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Massachusetts Turf and Lawn Grass Council
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The President's Aims

When I was approached by the nominating committee for nomination as your President, I was at first reluctant to accept the offer, but, after I gave the matter careful consideration, I thought perhaps as your President, I might be of some service to the organization and help, in some small way, to make The Council a stronger and more active group. I shall attempt to live up to your faith in me, and I will endeavor to be a source of inspiration for all of my fellow turfmen.

Turf has always been a big business in Massachusetts, but since World War II the demands being made on the professional turfman have increased a hundred fold. However, there is something which we must all be aware of, and that is the non-professional turfman disguising himself as a professional with the result that many of the practices the non-professional uses impinge upon the integrity of the man—the professional—who is devoted to doing the public a service not a disservice. When and where I can I will uphold the tradition of our profession, and I shall make it known to the public how important it is to deal with the men who take pride in good turf, and are organized to find better methods and practices that will aid the general public.

Because of a shorter work week there has been a mass public movement toward more outdoor self-participating activities such as we have seen on our golf courses, parks and grass recreation areas. With this increased demand there has been a demand for both beauty and utility in these areas. For example, our highways are being expanded rapidly, and with this expansion has been the demand for safety, erosion protection and beautification. More and more we are being called upon, and relied upon, to produce the desired results—we have met this challenge. However, we must be mindful in order to continue our successes, we must be aware of the needs which heretofore did not exist—we will need newer types of equipment, fertilizers and chemicals, and of the type that will be practical and safe to use.

In order to stay abreast with these problems there are certain things that must be done to facilitate our aims. I sincerely believe we can best

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Grub-Proofing Pointers

Prof. E. H. Wheeler, Entomologist, UMass

Grub-proofing chemicals must get down into the soil where the grubs move about feeding on grass roots. Some chemicals vaporize into the air if left exposed after application. Young larvae, in their first and second instars, are more susceptible than the larger, older grubs present in mid and late spring. Failure to remember these points often results in an actual or apparent lack of grub control after treatment.

Extensive research and wide experience has proved that chlordane at 10 lbs. active ingredient per acre and either dieldrin or aldrin at 3 lbs. do grub-proof turf areas for periods of 4 to 5 years and longer. Heptachlor, at 2-3 lbs., kills quickly when first applied but may not remain effective as long. Then why do we have failures?

An excess of water must be used to wash the chemical off the grass blades and down through the mat of debris into the soil proper. The U.S.D.A. normally used 1000 gallons of water per acre when applying lead arsenate at 500 lbs. per acre. In contrast, some people now try to grub-proof with as little as 10-20 gallons per acre. This may work well for weed control but it is not adequate for grub-proofing. Especially, if the spray dries before heavy irrigation or rain.

The wettable powders and emulsifiable liquid concentrates, normally used in grub-proofing sprays, are formulated for foiliage spraying. They are made to stick on the foliage as soon as the spray dries. So, instead of getting down into the soil right away, the chemicals remain on the grass blades exposed to the sun and air. Chlordane, being quite volatile, is lost relatively rapidly. Others may not vaporize so quickly but still they remain on the grass blades and the matted debris. Full effectiveness may never be realized or will be greatly delayed even though the correct amount of active ingredient was distributed.

Two choices are suggested. If low gallonage spray applications are the only practical method available, arrange to irrigate the treated areas *before* the spray dries or do the job during a soaking rain. Get that chemical washed down into the soil fast! Obviously, a thick, matted turf will require the most water.

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President's Aims

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accomplish our desires and my hopes by keeping a Massachusetts Turf and Lawn Grass Council vigorous enough to accept the challenge. Only through our organization will we be able to maintain a high level of respectability for our profession. This is not a one man job I need the cooperation of all the members of the council.

For example, some of the plans and aims of the council for this year are:

1. To continue to assist the University of Massachusetts turf department in the planning of the annual turf conference.
2. To promote and support more turf research in the state. Cooperating to help, within our power, in setting up a model turf and golf course area at the University.
3. To have more publications of our Turf Bulletin, available—more often.
4. To carry on the educational work now being done in the state.
5. To increase our membership to 500—this year. So a more ambitious program can be undertaken in future years.

Other states have very active and strong turf councils and in order for Massachusetts to attain the position it deserves we will need an organization composed of members who will actively engage in council affairs, either by soliciting new members or by giving constructive advice in helping the officers of the council attain the position they are seeking for the Massachusetts Turf and Lawn Grass Council.

I extend to each and every member of the council an invitation to discuss with me any suggestions which they feel will be beneficial to us. Remember—this is your organization—be active—help us build up our membership. Call or write me at anytime for aid or advice.

President Bob Grant

Editor's Note: On the President

President Bob Grant was born in Northampton, Mass. in 1925. He is a graduate of the Stockbridge School of the University of Massachusetts; and majored in Turf.

Served with U.S. Air Force during World War II as a Staff Sergeant, and saw considerable action in Europe. After his hitch in the Air Force he came back to his first love—the growing and maintenance of fine turf.

Bob worked for three years in general landscaping, and served his placement training at Indian Hills, Newington, Conn. Also he was employed at the Bellows Falls C.C. Vermont; The Airport Golf Course, Newark, N.J. Success of his fine turf management was noted by the committee of the Wayne C. C. Wayne, N.J. and they gave him the position of Superintendent of the course. However, Bob pined for the Bay State, and when the opportunity presented itself Bob made the move. He is now the Superintendent of the Bolton C.C. Bolton, Mass. where his fine turf management ability has won for him a position of prestige in the Turf field.

President Bob, has been a member of the Council for 5 years, and is a member of both the National and New England G.C.S.A. In fact, he is the Chairman, and a director of the Educational Committee of the N.E.G.C.S.A. Association.

We are all with you Bob—Good Luck.

Natural and Man-Made

Prof. Richard Southwick, Agronomist, UMass

We have all noticed the dark rich color of soil under an old well-managed turf. With closer examination one will also notice the aggregation of the soil particle or structure of the soil is different than that of the soil in adjacent areas, and the top soil is usually much deeper.

What has caused these desirable conditions to develop while soils of gardens, etc., still very much resemble the old forest soils?

Perhaps the best way to evaluate the conditions of soils under turf is to examine soils which have developed under similar types of vegetation under natural conditions. The natural grassland soils of the world which include: the American Prairie soils, the black soils of India, the Chernozems of Russia, the American Wheat belt, and the South American Pampas are some of the most desirable and productive in the world. They usually have the same dark rich color of an old turf soil; the same friable tilth, and a fine granular structure. Under grass culture the fine fibrous roots penetrate deep in the mineral soil distributing organic matter and aerating the soil, this coupled with the addition of lime and other plant nutrients has enabled turf soils to develop the same fine characteristics of the famous natural grassland soils of the world. It's no wonder that turfed areas increase in beauty with maturity and tend to be more versatile and persistent than any other type of vegetation for recreational areas.

One would expect that with the culture of grasses eventually the turf problems would completely disappear. This would perhaps occur if the grasses were not clipped or were periodically allowed to mature and develop seed. Since this is not possible under most circumstances, the conditions of turf culture are not identical to the natural conditions of prairie or Chernozem soil development. It would be well to bear in mind, however, in turf culture that the soil under turf tends to develop like a prairie soil and loses many of its forest soil characteristics. Consequently, the management of turf areas in natural forest regions presents many problems by compounding the problems of both the grassland and forest soils. It requires little imagination to appreciate the complexity of turf culture and to realize that problems of turf in the Northeast are unique.

LIME: Foundation of Healthy Turf

Prof. John H. Baker, Agronomist, UMass

The growth of fine turf grasses in nutrient solution is equally good over the entire pH range from 4 to 7 commonly found in soils of New England. Yet soil pH is probably measured more often than any other soil property for fine turf grasses grow poorly in soils as acid as pH 4. Guides to establishment and maintenance of turf recommend application of sufficient lime to provide a soil pH of about 6.5. How do fine turf grasses benefit from liming?

Acid soils are commonly low in available calcium and magnesium and high in available aluminum, iron and manganese. Both calcium and magnesium are essential for plant growth and acid soils may not contain sufficient amounts of these elements in available form to support vigorous growth of fine turf grasses. The application of most liming materials supplies both calcium and magnesium increasing the availability of these elments in the soil. In addition, the high concentrations of available aluminum, iron, and manganese found in strongly acid soils are toxic to fine turf grasses. The increase in soil pH effected by liming causes precipitation of these elements as hydroxides or hydrous oxides. Both of these effects of lime application are important in improving an acid soil for growth of fine turf grasses. Turf growth often is not improved, for example, when calcium sulphate (gypsum) or magnesium sulphate (epsom salts) is added to an acid soil because the addition of these salts does not cause precipitation of aluminum, iron and manganese.

Liming acid soils also increases the efficiency of utilization of other plant nutrients. When an acid soil is fertilized with phosphorous the availability of the added phosphorous may be greatly decreased by formation of very insoluble iron and aluminum phosphates. Liming, by causing precipitation of iron and aluminum as hydrous oxides or hydroxides prevents the precipitation of phosphorous with iron and aluminum. The growth of soil micro-organisms is improved just as the growth of fine turf grasses is improved by liming. The increased population and activity of soil micro-organisms increases the rate of decomposition of grass residues in the soil releasing nitrogen. phosphorous and other plant nutrients for use by the grass.

While lime applications that increase soil pH to about 6.5 improve soil conditions for the growth of fine turf grasses, excessive lime applications may decrease the growth of these grasses. Manganese and iron become increasingly unavailable as soil pH increases, especially in soils low in organic matter, and fine turf grasses may become deficient in these elements if enough lime is applied to raise soil pH much above 7.5.

Dune Stabilization at Provincetown

Prof. John Zak, Agronomist, UMass.

The spectacular dune formations, the low wind-slanted trees and the quaint old village are a major tourist attraction at Provincetown. However, the creeping inland dunes are slowly covering over the highways, trees, vegetation and even filling in Pilgrim Spring Lake. Thousands of cubic yards of sand are annually removed by the highway department and this creates an expensive and difficult maintenance problem.

Several projects have been initiated to evaluate the best method of dune stabilization for this area.

The first project involves the use of drought resistant plants to be established from seed for dune stabililization. This, if successful would be the cheapest and fastest method of control if a species of grass could be found to efficiently establish itself on sand, tolerate summer heat and drought as well as survive the sand blasting and scouring during fall and winter. Reports show that during severe storms wind velocities from 80-100 miles an hour have been reported for this area.

A grain drill was modified to plant seed on the dune area. Drought resistant grass species selected were; Lolium, Poa, Panicum, Eragrostic, Agropyron, Festuca and Elymus. Fertlizer was used at the rate of 500 lbs. of 10-10-10 per acre. The area was top-dressed with 100 lbs. of urea during the summer Mulch plots using hay, jute, asphalt compounds, gelatin, sodium silicate, latex and resins at recommended rates were established on the seeded area to determine their aid in seed germination and grass establishment.

Moisture determinations made during the summer showed no differences in moisture retension in the sand to a depth of 4 inches below the mulch. Seed germination was good. However, many of the young seedlings became bleached, and did not survive the summer heat and droughty condition on the sand. In the fall the remaining grasses on the check plots were as good as the grasses established under the various mulches. The grasses that showed most promise were Tall fescue, panicum amarulum, switchgrass, and weeping love grass. Further evaluation will be made next spring when the grasses have been subjected to wind blasting and sand scouring.

Another project involves the use of American beachgrass for sand stilling and revegetation. Generally beachgrass is planted 4 to 5 culms per hill on 18 inch centers in blocks or strips from eight to 20 feet. The adjacent blocks or strips are left bare. Thus one half of the area is planted. The rhizomes of the beachgrass spread into the area over a period of years and stabilized the sand. This type of planting is being compared to machine planting where the whole area is planted to beachgrass. The same amount of plants are used in each pattern. The plants are spaced eighteen inches apart, and in rows which are 36

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TROLLING

SMALL BUSINESS ADMINISTRATION LOANS FOR GOLF PROJECTS—A review of the monthly releases of the Small Business Administration and a further check with SBA personnel at Washington, D.C., reveals that a number of requests for loans for golf course construction have been approved. Any profit motive golf venture may make application for such loan. States, counties and cities, too, may make application for loans through local development corporations they may establish for the purpose of raising employment or improving the economic development of a community. The accomplishment of the goals of such development corporations could include the construction of golf facilities. Contact nearest SBA office for information.

The maximum the SBA will loan any one borrower is $350,000.00.

RESEARCHERS TRY TO "WAKE" QUACKGRASS—Scientists are on the verge of understanding enough about the life of a quackgrass plant to deal this pest a death blow.

Researchers at the University of Wisconsin found that only one-tenth of the quackgrass buds on rhizomes on underground stems break through in the spring to produce top growth. The rest "wait in reserve" and some of them come up if the first crop is destroyed.

If researchers can find a way to make all buds grow in the spring, one treatment should control the weeds for the entire season. Or, if they can make the dormant buds "stay asleep" when above ground buds are treated, researchers could accomplish the same thing.

A chemical called NAA causes a decrease in bud activity and shoot growth according to recent tests. Maleic hydrazide and several other chlorinated aliphatic acids slow shoot growth but don't affect buds, report Wisconsin researchers.

Crops and Soils

LILLIPUT—Millions of Americans may eventually share one of the world's rare collections of dwarf evergreens now being assembled at the National Arboretum in Washington, D.C.

This collection, which contains 1,500 tiny trees —freaks of nature that occur rarely and unpredictably.

The collection is notably comprehensive—it includes all major conifer genera. There are numerous junipers, spruces, and jews, as well as many dwarf forms of hemlock, pine.

Dwarf conifers may reach 6 feet in height, but many are still only a few inches tall when they are 25 years of age or older. A 15-year-od Jarvis dwarf hemlock in the collection is small enough to fit a garden pot.

FEDERAL SOIL SCIENTISTS find that good earth comes in many forms, and having mapped about one-third of the nation's land, they distinguish between at least 70,000 different kinds of soil. They are checking texture, color, stoniness and other factors affecting suitability for homes, highways, factories and the like—Agr. Res.

FIGHT FIRE WITH FERTILIZERS — The summer months always pose a problem to some people in recreational areas from the standpoint of fire hazards. Non-irrigated areas which become dry and brown during the summer and are extreme fire hazards have some degree of hope in the future. This hope resides in the use of using diammonium phosphate fertilizer as a fire retardant for the protection of homes, ranches, agricultural lands, recreational and wildlife areas.

HAS NO EFFECT ON GROWTH—Dairy cows and chickens seem to produce better while "listening" to music. But the theory that music is good for plant growth too just "doesn't hold water," according to University of Illinois agronomists.

DUNE STABILIZATION . . .

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inches on center. A Powell 42 tobacco transplanting modified to plant beachgrass not less than 6 inches deep was used. The plots were planted to beachgrass in June of 1962, and were successfully established. These areas were fertilized with 500 lbs. of 10-10-10 fertilizer per acre and topdressed with 100 lbs. of urea during the summer. The results of sand stilling and revegetation will be evaluated this summer.

After grass is established and the sand is stilled, it is best to establish shrubs and trees as permanent cover. This spring, various species of shrubs and trees will be planted on the established grass area plots to determine their value as permanent cover.

GRUB-PROOFING POINTERS . . .

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The other alternative is to broadcast granules in the right amount to provide the correct dosage of active ingredient per acre. Such formulations are used in dry form. Being relatively heavy and dry they are not blown away by the wind and the granules filter down through the grass blades and into the matted debris or directly to the soil. There is less chance for loss by vaporization and all the chemical is carried down between the grass plants rather than remaining up on the blades.

However, if applying granules in summer, when higher temperatures and relatively dry conditions prevail, heavy watering would be very desirable.

The large, third instar grubs found in the soil under turf in May and June are difficult to kill. This fact, plus the points mentioned above, are the reasons that grubs are found still alive after grub-proofing has been done. No one should expect to get complete kill of those large grubs from a spring application.

The partial kill obtained should prevent further serious damage from that brood. The real effect will be against the next generation of grubs which hatch mainly in August and the succeeding generations of subsequent years.