

NEWS LETTER

The Higher men climb, the longer their working day. Any young man with a streak of laziness in him may better make up his mind at the beginning that mediocrity will be his lot. Without immense, sustained effort, he will not climb high. And even though fortune or chance were to lift him high, he would not stay there. For to keep at the top is harder almost than to get there. There are no office hours for leaders.

—Cardinal Gibbons.

OCTOBER

1938

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.

GUY C. WEST Editor
Rhode Island Country Club
West Barrington, R. I.

GEORGE J. ROMMELL, JR.
Business Mgr.
28 Granville St., Dorchester, Mass.

October, 1938 Vol. 10, No. 10

The ideas and opinions expressed in the subject matter of this NEWSLETTER are not necessarily those of the Editor or the members of the club as a whole.

MORE STORM NEWS

Since the last issue, we have heard news concerning storm damage at many New England clubs. Practically all courses near rivers or the shore suffered from flood waters, with the ones near to salt water suffering most from a salt deposit. From news we have received, we can list the following damage:

Kittansett, much damage from salt water, buildings, trees down, and debris.

Newport, several holes covered by the salt water, rocks from the Ocean Drive, which was washed away, debris and tree damage.

Metacomet, three holes covered by the salt water, also a layer of oil from a tank car which was cast up on the course. Also tree damage.

Agawam and Wannamoisett, mostly tree damage with some minor damage due to holes made by fallen trees.

Fall River, one green and parts of three fairways flooded.

Winnepaug Hills, three holes covered with salt water and much debris including whole cottages and much lumber.

Misquamicut damage was less due to fresh water pond lessening the salt strength of waters which covered the lower holes, according to a report.

Montaup, damage extensive from salt water which covered most of the course.

All courses contacted report extensive tree damage.

A letter from Franklin Hammond is typical of damage suffered:

"At Tyngsboro we also had flood and wind. Two greens and fairways under water and sand. Just a mess to pump out and clear off. The wind hit us hard, between two and three thousand trees down in our outing grove. Two thousand feet of private electric line completely wiped out. Our new recreation building, just completed, was buried under the trees but thanks to its rugged construction, no harm came to it. Not even a light of glass broken.

"Cleaning up the grove and grounds looks to be more than a Winter's job for the whole crew. Two of the holes must be re-designed because of the damage to the tree borders of the fairways.

"Vesper was hard hit, both wind and water, and Nashua had considerable flood damage."

We would like your story for the NEWSLETTER. Let us know how you are solving your flood problems.

HURRICANE OVER NEW ENGLAND

T. E. Odland

Rhode Island State College

Hurricanes are usually thought of as more or less frequent disastrous visitors to tropical regions with some occasionally reaching our own coast at Florida. That one should even approach the quiet, peaceful country sides of New England seemed too fantastic to even dream about. After our dreadful experience on the afternoon and evening of September 21, 1938 we know that we are not in a restricted area when Mother Nature is on a rampage.

The hurricane that struck New England with such disastrous effect apparently started out in the usual way from somewhere in the South Atlantic and headed over the customary route towards Florida. For some reason it verred off before reaching there and went northward towards Long Island. It apparently was travelling along at

the rate of about 60 to 70 miles an hour. It was thought that it would lose its momentum long before reaching that far north. However, what was left of it would, it was thought, pass to the northeast of land and so have no effect on the New England coast. It had reached Long Island before it was realized that its course would take it over this region. Warning signals were then run up at Coast Guard Stations and radio flashes broadcast. We are not used to such warnings here so probably very little attention was paid either to the signals by those that saw them or by those who may have heard the radio warnings.

The center of the storm apparently travelled northward somewhere in the vicinity of the Connecticut River about 60 miles west of here (Kingston, R. I.) It continued up into Vermont and New Hampshire.

The greatest loss of life occurred in Rhode Island not because the storm was the most severe here but because of the low lying coastline over which the tidal waves washed. The wind velocity in the hurricane itself reached more than a hundred miles an hour in this locality. This force raised tremendous waves which swept the beaches clear of all summer cottages and other buildings that were not on high ground or a considerable distance away from the water. It was fortunate that the summer season had closed and there were relatively few summer residents left. A month earlier the casualty list would have gone into the thousands instead of hundreds as now.

Along many miles of the South Rhode Island shore there is a narrow strip of land from a quarter to half a mile wide with fair sized ponds back of this ranging from a half to a mile in width. Back of this is the mainland. Cottages and small business establishments had been built all along this strip of land along the ocean and Narragansett Bay front. In some places where the land was higher and wider whole villages had been built. In places this strip was perhaps 25 or 30 feet above normal high water and considered perfectly safe.

When the hurricane struck it was just a matter of minutes until everything on these narrow strips of land along the shore had been completely washed away. The buildings were smashed and left as a great mass of

debris on the land back of the ponds. From 50 to several hundred feet of the original strip of land became part of the ocean beach. All of it was leveled off so that nowhere is it more than a few feet above high water. There are now beautiful, wide, clean beaches with only now and then some large chunks of concrete to show that there had been some form of human activity there previously. It is difficult to find even approximately where some of the buildings had been.

In Providence, at the head of Narragansett Bay, the waves came in with such force that large boats and barges were piled up in some of the main streets. In some places the water was 10 or 12 feet deep in the business section. It seems a miracle that more lives were not lost here. The water was 2 or 3 feet higher than it reached in the last big gale which occurred in 1815.

In the parts of the State not directly on the water front, the high wind also did tremendous damage to buildings and other property. In nearly every village in southern New England, toppling trees fell on houses and across roads. Power lines and telephone lines were either broken down by falling trees or went down by their own weight. In Kingston perhaps 1-3 to 1-2 of all the fine century old elms went down. In spite of this there was little loss of life excepting at the beaches where the tidal waves swept everything before them.

About a week of steady rain just before the storm struck had swollen the rivers so that a flood was just arriving in the Connecticut valley. This in itself was nearly as bad in places as the one 2 years ago which broke all records. Highway and railway bridges were washed out and whole communities were isolated as in 1936. This added to highways blocked with fallen trees made it almost impossible to get anywhere regardless of urgency. Even here in Kingston, we were without any outside communication for several days except by a few main roads that were cleared the next day. Our electric service was partially restored through the main section of the village today—six days after the storm. Service crews for power and telephone lines have been brought in from as far away as Ohio and Indiana. Many of these were brought in by airplane.

The high wind which struck Kingston shortly after 3 p. m. lasted for more than three hours before it finally began to slacken. It was still of high velocity at 9 o'clock but by that time it could be classed as an ordinary high wind storm. The wind direction was from east to southeast throughout at Kingston.

The extent of the storm area was almost as amazing as the severity of it. It became necessary for us to go to Northfield, Mass. on the second day after the storm. This is a small village in western Massachusetts near the Vermont line. The distance is about 135 miles from Kingston. We travelled nearly 200 miles to get there on account of washed out bridges. It was only through the kindness of various local people along the route who guided us through country roads, through pastures and over temporary trails that we got to our destination at all. It took 8 hours to make the distance and that was making unbelievable good time. Trees and poles were down over the highways all the way. They had been cleared enough to let traffic through. It was the washed out bridges that caused the necessary detours.

Northfield is a small village with fine old trees much like Kingston. The extent of damage there was about in the same proportion as here. Fortunately we found that our daughter was not among those who had been injured at the girl's seminary there. A radio flash gotten through a car set had told about an accident there. Two girls were crushed to death by a falling chimney and a number injured. We had no way of finding out who were among those injured excepting to go there.

An excellent spirit has been manifested among all agencies assisting with the care of refugees and restoration of property. The State and Local Police, National Guard, Coast Guard, American Legion, the Red Cross, and others have labored tirelessly at the task.

Kingston and the State College are gradually getting back to regular routine. Classes will resume on Thursday morning after one week of recess. The greatest loss to the college was a marine laboratory on Narragansett Bay. There is not even a splinter left to show where it stood. Outside of that it was chiefly campus trees and a few minor buildings that show the signs of the storm.

The college facilities have been used the past week for helping to prepare board for about 1500 refugees and relief workers.

A tree fell on our own house but very little damage resulted excepting for a broken cornice and rain gutter. We had a lot at one of the beaches but fortunately no cottage on it. If it is where I believe it is, about half of it remains. The other half is beyond the present high water mark and therefore is now the property of Uncle Sam. It still is a beautiful beach and no doubt the next generation will build some more beautiful cottages and bathing pavilions there. It is a wonder how quickly even the worst of catastrophies are forgotten. I would not be surprised if I found myself spending my twilight years during the summer months sitting on the porch of a cottage built on what remains of our lot gazing at the tranquil ocean and wondering how it could ever have behaved as it did back in 1938 just before the big war broke out.

NEW JERSEY NOTES

by Kent Bradley

Meeting N. J. G. S. A.

October 10, 1938

Yontakah Country Club, Nutley, N. J.

Twenty-three members and ten visitors were guests of John Cameron, Superintendent of Yontakah. Cameron is President of the N. J. G. C. S. A. A Kickers' Tournament was held in the afternoon. Speakers of the evening were: H. W. Bradley, President Trenton Country Club; M. A. Tome, Trenton Country Club; J. W. Cannon, Chairman Greens Committee, Twin Brooks Country Club; Harry Gray, Hopewell Valley Country Club; G. C. Turner, President Yontakah; F. Cunningham, Financial Secretary of Yontakah; Dr. M. E. Husted, Chairman of Greens Committee, Yontakah.

Dr. M. E. Husted

Chairman Greens Committee
Yontakah Country Club

"Two of the Jersey City Water Company's mains 6 ft. in diameter cross the golf property. We tapped from these



Specify

Woodco
Brand grass seed

ARE YOU SATISFIED WITH YOUR TURF?


Here's REAL help for you!

Woodruff knows New England soil—has met all the problems it offers in different localities.

Woodruff knows what grasses thrive best under particular conditions—knows, also, the most satisfactory methods of caring for them.

Woodruff continually experiments with New England turf-raising problems—both in the laboratory and on the Proving Grounds.

In a word—Woodruff knows New England. And all of this experience is yours for the asking. Let Woodruff's unparalleled acquaintance with local conditions help you grow better turf. Write today.

GRASS SEED DIVISION
F. H. WOODRUFF & SONS
MILFORD, CONN. TOLEDO, OHIO
THE SIGN OF  GOOD SEEDS

6 inch lines. Bond issue of \$20,000 was raised in 1934-35 to install an irrigation system and do some course re-ramping. Water systems cost \$15,000 for 18 holes to tees, greens and fairways. The bonds were \$100 each with 3% interest. They are paid back by a caddy tax with players paying 15 cents a round. In three years we have retired \$9000 of the issue including 3% interest. Our swimming pool bond issue was raised in the same manner and is being paid off by a tax on each one entering the pool. We believe that the improvements, irrigation system and the swimming pool saved the club from closing. The sprinkler system is especially valuable in a dry spring and fall, and we are able to do seeding and fertilizing with the best of success. It is advisable to get a good irrigation engineer at the start. The system should be basically right with sufficient pipe sizes put in. We find little difference between the leading makes of valves and sprinkler, one is practically as good as the other, and largely a matter of personal choice."

Dr. Hamilton

"Japan Beetles were ten days late this year due to the weather but are still on the increase. They were affective over a longer period and are spread out this year. Dichlor Ethyl Ether, a solvent, shows possibilities for sod web worm and chinch bug control. Apparently it stimulates turf, at least, the roots to make this. The cost is around 16 cents a pound. One-fourth an ounce solution per square foot is the dosage we are trying."

It is with a great deal of pleasure that we inform our readers that Lester E. Erwin of the Rhode Island State College, well known to greenkeepers for his studies with "Pink Patch", received his doctor's degree in Plant Pathology from Iowa State College last July. It is of special interest to us that his thesis was on "Pink Patch" and covered his work with this plant disease and control measures for it.

"The ships may come in, but only to those who have sent them out."

SUGGESTED TREATMENT OF PUTTING GREENS TO HELP COUNTERACT INJURY CAUSED BY SALT WATER FLOODING

Prepared by

J. A. DeFrance—R. I. State College

October 8, 1938

1. Remove debris, sand and silt by raking and sweeping.
2. With a steel-tooth rake remove dead grass caused by salt water, and loosen the turf. Use your judgment in loosening turf by severe raking.
3. Spike greens thoroughly to help loosen soil and hasten salt leaching.
4. Apply about 10 to 15 pounds hydrated lime per 1000 sq. ft.
5. Apply about 10 pounds superphosphate per 1000 sq. ft.
6. After grass greens up, a small application of nitrogen in the form of nitrate of soda or sulfate of ammonia at about 2 or 3 pounds per 1000 sq. ft. would help hurry the grass along but does not appear to be absolutely necessary this late in the season. The calcium in the lime will replace some of the sodium in the salt deposit and the superphosphate will help stimulate root growth.
7. Apply quantities of water at intervals—allowing time sufficient to let salt leach through soil before again washing; thus, allowing air to get to the roots and thereby not drowning the turf which will rot the roots.
8. In case some of the greens do not respond to treatment by Spring, it would be advisable to start a small nursery at once.

Regarding areas damaged by debris fires: Remove all ashes; plow to depth of 8 inches; lime, if test shows need for it; apply 25 pounds of an 8-6-4 or 10-6-4 or some similar complete commercial fertilizer and reseed.

At the recent Boston American Christmas Basket Fund exhibition match at the Belmont Country Club, it was reported the following comment was made to the American's representative without solicitation on the part of any of the interested parties, Jimmy Thomson, Lawson Little, Horton Smith and Harry Cooper all declared that **"the Belmont Country Club greens were the best they had played on this season, in championship, tournaments or exhibition matches."**

BELMONT GREENS

are fertilized with—

^{VC}
NEW PROCESS
fairway

6-6-4 formula with a
humus-forming organic base

BRECK'S

85 State Street—Boston, Mass.

—Seedsmen Since 1818—

TALKS ON TREES

By E. Porter Felt

Bartlett Tree Research Laboratories
Stamford, Conn.

Experience is a costly teacher. Shade tree insects are among the more costly teachers.

The developments of this season illustrate the possibilities of insect attack on shade trees. The wide spread damage by the forest tent caterpillar to sugar maples in many of the higher areas of New England and New York State, the severe injury to elms in numerous New England and New York localities by the elm leaf beetle, and the somewhat general defoliation of many different kinds of trees in areas within fifty miles of New York City and in the State of Delaware by the Japanese beetle, all testify to what insects can do.

Some will recall that the ravages of the Gypsy moth in eastern Massachusetts in the 90's and again in the 1900's forced communities in those areas to protect their shade trees. The same

was true in the Hudson Valley and later in portions of New England as these sections became infested with the elm leaf beetle and literally many thousands of highly prized trees were killed by this scourge. The habits of the elm leaf beetle and effective methods of control are well known and yet this season a Mohawk Valley town belatedly authorized the spraying of its trees after a large proportion of the possible damage had been caused.

There is a more general appreciation of the desirability and value of trees than was the case a quarter of a century earlier. Nevertheless, the developments of the past season indicate that many communities still must be shown that insects are really menaces to shade trees. It cannot be that residents are willing to sacrifice these desirable ornaments of our streets. They either refuse to face the facts or prefer to take long chances, and all too frequently lose. It is not difficult to forecast serious damage by such pests. The need of systematic protection of shade trees is becoming increasingly evident.

Do unto the insects as ye would not that they do unto you, and do it first.

PREPARATION OF COMPOST

(Reprinted from The Australian
Greenkeeper)

Details of the Indore Process

Every year the public parks of Britain burn "waste," which could with very little extra labour or cost be converted into tens of thousands of pounds worth of humus (leaf mould) invaluable as manure for restoring and maintaining the fertility of the soil concerned or for sale to other agencies. There has long been a somewhat dim awareness of the possibilities; unfortunately few people have cared to examine the subject from the practical standpoint or even to discover what has already been achieved by scientific workers. There is widely prevalent a false impression that the cost of production exceeds the actual value of the humus manufactured, and this thought has acted as a deterrent to further advance or even to small scale experimentation.

Actually, however, there exists a simple and inexpensive method of compost preparation, known as the Indore Process, which has been taken up at many hundreds of plantations in India, Ceylon, Kenya, Central America, Africa, and other parts of the world where cultivators feel themselves bound to replace the high percentage of nutriment which their plants extract from the soil.

Cheapness and elasticity are two of the leading characteristics of the Indore Process; another is simplicity. A "humus factory" can occupy a small area in any corner of a park or estate, the site being screened from the public gaze and located at a point convenient for supervision. According to the amount of humus required the "factory" consists of a number of shallow pits—each about 30 feet by 14 feet, and 3 feet deep—with sloping sides, arranged in three rows with sufficient spaces between the lines of pits for the easy passage of loaded carts. At Indore there are 33 such pits, arranged in pairs, with a space 12 ft. wide between each pair. It is often an advantage to have water laid on to enable periodical moistening of the compost to be done by means of a hose pipe.

In a recent address, Sir Albert Howard added the following informa-

tion: "Mr. E. F. Watson, the Superintendent of the Government Estates in Bengal, who has successfully adopted composting at the Governor's residences in Calcutta, Barrackpore and Darjeeling, has devised a simple method for increasing the aeration of the pits from below. Aeration drains, 10 inches by 3 inches, are dug in the floor of the pits. Down the centre of this trench another trench, 6 inches by 5 inches, is cut. Old bricks are then laid, open jointed, in the upper trench. Copious aeration, followed by fungus development, rapidly spreads in the mass lying over these drains to a distance of two feet all around. In all cases where composting is done on a large scale it would probably pay to lay these aerating drains under the whole system of pits and to provide them with the requisite number of aerating chimneys. Mr. Watson has also introduced an ingenious arrangement for getting still more oxygen into the mass from the atmosphere. Temporary V-shaped partitions, made of old scrap perforated corrugated sheets, bolted together above and below, "with a bamboo separator at the top, which also serves as a handle, are placed in the heaps, at a distance of 6 feet apart, and left till compost has settled, when they are lifted out and used elsewhere."

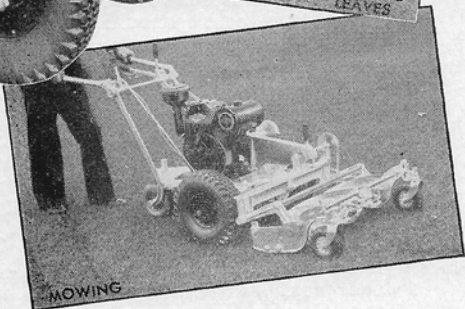
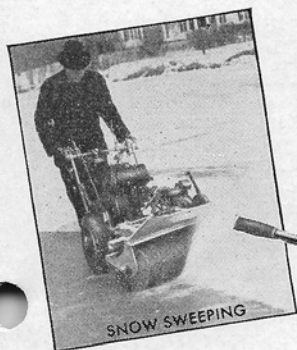
Materials for Making Humus

The materials needed for the manufacture of humus may be classified as follows (closely following Sir Albert Howard's own list)—

1. **Mixed plant residues**—All available vegetable matter of every description—such as weeds, green-manure, fallen leaves, the light prunings of bushes and shade trees, trimmings from the roadsides and hedges, straw and chaff, wood shavings, sawdust, waste paper, old gunny-bags, and so forth. All these must be carefully collected and stacked—collection is a normal daily process in our parks everywhere. All hard woody materials—such as lighter prunings and stalks—are first crushed (by placing on service roads) and reduced by traffic to a condition resembling broken-up straw. All fresh green materials, such as weeds and green-manure, must be withered before stacking. Proper mixing of all these dry plant residues is an essential part of the process, and to ensure this they must be stacked alongside the humus factory as received, layer by layer—under cover

Year Round Utility with the

IDEAL Caretaker



A Power Lawn Mower — a Power Sweeper — a Power Roller all in one convertible combination—the Ideal Caretaker.

The **mower** assembly embodies advantages found in no other mower. Full-floating, power-driven cutting unit with 8" reel. Will trim close around flower beds, drives, etc.; and will handle a wide variety of mowing conditions with maximum efficiency.

The **sweeper** assembly offers an efficient method of windrowing—leaves in the fall; sweeping dead grass and debris from lawns in the spring; sweeping snow from walks, driveways, platforms and skating rinks in the winter. It takes less than 30 minutes to convert the "Caretaker" from a power mower to a power sweeper or vice versa—the power unit will haul lawn roller, spiker, etc. Truly an implement of practical, year-around utility.

Write for complete information and catalog, or ask to have our nearest representative call.



IDEAL POWER LAWN MOWER COMPANY

New York Branch:
12 Harrison St.
New Rochelle, N. Y.

436 Kalamazoo Street
Lansing, Michigan

Canadian Distributors:
Aikenhead Hardware, Ltd.
17 Temperance St., Toronto, Ont.

New England Distributor: Ideal Mower Sales & Service, 111 Cypress St., Brookline, Mass.

during wet weather. To ensure even mixture, the stacked material is removed to the pits from one end of the stack. If these precautions are observed (that is, proper mixing and withering), the residues reach the pits as a suitable chemical composition and, furthermore, undue packing (which cuts off air supply) in the pits is prevented. Continuous aeration is essential for the rapid production of the best compost.

2. Cattle and horse manure (including stable litter). This material, as well as the droppings of poultry, has to be collected every morning and broken up before being added to the compost pits. Such collection is normal routine where animals are kept and costs nothing extra.

3. Ashes—All wood ashes from whatever local source should be carefully collected and stored under cover alongside the humus factory. Where wood ashes cannot be obtained, ground chalk is an effective substitute.

4. Urine Earth—When available, the earth under cattle and horses should be dug out and renewed to a depth of 6 inches every three or four months. This urine earth should then be powdered and stored under cover alongside the humus factory.

5. Water and Air—These two are essential ingredients for the making of humus and for the fixation of nitrogen which takes place during the latter part of the process. An armoured hose-pipe with a nozzle which breaks up the stream is the best means of applying the water, while an ample supply of air is guaranteed by the proper mixing of the plant residues and by the use of shallow pits 3 feet deep.

Charging the Pits

The next step is to charge the pits correctly. This is done by spreading a layer (about 3 inches deep) of mixed plant residues lightly and evenly with a rake over a section about 6 feet wide of the pit-floor; then sprinkle the layer well with dry powdered urine-earth to which a few handfuls of wood-ashes have been added. Next apply a layer, about 2 inches deep, of broken-up manure and stable litter. Moisten the contents of the pit well with the hose, taking care, however, not to use too much water or to flood the pit. Now continue the charging process section by section until the pit is completely filled. The

utility of working section by section lies in the fact that this method altogether avoids trampling. Be careful to finish off each section of the pit with a layer of manure and litter, followed by a good sprinkling of urine earth, ashes and water. A further watering must be given in the evening and repeated next morning. These three stages of watering give the mixture time to absorb sufficient moisture to start the intense fermentation which rapidly establishes itself. Incidentally, it is important that in the charging process the materials should be arranged lightly. Anything in the nature of consolidation or trampling which would have the effect of cutting off the air supply must be avoided. It will be noticed that when first charged the level of the contents of the pit will be a few inches higher than at the level of the ground, but that rapid shrinkage takes place during the composting process.

The importance of powdered urine earth and ashes or ground chalk as ingredients lies in the fact that these materials are needed to feed the fungi and bacteria which are cultivated during the process and also to check excessive acidity. While sufficient for these purposes, they should not be excessive in quantity, as otherwise they tend to consolidate the heap and cut off the air supply. Experience will show what quantities are necessary. Experience will also reveal how much water is required. In addition to the three preliminary waterings already mentioned, the heaps have to be watered once a week, and for the first, second and third turns, which are described below. Moreover, it has to be remembered that if too little water is added fermentation will cease; if watering is too heavy, on the other hand, there will be interference with the air supply and the process will thus be retarded. At first the plant residues absorb water slowly—hence the reason for the 12-hour intervals between the first three waterings in the preliminary stage. Later, as fermentation progresses, the rate of water-absorption is accelerated. The aim should be to maintain the heaps moist and mellow (rather than wet) and the temperature high.

Turning the Material

The material has to be turned three times during the process of compost manufacture—the reasons being to ensure uniform mixture and decay and to

NEW ENGLAND DISTRIBUTORS OF

TORO Power Mowers—Gang Mowers—Hand Mowers
Tractors and Gang Mower Combinations of 3-5-7 Units
Rollers—Spikers—Sod Cutters—Soil Screens

BUCKNER — Fairway — Tee — Green Sprinklers and Valves
Milorganite — Netco 8-6-2 Putting Green — Fertilizers

FRIEND Power Sprayers — *McCLAIN* Hand Pressure Outfits

LEWIS Tee Equipment — *STANDARD* Green and Tee Equipment

WORCESTER Lawn Mowers — *PEERLESS* and *CARPENTER* Grinders
Antube — Arsenate of Lead — Brown Patch Preventatives
Flags — Poles — Tools — Fertilizer Distributors — Seeders
Hose — Markers — Ball Soap — Burners — Sod Cutters — Towels
Grass Seeds — Special Mixtures — Certified Bents

New England Toro Co.

DISTRIBUTORS FOR NEW ENGLAND

1121 Washington St., West Newton — WEST New. 1658

furnish the appropriate amount of water and air. The first turn is generally due when the pit is 10 to 14 days old. We now turn the whole contents of a pit from one end at the first turn. Clear about 3 feet wide at one end. Then turn the whole pit towards the exposed end, taking care to turn the outside and exposed layers into the middle. As the contents shrink during fermentation, there will be a vacant space here at the end of the first turn. The second turn is normally due 14 days after the first turn, that is, roughly a month after the original charging; the process consists of turning the material again, in the opposite direction, watering it and piling it up loosely along the empty portion of the pit. The third turn is when the pits are two months old; the hard crumbling material is removed from the pits, moistened and stacked in rectangular heaps—10 ft. broad at the base, 9 ft. wide at the top and 3½ ft. high—and left there to ripen for a month, when it is ready for removal to the fields. The pit can then be recharged.

The changes which take place in the chemical nature of the material may now be described—and they can be ob-

served and tested during the process without resort to chemical or biological analysis. During the first month fungi develop to break down the organic matter, the heaps becoming a mass of white fungoid growth, with the temperature high (a metal rod should be hot to the touch when withdrawn). After the third week the mass begins to grow darker rapidly and to become crumbly, while there is a slight fall in the temperature. It is at this stage that bacteria begin to take a bigger share in humus manufacture.

Moisture and Air

Two details to observe are whether fermentation stops and the pits grow cool—if so, the most likely cause is lack of moisture. Secondly, if the heaps begin to smell, flies will be immediately attracted and will lay eggs in them, followed by the development of maggots in great numbers; this is a sign that the air supply has been interfered with, and the remedy is to turn the heap without delay and to add manure and ashes. The main causes of inadequate aeration are excessive trampling, the addition of too much urine-earth and ashes at the outset, over-watering, or failure to turn

the mass at the proper times. Shortage of air is also indicated by the production of ammonia.

Individual requirements and experience will reveal the best mode of applying the humus to the land when it is ready for use. In its final form it appears as a pulverised mass. Meanwhile, what is certain is that the seeds of weeds are always destroyed by the intense fermentation that occurs during the composting process.

In Britain we have sports grounds and parks yielding (in the aggregate) immense quantities of waste products which periodically go up in smoke, whereas by utilization in the form of compost they could go back to the soil from whence they came and would solve many a problem of soil replenishment with practically no extra cost and extremely little additional labour.—Extracted from article in "Parks, Golf Courses and Sports Grounds."

ANNOUNCEMENT

of the 1939 Winter School for Greenkeepers at the Massachusetts State College

January 3, 1939—March 12, 1939

The Massachusetts State College Winter School for Greenkeepers will open on January 3, 1939 and conclude with the annual Golf Course Maintenance Conference and Exhibition on March 10, 11 and 12.

Beginning in 1939, the course will be divided into two terms, the first beginning January 3 through February 3, and the second term February 6 through March 12. This division is made to give a greater number of greenkeepers a chance to attend the school. A man may attend the first term in 1939 and the second term in 1940 or 1941. The division will not weaken the courses or tend to make the school two five-week courses, as no one will be admitted to the second term who has not passed the first term's work, and no certificate will be granted until the completion of the two terms.

Applicants are advised to take the full course in one year, but it is hoped that the possibility of dividing the expense through two years will induce more clubs to pay the full expense of their greenkeeper, or permit more greenkeepers to attend as personal, professional improvement.

Though the 1939 course is the 13th, Professor Dickinson is not pessimistic as a number of applications for enrollment have already been received. The enrollment is limited in number, and is for greenkeepers, their assistants and others who have charge of the maintenance of golf courses. No one is admitted who is not thoroughly familiar with the game of golf or has intimacy with greenkeeping problems. The school is for the professional improvement of the individual and not to introduce inexperienced men into the profession.

Courses studied are Botany, Entomology, Water Systems, Drainage, Equipment, Grasses and Turf Culture, Cost Keeping and Analysis, Managerial Problems, Soils and Fertilizers. There is also a daily forum or summary hour.

The Expense

One Term Only

Tuition	Registration	Health Fee
\$ 5.00	\$2.50	\$1.50

Two Consecutive Terms

Tuition	Registration	Health Fee
10.00	5.00	1.50

Incidentals, such as stationery, notebook, etc., will not cost over \$2.00 and good room and board may be obtained for from \$10.00 per week up. Special rates are given by the local hotels, and small apartments are often available.

No classes are held on Saturday or after 3.25 on Fridays. On the other week days, eight hours are spent in the laboratory or classroom.

Further information and application blanks can be obtained by writing to the Director of Short Courses, or to Professor Lawrence S. Dickinson, Massachusetts State College, Amherst, Massachusetts.

A wise man will make more opportunities than he finds.

—Bacon.

Homer Darling of the Juniper Hill Golf Club, Northboro, Mass. had some fine booklets printed this year, entitled "Follow thru—a guide to good Golfing", and distributed them to his players. This seems a fine idea for a public course.

Some excerpts from this booklet are:
Follow Thru . . .

Golf is an individualistic game. It is a real test of one's honor, temper, and character. What you do on the golf course, how you score your game, and your general attitude, reveals your true self. **Don't Cheat.** Nobody likes a chiseler. From the very beginning of your golf career count every stroke, including the misses. Everyone prefers to play with a square shooter and an honorable sportsman.

Golf is different from many other sports in that except for the most important matches, there is no referee or umpire to call your attention to infringements or violations of the rules of this game. Your friends and other players are reluctant to call attention to your mistakes in the rules. For this reason many players are careless about reading or observing rules. There is definite need therefore, for more knowledge along this line.

To aid the beginner and others who need it, a few rules and general terms most commonly misunderstood are discussed below.

Fore. This is the warning or danger signal used in golf. Most beginners know its significance, but it is not out of place to discuss the term here in connection with your protection from a legal as well as a physical danger viewpoint.

The careful person, wherever he is, takes no chances in exposing himself or his neighbors to unforeseen accidents. The same should be true on the golf course.

Shout the warning signal, "**Fore**", before playing whenever anyone may be in danger of being hit by your ball. Someone in your own foursome may thoughtlessly step in range of your shot, or someone in another fairway may unconsciously be in range of your shot. It is safer to give warning before hitting than to wait until the ball is in the air. Neglect in giving the warning in advance, or in using good judgment, may make you legally liable for your actions.

"Pioneers in Soil Tests for Seed Mixtures"



Last Call For Fall Seeding

Telephone us collect or mail us your fall seed order for immediate shipment.

Market reports show prices unchanged as yet on the Bents, Bluegrass and Redtop. Chewings Fescue prices continue to rise.

Our job is to serve you through advice on your turf problems. So feel free to consult us at any time.

JOHN D. LYON

Seedsman—Consultant

17 Bartlett Ave.—Belmont, Mass.

Tel. Belmont 2907-J, 4346-W

FOR SALE

We have available 30,000 sq. ft. of prime Kernwood velvet sod, which we are offering at 10 cents a foot, cut, at Tyngsboro. If interested, write

FRANKLIN HAMMOND

Tyngsboro Country Club

Tyngsboro, Mass.

Hazards. A hazard is any bunker, water (except casual water), ditch, sand or road. A bunker, is that part of a depression in the ground where the soil is exposed, and usually covered with sand.

When a ball lies in or touches a hazard the club shall not touch the ground, nor shall anything be touched or moved, before the player strikes at the ball. (Penalty Two strokes in stroke play, or loss of hole in match play.)

WINTER HARDY—ACCLIMATED
RHODE ISLAND
CREEPING
VELVET

BENT
GRASS SEED
and Fairway Mixtures

of highest quality for lowest price that seed of equal quality can be offered.

NATURE HAS WRITTEN A PRESCRIPTION for your course. Right here in southern New England is the natural home of the entire family of the Bent grasses, the principal member of which, namely R. I. Bent, derived its name from this, the smallest state in the union.

You can grow NATURE'S OWN INSURANCE into your turf by using FRESH, VIABLE seed which grows in YOUR latitude in YOUR country.

SAVE for your club: Buy your seed direct from the grower.

A. N. PECKHAM
KINGSTON RHODE ISLAND

**USED GOLF BALLS
WANTED**

Highest prices paid. Check mailed within 48 hours after balls are received.

Known to the trade for 15 years.
Get our prices before selling.

EASTERN GOLF CO.
244 West 42nd St.—New York, N. Y.

Water hazard. If a ball lie or be lost in a recognized water hazard, the player may drop a ball, under penalty of one stroke, behind the hazard, keeping the hazard between him and the hole.

Preferred Lies. This means that you may place the ball on the grass where a better shot can be made, providing it is not nearer the hole. It applies to the fairway only, and does not include the rough. It does not mean that a tee should be used. The reason for allowing this temporary local rule on any course is for your benefit, to save the course under adverse conditions.

The foregoing are some of the rules which are more commonly misunderstood, or at first give the most trouble to beginners. A golf rule book should be studied to get a better picture of what the game is all about, just as rules for other games are learned before one may know what to do.

Strive to learn as much as you can about golf etiquette, golf rules, and the proper conduct of players on a golf course, so that you may be less conspicuous as a beginner.

"In early New England days young men and women frequently used the "courting stick," an eight-foot hollow stick, one inch in diameter, which was fitted with mouth and ear pieces for secret conversation while sitting on opposite sides of the fireplace in the presence of the family."

A use for worn bamboo poles or steel shafts?

"Facts are not 'stubborn things.' It's the person who won't recognize them that's stubborn."

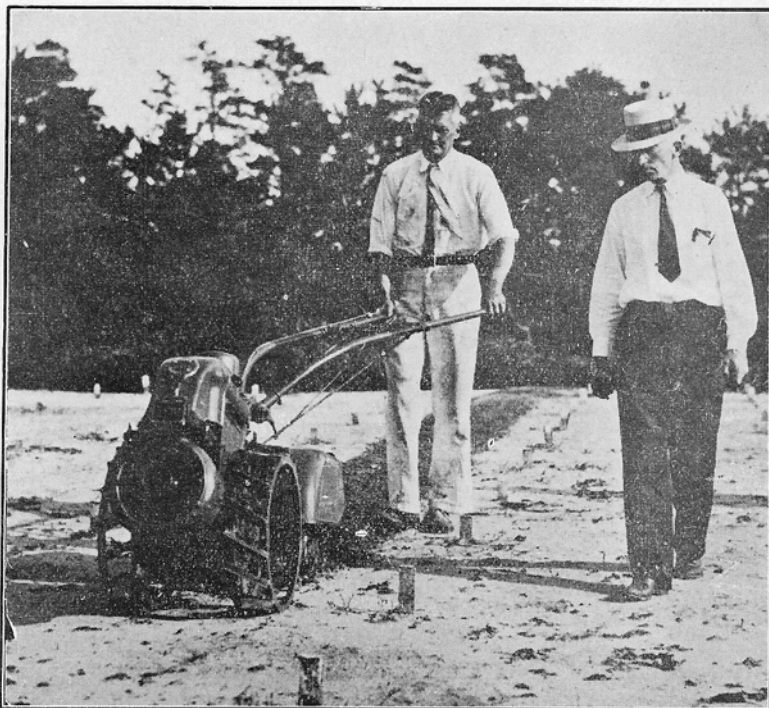
OFFICERS' DIRECTORY

President R. A. Mitchell, Kernwood C. C., Salem, Mass.
Secretary Philip Cassidy, 45 Grosvenor Rd., Needham, Mass.
Treasurer Frank Wilson, Charles River C. C., Newton Centre, Mass.
Chairman Enter. Comm. Sam S. Mitchell, Ponkapoag G. C., Canton, Mass.
Chairman Golf Comm. Lloyd G. Stott, Meadow Brook G. C., Reading, Mass.
Chairman Welfare Comm. Paul Wanberg, 8 Curtis St., Waltham, Mass.
Chairman Employment Comm. Guy West

NEWSLETTER officers, see page two.

ROTOTILLER

TRADE MARK
REG. U.S. PAT. OFFICE



NEW ENGLAND DISTRIBUTORS:

R. R. RIDDLE,
North Wilbraham, Mass.
Tel. 72-3

E. N. BANKS
230 Lowell Street, Waltham, Mass.
Tel. 1988

ALLAN STARKWEATHER
Dover, Mass.
Tel. 309

R. J. ALLEN, JR.
1 Brattle Street, Worcester, Mass.
Tel. 5-2891

PEARSON BROS. NURSERIES
Lynnfield Center, Mass.
Tel. 61

ERNEST ELFGREN
East Killingly, Conn.
Tel. Danielson 103-4

When writing, mention NEWSLETTER.



Merion Cricket Club, of Haverford, Pa., is one of the many famous clubs which use Worthington equipment.

WORTHINGTON EQUIPMENT

will save you money now and in the future

By installing Worthington grass conditioning equipment now, you can save your club the expense of repairing worn machinery this Winter. Worthington Tractors and Gang Mowers and Worthington Overgreens quickly pay for themselves in time saved, operating economy and man-power. 44 out of the 56 courses in the United States, Canada and England, on which the National

Open and Amateur Championships have been played, used Worthington equipment, and there are more Worthington Gang Mowers in use throughout the world than all other makes combined.

C. M. SAWTELLE, *New Eng. Distributor*
3 Walker Terrace, Cambridge, Mass.
Telephone: Trowbridge 7491

- Tear out this coupon for illustrated catalogue and discover how you, too, can profit from Worthington equipment in money saved and in increased member satisfaction.

Worthington
Mower
Company

Main Office Sales Agencies
Stroudsburg, Pa. All Principal Cities

WORTHINGTON MOWER COMPANY
Stroudsburg, Pa., Dept. NL/O
Please send catalogue on your equipment at no obligation.

Name _____

Address _____

City _____ State _____