRASSES ON LAWNS, PARKS, AND RECREATION FIELDS

Howard B. Sprague, Agronomist

Healthy turf is dependent in large measure on maintaining a comparatively high state of soil fertility by proper management. Practically all soils in this region require the regular use of fertilizer to ensure the desired supply of plant nutrients. Although certain types of grasses are more tolerant of low soil fertility than others, all species make the most satisfactory growth when the essential elements for growth are present in liberal amounts. Weed control, prevention of drought injury, avoidance of disease outbreaks, and resistance to insect attacks are all intimately related to the proper use of fertilizers.

Essential Plant Nutrients

Farmyard or stable manure is no longer recognized as the standard source of plant food for lawns. Commercial fertilizers are applied with greater effectiveness and at a considerably lower cost. In addition, commercial fertilizers do not contain weed seed, are not offensive or unsightly, and may readily be obtained in any community.

A complete commercial fertilizer contains the three more important nutrients frequently deficient in soils, namely, nitrogen, phosphoric acid, and potash. Nitrogen is needed for vigorous leaf and stem growth, phosphoric acid for root development, and potash for general tone and vigor and resistance to disease. Certain commercial fertilizers do not carry all three of these nutrients. Thus, sulfate of ammonia and nitrate of soda supply nitrogen only, superphosphate carries phosphoric acid only, and such substances as bone meal and tankage provide nitrogen and phosphoric acid but no potash. Fortunately, our State laws require that the percentage of each of the plant nutrients contained in a fertilizer be stated on the bag or package of the material offered for sale. A complete fertilizer is not necessarily well balanced for all purposes. The proper ratio of fertilizer elements should be varied to suit the requirements of specific plants and soil conditions. The value of commercial fertilizers is determined by their plant food content, and the form in which each of the nutrients is provided.

Forms of Nitrogen

For the development of turf grasses, nitrogen is the most important of the three nutrients supplied in commercial fertilizers. The choice of a fertilizer should depend on the form in which the nitrogen is present. Nitrogen may be supplied as ammonia compounds, nitrate compounds, or organic compounds. The ammonia compounds, such as sulfate of ammonia and urea, are readily utilized by grasses growing in soils which are not strongly acid. These substances tend to make the soil more acid, however, and must therefore be balanced with lime to be permanently useful. Nitrate compounds such as nitrate of soda, are readily absorbed by grasses, and are preferable to other forms of nitrogen on soils which are acid, or acid soils that have been limed recently. Organic forms of nitrogen such as bone meal, tankage, cotton-seed meal and sewage sludge, are slowly available since these materials decompose and release their plant food only in comparatively warm moist weather.

For most satisfactory results a general grass fertilizer should include all three types of nitrogen compounds just discussed. For individual areas, the

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fertilizer may be varied to suit the particular conditions. Nitrate nitrogen should predominate in the fertilizer formula on strongly acid soils, whereas organic nitrogen should be present in substantial amounts for very sandy and shaley soils to prevent undue losses of nutrients by washing.

Although nitrogen is essential for turf grasses, an excessive supply is extremely injurious. The quantity of fertilizer applied to supplement natural fertility of the soil should be limited to that actually required for hardy growth of grass, rather than immoderate applications which stimulate tender luxuriant vegetation readily injured by wear, disease, insects, and other unfavorable conditions.

Phosphates and Potash

In general, all lawn soils in this region are naturally deficient in available phosphates. The use of manure, sulfate of ammonia, nitrate of soda, and similar fertilizers has accentuated this deficiency, with the result that on many lawns, the lack of sufficient phosphoric acid is definitely limiting root and top growth. Lawn fertilizers should contain a liberal proportion of phosphoric acid to provide a regular supply of this element. Unlike nitrogen, an abundance of phosphoric acid produces no harmful effects on turf.

The role of potash in increasing the resistance of grass to disease and other adverse conditions, indicates the need also for including this nutrient in a complete fertilizer for use on lawns.

Kinds of Fertilizer to Use

There is no single ratio of elements that may be considered ideal in a lawn fertilizer for all locations. On phosphate deficient soils, phosphoric acid should predominate in the fertilizer mixture, with sufficient nitrogen included to produce satisfactory top growth. For lawns including mixed vegetation on soils of average fertility, fertilizers containing 4 to 5 per cent nitrogen, 8 to 10 per cent phosphoric acid, and 4 to 5 per cent potash should prove suitable. The nitrogen should be derived as follows: Approximately 1/3 from nitrate compounds, 1/3 from ammonia compounds and the remainder from organic sources of nitrogen. The phosphoric acid may be supplied by superphosphate and bone meal, and potash by muriate of potash.

On soils which are comparatively fertile, the ratio of nitrogen to other plant nutrients may be somewhat higher, and the amounts used may be adjusted to avoid applying an excess of nitrogen. Fertilizers analyzing 8-6-4, 10-8-6, and 10-6-4 have proved useful on lawns of this type.

Balanced Feeding

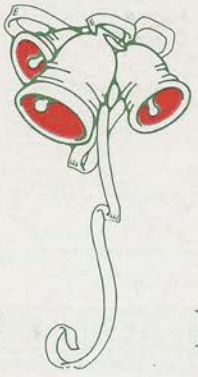
Although commercial fertilizers state the total plant food contained, no information is usually given as to the materials from which the plant food is derived. Many of the widely advertised lawn fertilizers are wholly soluble, with nearly all the nitrogen present in the form of ammonia compounds which are not readily utilized on strongly acid soils. Where it is convenient to apply such fertilizers, they should be supplemented with organic materials. In this case the application per 1,000 square feet may consist of 8 to 15 pounds of a 5-10-5 or 4-12-4 fertilizer and 10 to 20 pounds of dehydrated manure, bone meal, castor pomace, cottonseed meal, soybean meal, activated sewage sludge or some similar substance.

Reliance should not be placed entirely on such organic materials as manure and bone meal, as the sole fertilizer for lawns. Such substances decompose slowly in cool weather and consequently little plant food is supplied in autumn and spring when turf grasses make use of plant nutrients to greatest advantage. Moreover, organic fertilizers release most of their plant food in the summer period and thus favor the growth of crab grass and similar weeds that thrive in hot humid weather. In general, all fertilizers should be withheld during the summer months to avoid the danger of burning the turf, and the stimulation of summer weeds.

Time and Method of Application

Fertilizer applications are most effective on lawns where one-half of the total amount available is applied in late March or early April, and the remainder in September or October. Uniform distribution of the fertilizer material over the lawn surface is highly essential since these materials move downward in the soil but do not penetrate laterally. Areas not actually receiving fertilizer will derive no stimulating effect. All lawn fertilizers may be applied safely without danger of burning, if spread at a time when the grass leaves are dry, permitting the material to sift through the leaves onto the soil. Artificial watering following fertilization is not essential where this practice is adopted.

(Circular 365--N. J. Agri. Exp. Sta.)



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