

TIMELY TURF TOPICS

Issued By The

UNITED STATES GOLF ASSOCIATION GREEN SECTION

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MESSAGE FROM THE GREEN SECTION CHAIRMAN

Fielding Wallace, Augusta, Ga.

Several months ago the United States Golf Association offered the services of Dr. John Monteith, Jr., to the War Department, which we understood was faced with the necessity of developing a Turf Unit in the Construction branch of the United States Army Engineer Corps.

It is with satisfaction and pride that we announce that his services have been accepted. Dr. Monteith since 1928 has been Director of the turf investigations of our Green Section. Because of his nation-wide experience with turf and his intimate knowledge of the problems involved in its establishment and maintenance he was asked to serve as Chief of the Turf Unit. His wide experience, we know, will be invaluable to the War Department in helping its staff to answer the many perplexing problems involved in getting a tough, wear-resistant turf on airfields in many sections of the country with the least delay possible. We take this opportunity to wish him, and the many capable turf men who will be working with him, a full measure of success in this gigantic task.

In the meantime the Green Section must carry on. These are times when our member clubs are faced with unprecedented problems of attempting to maintain turf at as near pre-war standards as possible in many cases with seriously reduced personnel and equipment. Added to this is the fact that many of the materials taken for granted in turf maintenance programs for use as fungicides, insecticides, and herbicides are no longer available because of their vital role in the war effort. Substitutes must be used. The questions in the mind of every club official are, where shall we turn and what shall we use when present supplies are exhausted?

This year the Green Section has been handicapped not only by the fact that there have been unavoidable reductions in personnel due to the urgent need for experienced turf men in the war effort but also by the removal to Beltsville, Maryland, of the Arlington Experiment Farm, where our turf investigations were conducted for many years. Consequently, tests this year have not been practicable. However, through the medium of TIMELY TURF TOPICS suggestions have been made of war time substitutes and the results of the experiments of others have been cited to point the way for clubs to test possible substitutes for themselves. Suggestions have been given as to how to apply materials on test plots and clubs have been urged to report any interesting results in favor of or against any of the war time substitutes they may have tried. If our member clubs will cooperate with us the Green Section may in this way act as a clearing house for the experiences and the results from use of various possible substitutes in many sections of the country.

At present the Green Section is planning to devote a large share of its efforts during the coming year to the problems connected with the development of war time substitutes for generally accepted materials used in the maintenance of turf. Plans are being formulated now for comprehensive tests of many possible materials. These tests are to be made in collaboration with the Bureau of Plant Industry of the U. S. Department of Agriculture, as has been the case heretofore when we had the Turf Garden at the Arlington Experiment Farm. It is hoped that the tests made in Washington by the Green Section staff may be supplemented by carefully planned and executed tests in other sections of the country.

August, 1942

TURF SPECIALISTS WORKING ON AIRFIELDS: In connection with the appointment of Dr. John Monteith, Jr., as Chief of the Turf Unit of the Construction Branch of the United States Army Engineer Corps, it is interesting to know that New Zealand has also turned to its experts on golf course turf for guidance in the construction of turf on airfields. According to the 15th Annual Report of the New Zealand Department of Scientific and Industrial Research, "Mr. Madden, Senior Agrostologist, has been seconded to the Public Works Department to advise, particularly on aerodrome turf production and to carry out research work where particular difficulties in turf construction are met with." Previous to this appointment, Mr. Madden was conducting research work on golf greens in New Zealand.

The Annual Report referred to above includes some very interesting conclusions which have been drawn in New Zealand regarding relationships between turf for airfields and that on golf courses. Because of the very timely interest in this subject some of the particularly pertinent statements are quoted:

"From observations to date there is fairly clear-cut evidence that the type of turf most suited to aerodromes which are required to stand hard wear is that class of turf most closely approaching a playing green or lawn. The pasture species such as ryegrass and white clover are definitely unsuited to hard regular wear. Some other drastic treatments will be necessary to convert the pasture type of turf to a good hard-wearing mat. Some considerable expenditure will also be necessary to control white clover which up to now has been fairly well established but is already proving to be quite dangerous. Supplies of grass seed suitable for aerodromes have been secured, the main species needed for this work being Chewings' fescue, certified browntop, Poa pratensis, and yarrow. In addition, according to soil type and climate, there is need for some creeping-bent seed and dryland browntop seed. At one particular aerodrome-site Puccinellia was sown, and a further quantity of this seed is to be sown now." . . .

"Several important factors have been observed, and these are closely associated with the greenkeeping research work of former years. . . . Some difficulty was experienced in securing satisfactory machinery for the distribution of seed and manure, but the position is now fairly satisfactory in view of some recent improvements to New Zealand-made machines."

INORGANIC NITROGEN NO LONGER AVAILABLE FOR TURF: In a letter dated July 11, 1942, the War Production Board requested fertilizer manufacturers doing business in the Middle Atlantic and Middle Western states to in turn request their retail agents who now hold stocks of fertilizer containing chemical (inorganic) nitrogen not to sell, offer for sale or distribute any of such stocks after July, 1942, for any purposes other than 1942 vegetable production, in the following states: New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio, Indiana, Kentucky, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Missouri, and Kansas.

Until a conservation order is formulated by the War Production Board covering the manufacture and distribution of fertilizer throughout the entire country, it is to be hoped that all who are interested in fertilizing turf will cooperate with the fertilizer industry in carrying out both the letter and the spirit of the above request. According to this request, fertilizers containing inorganic nitrogen are no longer to be sold for use on turf.

However, as discussed in the June, 1942, issue of **TIMELY TURF TOPICS**, the organic meals can well be substituted for mixed fertilizers containing chemical nitrogen. When available, cottonseed and soybean meals as well as activated sludge will be found to be particularly satisfactory for turf purposes since they usually show analyses of approximately 6-3-2.

Also the recommendation has been made that "All Organic" nitrogen formulae be used for mixed fertilizers to be sold without restriction. Such mixed fertilizers could be purchased and used satisfactorily for golf courses, parks, lawns, etc. As these "All Organic" mixtures are made available for turf use, information concerning them will be published in **TIMELY TURF TOPICS**.

DICHONDRA REPENS - WEED OR GRASS SUBSTITUTE? Considerable publicity has been given recently to the use of Dichondra repens as a substitute for grass in turf, particularly in southern California. One large mail order house is selling it in flats under the name of Dew Drop grass. Their advertisements indicate that it is the panacea for all turf worries.

Dichondra repens is a low creeping plant related to the morning glories but superficially resembling white clover. The leaves, however, are kidney shaped and may under certain conditions be as large as an inch in diameter. It occurs natively from Virginia south to Florida and Texas and in southern California. Because of its habit of spreading rapidly by means of runners it has been generally considered as a weed in turf.

According to California publicity regarding it, it "is able to compete with such grasses as Bermuda and crabgrass and will definitely retard such grasses although they may remain alive and require mowing. Cases have been reported where a small piece has increased to as much as 20 square feet in a season, although the rate of growth is less as an average. The roots and subterranean runners form a sod to a depth of about 3 inches,"

Department of Agriculture officials say that it occurs natively most frequently on wet moist lands but practically never on dry soils; that it seems to prefer heavy soils rather than light or very fertile soils; and that it will withstand partial shade or extreme sun when sufficient moisture is available.

In recent years, apparently successful lawns have been developed from this plant in California. Its general adaptability for this purpose throughout the warmer regions of the United States, however, has not been established nor has its general use in the replacement of grasses for turf purposes been justified.

Since it is difficult to destroy, once it becomes established as a weed, it probably will be wise for anyone who is considering it as a grass substitute, to try it out in areas which are carefully confined by walks, driveways, or good edging plants.

Seeds of Dichondra repens are not available commercially, but the plants can be bought in flats which contain enough vegetative material to plant 100 to 150 square feet.

STOP THE LEAKS: Water leaking from a faucet in a stream the size of a common pin wastes about 150 gallons a day, engineers of the United States Department of Agriculture have found. Even a leak of only one drop a second causes a waste of about 4 gallons a day. Considering the number of hose connections or other outlets that are to be found on areas in turf, a great deal of water is frequently wasted in the course of one season. All outlets should be checked and hose repaired to prevent unnecessary waste.

MANUFACTURE OF MANY TURF TOOLS BANNED: On May 20, according to Order M-126, the War Production Board banned the manufacture of many civilian articles made of iron or steel. Materials on hand could be processed until June 19, and assembly of these articles was permitted until August 3. The only articles of direct interest to the turf culturist which were affected by this Order were grass shears, and hose reels.

On July 13, this order was amended by the addition of a supplementary list of more than 200 items including trowels, garden sprinkling cans, weed cutters and pullers, hand weeders, grass whips, lawn brooms, lawn edgers, lawn rakes, lawn rollers, lawn tampers, lawn seeders, sod lifters, and turf edgers. The manufacturer is given 30 days to process material he has on hand for these articles, but the amount processed must not exceed 75 percent of the average monthly weight of these metals used in 1941. Moreover, no processing must be started that cannot be completed in the specified 30 days. An additional 30 days are allowed for the assembly of parts already manufactured. The same order forbids the delivery or acceptance of delivery of any items included in the lists referred to above if they are known to have been manufactured in violation of this order.

FAIRWAYS TO SHEEP PASTURES: Several golf clubs in this country have raised the question of the practicability of their participating in the war program and at the same time reducing their war-time maintenance costs by taking the mowers off the fairways and bringing on the sheep.

In Scotland, grazing sheep kept the golf courses closely clipped long before mowing machines were invented, and on some courses in that country this practice has continued to the present day. In England before the war some few well known clubs still continued grazing because by a condition of their lease the landlord retained the pasturage.

For the last two years, however, the Board of Greenkeeping Research has been emphasizing to the clubs of the British Golf Union the desirability of arranging for sheep grazing on their courses for the purposes of "1.- Helping food production; 2.- Relieving agricultural land for crop production and so helping to maintain the sheep population; and 3.- Keeping down grass and weeds and so saving mowing." As a matter of fact, clubs in England are now expected, and can be compelled, under certain conditions, to graze sheep.

According to the British Board of Greenkeeping Research, "Sheep grazing will do much to keep down the growth but will not altogether replace cutting. The sheep also will tend to keep down weeds, especially ribwort plantains (narrow-leaved). The greatest damage is likely to occur from scalding on the greens and the breaking down of bunkers, built up tees, and banks. Sheep often select certain greens for sleeping and the scalding nuisance can be mitigated by fencing these greens with light post and wire fencing during the night, removing it in the morning in readiness for play."

The problem of fencing off the greens to prevent the objectionable accumulation of dung on the green as well as the scald which is particularly severe in dry weather, became an acute one. Ordinary fencing consisting of netting or barbed wire attached to posts, aside from being unsightly, interfering with play, and being only partially effective, is both expensive and extremely difficult to secure. The staff at the Research Station in Bingley, England, therefore, set up some experiments using electrified wire, which of course depends on its electric charge rather than its mechanical strength to keep out the sheep. They were able to protect greens by using two strands of 14-gauge wire placed at 15 and 30 inches from the ground respectively and attached to posts which were only $1\frac{1}{2}$ inches square and $4\frac{1}{2}$ feet tall, placed at approximate 10-yard intervals. Where lambs were involved, a third wire placed at 7 or 8 inches from the ground was desirable.

It was found, moreover, that sheep which experienced the shock from the charged wire eventually became "educated" and would not graze closer than within about 9 inches of the wire. So complete was their education apparently, that it became possible to turn off the current during the daytime hours for the convenience of the players. Mowing, of course, had to be continued on the narrow strip adjoining the fence.

The electrifying unit, as used at Bingley, consists simply of an induction coil unit and vibrator, well grounded and connected to the fencing system, the current being supplied by a 6-volt dry or wet battery, the charge of which lasts about a month. The unit, enclosed in a weather-proof box, is set up in a closed shed. Its manufacturers claim it will furnish sufficient current to electrify 25 miles of wire. The wire is carried between the greens on 10- or 12-foot poles. Simple gates are provided to the greens by means of a 4-foot length of wire fitted with a hook, spring and insulated handle. On the St. Ives course at Bingley, 7 greens were fenced in this way with only about 80 man-hours of work.

In this country, if grazing is to be permitted, in addition to protecting the greens, the course itself will have to be fenced in order to confine the sheep as well as to keep out dogs which are one of the greatest pests in sheep production. For this latter fencing, it may be possible in some sections of the country to borrow or rent from municipalities or highway departments snow fences which are customarily stored during the summer months.