

tain a good porous soil, well supplied with nitroifying bacteria for topdressing of putting greens. We must remember that these bacteria play a very important part in both plant and animal life—for without bacteria there would be no decay and where there is no decay there is no life.

Where soils have become too acid either by excessive use of sulphate of ammonia or other sources, the acidity can be neutralized by the use of pulverized charcoal made mostly from hardwood. I believe that I have used more acid fertilizers on my putting greens than any other greenkeeper in America and by using charcoal my putting greens are never over media acidity, while some are neutral.

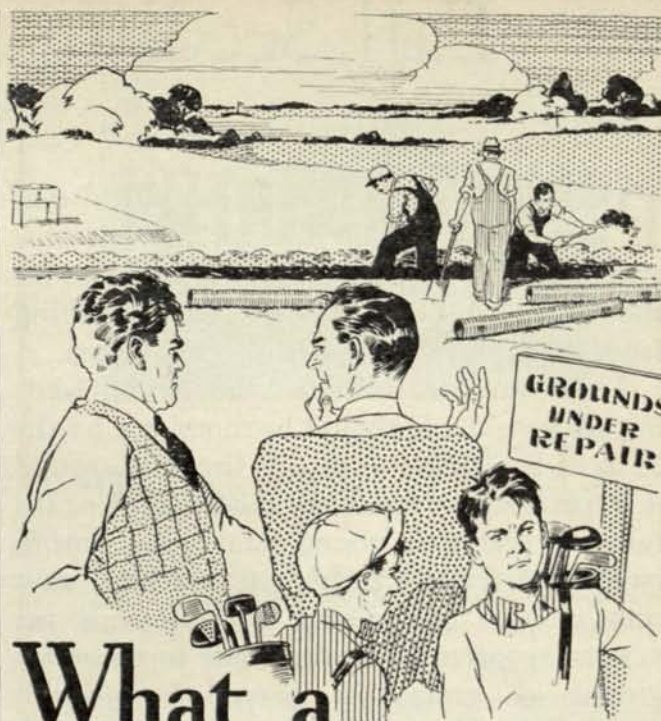
It has often been stated that the use of charcoal on a putting green is only necessary under certain conditions. When through the heavy character of the neutral soil abnormal rainfall or other causes the surface becomes wet and sticky, the use of charcoal is advisable. If a putting green goes bad in color from any cause a dressing of charcoal will soon improve matters and leaves the grass healthy and vigorous. As a purifier of the soil and an absorber of moisture charcoal has no equal.

#### Charcoal Keeps Greens Porous

**P**ERSONALLY, I have realized by using charcoal that it helps to keep the surface of the putting greens in a good porous condition so that when the player makes a good shot to the putting green the ball will bite well and not bounce off the green. We often create this condition by the use of charcoal, especially where silt and clay loams predominate.

During the playing season, should it be a dry one, charcoal helps to prevent the surface of the soil from baking and cracking open, thus preventing the nitrogen gases from escaping out of the soil. After a heavy rain or watering charcoal expands, thus allowing more water to enter into the subsoil. Charcoal also helps to make the surface of the putting greens firm and porous. For illustration (and don't think this is a fish story), a year ago in the early part of the month of May our clubhouse was destroyed by fire. I had a large

(Concluded on page 26)



## What a Chicago Golf Club learned about subdrainage

Frequent complaints from the members of a Golf Club near Chicago led to an investigation of why their fairways were slow to drain after rains. It was found that subdrainage was inadequate. That repairs were too frequent. That the ancient and royal game was being interfered with by that all too often appearance of men with shovels.

What to do?

Somebody suggested looking into the possibilities of Armco Perforated Iron Pipe. The report was favorable.

With the next drainage failure, Armco Pipe was installed. That drain caused no more trouble.

More Armco Pipe was purchased. As it took the place of broken drains, rain pools disappeared. And when the course was Armco drained throughout, repairs became unnecessary.

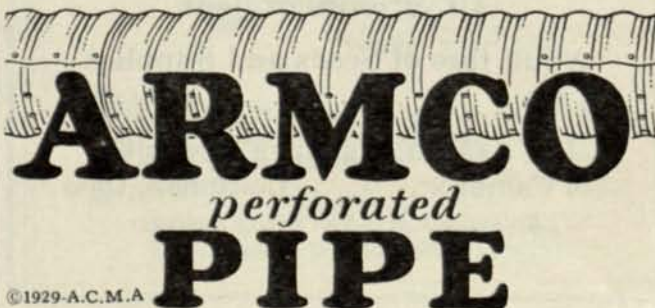
No more do the men with shovels interrupt play. For here is a pipe that removes surface water surely and quickly. It is proof against the heaviest rollers—against freezing or swelling soils.

The experience of 23 years in drainage is available at your request. If your course (playground or athletic field) needs better subdrainage, let Armco men help. Write us . . . there's no obligation.



Armco culverts and drains are manufactured from the Armco Ingot Iron of The American Rolling Mill Company and always bear its brand.

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MIDDLETOWN, OHIO



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# Fall Seeding Helps Greens

By W. J. SANSOM, Greenkeeper  
Toronto Golf Club, Long Branch, Ontario

**P**UTTING greens are seldom so good that they do not require repairing at some time of the year to thicken the stand of grass on the filling in of small bare patches resulting from the removal of weeds or other causes.

The advantages to be derived from fall seeding are several and should be completed by the 15th of September as at this time the ground is warm and full advantage can be taken of the fall rains giving the young plant ample time to establish before the early frost and short days come along. The weather at this time of the year being particularly favorable to the quick growth of grass—the ground being both warm and moist so that the young plant gets a chance to root deep as well as growing upwards and be in good condition to stand any ordinary winter and start away strong in the spring hardy enough to withstand the cold winds of early spring.

## Preparing Established Greens for Fall Seeding

**T**HIS work pays to be done thoroughly by taking sharp-toothed steel rakes and rake well in different directions. This cleans out any rubbish as well as opening up the surface for a seed bed. After a good scarify with the rakes take a machine set as low as possible and double cut. If turf is thin sow from 25 pounds to 50 pounds of seed, but if turf is thick and of good texture from ten pounds to fifteen pounds will be ample to a green from thirty yards by thirty yards using two cubic yards of good screened compost enriched with one hundred and fifty pounds of fertilizers.

I am using 5-12-2, as a general rule any of the less soluble fertilizers should be used in the autumn. The idea is to strengthen the grass after the trying summer weather and nourish it through the winter months. To do this it is necessary to use a fertilizer slow in ac-

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SEED**

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**V**ERY hardy and thrives with less water than creeping bent.

**Redtop and Ky. Blue Grass**

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**All varieties of Bent**

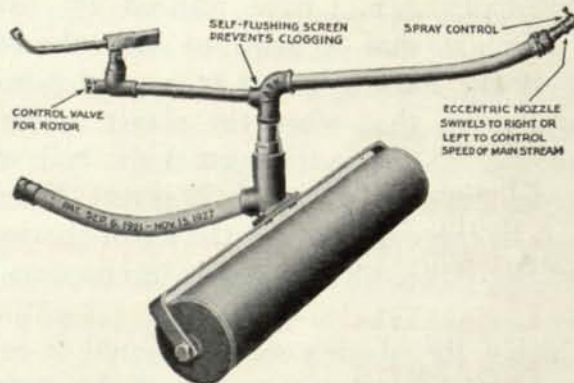
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*Recleaners and Specialists in Grass  
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## THE "LARK"

*Sprinkles Evenly from center to  
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*The "Lark" Sprinkles Evenly*

125 ft. on 50 lbs. pressure—90 ft. on 35 lbs. pressure  
100 ft. on 40 lbs. pressure—80 ft. on 25 lbs. pressure  
60 ft. on 15 lbs. pressure.

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The New Rotor Control Valve controls the speed of the Rotor and the quality of its spray under varying pressures. It eliminates those smoky sprays that are often lost in the breeze. It prevents excessive wear of the Rotor bearing.

The Self-Flushing Screen keeps all sediment away from the Rotor, preventing any clogging. All sediment passes out through the larger Main Stream Nozzle.

**L. R. NELSON MFG. CO., PEORIA, ILL.**



tion and not to force a strong growth of soft grass at this time of the year. Whilst the compost or basis of the mixture for a spring dressing remains the same, the chemical composing may be different. The autumn dressing precedes a period of rest, the spring dressing one of activity and life and so requires a quicker action.

Greens that are established and of good thick turf texture may not need any seed, but a good scarify with the rakes and cut low and when topdressed the same as described the green will take on new life and will well repay for the work done.

#### Tees and Fairways

**F**AIRWAYS that are thin or weedy should be attended to at this time of the year. Weedy fairways will be greatly improved by applying fertilizers. In the fall of 1927 I used bone meal and sulphate of ammonia, eighty per cent bone meal to twenty per cent of sulphate of ammonia at the rate of five hundred pounds per acre with excellent results. Tees treated the same way responded well to this treatment.

**Grass Seed  
Fertilizers  
Seeders  
Discers  
Greens Equipment  
Toro Equipment  
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Rollers**

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**J. Oliver Johnson, Inc.**

*World's largest golf course equipment house*

Morgan Huron Superior Sts.

CHICAGO, ILL.

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## "Better Than Ever"

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"It's the simplest machine I've ever used and light in weight, but it will stand the gaff and hug the ground better than the heaviest of them. It's RIGHT, that's all I've got to say."

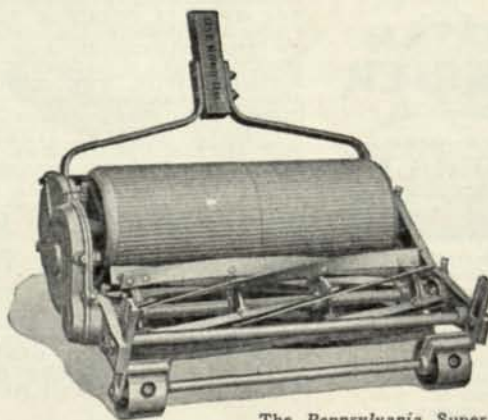
Let us send you our new catalog full of FACTS on the "New" Fairway, the Super Roller and New Aristocrat greens mowers and the other PENNSYLVANIA Quality Mowers for Golf Courses.

*Price of "New" Fairway Quint,  
\$625; Trio, \$375—both at Philadelphia*

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1645 North 23rd Street

Philadelphia, Pa.



The Pennsylvania Super  
Roller Greens Mower

**PENNSYLVANIA**  
*Quality*  
**LAWN MOWERS**



# Fall Is the Time to Work

Experience proves that work done in the fall brings fruit in the spring

By LEWIS M. EVANS, Greenkeeper  
Cedarbrook Country Club, Mt. Airy, Philadelphia



LEWIS M. EVANS  
President Philadelphia Association Golf Course Superintendents

I RECENTLY asked a greenkeeper in charge of a wonderful course just what he thought of an extensive fall program of work and his answer was that his course this year was finer than ever due to the fact that he laid the foundation for its present condition last fall.

I do believe that greenkeepers as a whole are commencing to realize that work on the course in the fall can be done better and that the result can be seen the following spring. The great volume of work that each spring brings is governed by weather conditions and should the spring be a wet one much of that work must either be hurriedly done or not done at all.

## The Compost Pile Goes Into Discard!



New harvest of Certified Coccoos Creeping Bent Seed, last word in fine turf, now available for Fall seeding. Also, Washington and Metropolitan strains of creeping bent stolons

ELIMINATE THE COMPOST PILE AS AN ABSURD AND RIDICULOUS RELIC OF THE PAST. SCIENCE HAS MADE IT POSSIBLE TO RID THE GREENKEEPER'S BUDGET OF THE EXPENSIVE AND DANGEROUS OLD FERTILIZING METHOD (FOR THE COMPOST PILE IS A BREEDING PLACE FOR GERMS AND WEED SEEDS)—AND TO HAVE PERFECT TURF BY THE SIMPLE USE OF ONE COMPLETE GRASS FOOD—LECCO. NOT ONLY DOES LECCO SEND THE OLD COMPOST PILE INTO THE DISCARD BUT IT SAVES THE EXPENSE OF HAND-WEEDING BY DRIVING OUT WEEDS AND CLOVER. LECCO ELIMINATES BARE SPOTS. IT MAKES AND KEEPS FINE TURF HEALTHY AND THRIVING THE SEASON AROUND. ASK US WHY LEADING CLUBS USE LECCO IN CARLOAD LOTS. 500 POUNDS IS AMPLE FOR 18 GREENS. TRY IT THIS MONTH.

# Lecco

"The Complete Grass Food"

LYMAN CARRIER - - GRANGER, IND.

## Spiking Greens for Seeding

MY PRESENT plans are to start my so-called fall work on or about the 20th of August when I do my first seeding of greens. I first spike the green with a spike roller to a depth of one-quarter of an inch (two ways), and these holes serve as seed pockets. I mix three pounds of bent seed in about six buckets of sand and this is broadcasted on the green and thoroughly poled in.

This I follow up with twelve buckets of finely screened compost and this is broadcasted on and poled in. The small amount of sand insures a more even distribution of the seed and the compost is just enough to cover the seed and yet not enough to invite an attack of brown patch.

The latter part of September I again seed using the same amount mixed with sand and this I follow up with a general composting, using about a yard of compost to a green. The latter consists of soil, well rotted manure and sand.

In late October or November I shall spike the greens as deep as the machine will spike them and compost them with a mixture of screened mushroom soil and sand mixed half and half. This latter composting is the one that you can add your slow acting fertilizer, also your ground or hydrated lime. My own choice will be a half bag of Milorganite and fifty pounds of hydrated lime to a green.

## Plugging Out Clover

I MIGHT add that just before this last composting is a good time to plug out clover and substitute good plugs from the grass garden and by spring they will be well sealed in and ready to go along with the rest of the green.

In conclusion, I would advise a very extensive fall program on the course for the reason that the work can be done more thoroughly and the following season will justify the additional cost and labor.



## JOHN MACGREGOR SAYS



JOHN MACGREGOR  
Greenkeeper, Chicago  
Golf Club

I INTEND to seed about nine acres this fall. Six years ago I seeded this piece of land with timothy. Being outside of the golf course proper, my intentions were to sell the hay thereby reducing the cost of maintenance which it did to a certain extent, until the dandelions became too numerous. This summer I ploughed all of it, (in June) and have been cultivating about once a week ever since, so it is now in good condition.

Sometime between the 20th, and the latter part of August I intend to seed it with Sheep's Fescue about 80 pounds to the acre. My reasons for seeding with Sheep's Fescue are: dandelions do not have a chance to monopolize the land, also one cutting a season is all that is necessary.

Fall seeding should be done between the dates of August 20th-September 15th for best results. My first top-dressing will be done about the first part of September. The usual summer weeding has been finished about this time, and the grass is over its dormant stage. Then too the weather is getting cooler, therefore top-dressing and feeding should be done, using compost to even the irregularities caused

THE PERFECT GOLF COURSE SPRINKLER  
COVERS GREATER AREA  
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SHOCK CHAMBER  
INSIDE REACTION DRIVE  
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**BUCKNER MANUFACTURING CO.**  
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(Pioneers in Golf Course Irrigation. Originators of Hoseless System)

through weeding, and feeding to give the grass a fresh start after the resting period.

I use about ten pounds commercial fertilizer to a 1,000 square feet or 50 pounds to a green of 5,000 square feet, analysis 10.6.4. This is mixed with the compost and applied with a top-dressing machine at the rate of about a yard to a 5,000 square foot green. My reasons for mixing the fertilizer with the compost are: first the compost absorbs the ammonia to a point where there is very little danger of burning, second; distributing the compost with a machine there is an even distribution of the fertilizer. I find by fertilizing at this rate very little, if any fertilizing has to be done until the following spring.

Fairway fertilizing I have never had to resort to in the fall, I would advise any one whose fairways are impoverished to fertilize both spring and fall until the turf has become dense enough to necessitate spring fertilization only, fertilizing at the rate of about 500 pounds per acre.

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Growers of  
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# FALL SEEDING — TOPDRESSING

Representative opinions of America's leading greenkeepers on maintenance work. Here are their answers.

## *1--Are You Seeding This Fall?*

From Joseph Valentine, Greenkeeper,  
Merion Cricket Club, Philadelphia.

I will do the reseeding this fall, especially on the fairgreens. Due to disease and draught one always loses a certain amount of turf and I will use four parts of Kentucky blue grass, one part of red top (to get a quick turf establishment) and one part of South German bent, as the red top will disappear and the bent will fill in.

From Alex Binnie, Greenkeeper,  
Shoreacres Golf Club, Lake Bluff, Illinois.

We are seeding and topdressing this fall in areas affected by winter kill and by poor drainage. Where proper drainage has been at fault we are lifting and replacing the tiling and filling in with number four stone to within one foot of the surface. We have corrected similar weak spots by this method and the results have been very satisfactory.

Whatever seeding is necessary we are disking with a Meeker disc and sowing fescue. Immediately after we are topdressing with two-year old compost.

From Elmer F. Affeldt, Greenkeeper,  
Glen Oaks Golf and Country Club, Great Neck, Long Island.

We are renovating our tees at this time as follows: spiking well with a spike roller, patching large bare spots, fertilizing with Milorganite 30 lbs. to a 1000 sq. ft., seeding and top-dressing with good compost, followed by a good watering. We usually plant enough stolons every year to lay down three or four greens, planting this in our nursery and then transferring the sod to the green. By this

method the green is not out of commission for a very long time, and the work can be done late in the fall when play on the course is at a minimum.

From Walter C. Reed, Greenkeeper,  
Westwood Country Club, Clayton, Missouri.

We are going to seed the course the first of September with a 30-70 mix, thirty per cent red top, seventy per cent Kentucky blue grass. So that we may have a finer turf next year. We are going to seed one hundred and twenty-five pounds per acre and on our 27-hole course there will be seventy acres to seed.

Hugh C. Moore, Greenkeeper and Professional,  
Sea Island Country Club, St. Simons Island, Georgia.

I am seeding with red top for winter greens as I find that this grass is superior to Italian rye and gives me a green equal to northern courses for putting surface.

From James Muirden, Greenkeeper,  
Ridgewood Golf Club, Cincinnati, Ohio.

Yes, I expect to seed parts of fairways requiring it by cutting them with a disc and seeding with seventy per cent blue grass, thirty per cent red top, also topdressing with soil and sand.

From Thomas Galvin, Greenkeeper,  
Rhode Island Country Club, West Barrington, Rhode Island.

I am going to sow about fifty pounds of Velvet bent seed on a turf garden this fall.

I have an acre of creeping bent which I sowed last fall. One-half is South German



# DRESSING — FERTILIZING

Answers on the best methods of handling the important fall  
answers to the three questions sent them

mixture and the other is Rhode Island creeping bent, which I purchased from Mr. A. N. Peckham, Kingston, Rhode Island. The Rhode Island creeping bent seems to show a finer strain and a deeper greenish color than the South German seed. The South German is a shade lighter in color.

From Herbert E. Shave, Greenkeeper,  
Oakland Hills Country Club, Birmingham,  
Mich.

On the third of September we start to regrass our eighteen greens on our North course. The bent of Inverness strain is getting too much nap, so we are going to skin them down to the roots, spike, roll and seed with fifteen pounds Cocos bent, seed and topdress with two and one-half yards topdressing. We had some of this seed tried out and I believe it's the best ever.

From Chester Mendenhall, Greenkeeper,  
Sim Park Golf Club, Wichita, Kansas.  
No.

From John Gray, Greenkeeper,  
Essex Golf and Country Club, Sandwich,  
Ontario.

For fall seeding I use New Zealand fescue and South German bent for fairways and tees.

From Joe P. Mayo, Greenkeeper,  
Pebble Beach Country Club, Del Monte,  
California.  
No.

From James W. Bolton, Greenkeeper,  
Berkshire Country Club, Reading, Pennsylv-  
vania.

We do not contemplate seeding this fall. If a bent nursery is kept in good condition at all times we find that we can work to a much

better advantage by sodding and plugging the affected areas before our regular topdressing once every month. On our fairways we use a mixture of Kentucky blue grass and Rhode Island bent. We do not use red top for we find in many instances that there is a considerable amount of red top in the bent.

From A. E. Arnold, Greenkeeper,  
Masonic Country Club of Western Michi-  
gan.

I am planning in September of planting sixty-five thousand square feet of Washington strain bent stolons to take up as sod next fall to replace the grass we have on nine of our twenty-seven greens. This planting will be in our nursery where we have enough sod of Washington strain to replace seven greens this fall. We changed sod on two of our greens last fall and we find a marked difference in two different grasses. We do not know the true name of our present grass but we note it is inclined to go off color during the hot weather of July and August. In two more seasons we hope to be completely changed over to Washington bent.

From Ford Goodrich, Greenkeeper,  
Flint Country Club, Flint, Michigan.

Tees—Fescue  
Greens—Washington Bent Stolons  
Fairways—One-half fescue, one-quarter red top and one-quarter Kentucky blue grass.

From J. O. Campbell, Greenkeeper,  
Wethersfield Country Club, Hartford, Conn.  
No.

From John Morley, Greenkeeper,  
Youngstown Country Club, Youngstown,  
Ohio.  
No.



## 2--When and How Will You Topdress This Fall?

From Joseph Valentine, Greenkeeper,  
Merion Cricket Club, Philadelphia.

I will topdress the fairgreens with top soil mixed with the same amount of sand so as to not get the mud formation and the putting greens I will topdress about the second week in September. I will also reseed them (greens that should have thicker turf), and will use South German bent and will use topdressing with one part of screened mushroom soil, one part of compost, two parts of sand and one hundred pounds of cottonseed meal, using about one and one-half yards to five thousand square feet.

From Alex Binnie, Greenkeeper,  
Shoreacres Golf Club, Lake Bluff, Illinois.

The amount of top dressing used on any one fairway or spot will vary depending entirely upon the requirements. We will topdress during September and October.

From Elmer F. Affeldt, Greenkeeper,  
Glen Oaks Golf and Country Club, Great Neck, Long Island.

It is too early to estimate the work that may be necessary on our fairways, as much damage has been caused by the drought as we have had no rain to speak of in nearly three months and we have reason to feel that a great deal of seed-ing will be necessary, especially on the knolls.

When we do undertake the work it will be done in this manner—disc the bare spots well,

with the blades of the disc set rather straight, seed well, topdress and roll.

From Walter C. Reed, Greenkeeper,  
Westwood Country Club, Clayton, Mis-souri.

We will topdress about the middle of Sep-tember and will use one and one-half yards to seven thousand square feet. We will use good screened soil with one-third sand and ten pounds of ammonium sulphate per yard.

From Hugh C. Moore, Greenkeeper and Pro-fessional, Sea Island Country Club, St. Si-mons Island, Georgia.

I topdress once a month using a black loam known as muck. The quantity per thousand square feet I use according to conditions of the green. I have no set amount.

From Thomas Galvin, Greenkeeper,  
Rhode Island Country Club, West Barring-ton, Rhode Island.

About the first of October I topdress greens and tees with compost. In the middle of No-vember I cover the greens with seaside sand which is sifted through a fine screen. The golf-ers play on the greens all winter, except when there is a thaw. I then give them temporary greens until the big greens freeze up again then I move them back into the big greens as they won't do them any harm when they are frozen. I use about two yards of compost and about ten pounds of sulphate of ammonia to six



### "A COMPLETE TOP DRESSING"

Says FRED A. BURKHARDT, veteran  
greenkeeper of the Westwood Country Club, Cleveland

"When the hot weather in July hit us my No. 5 green went bad. It was fermentation of the compost used last fall. Sulphate of Ammonia was giving some relief when Mr. Smith sent me a sample of his live hardwood humus. I dressed the worst part of the green and an immediate change for the better was noticeable. Every day since it has improved, much faster than the balance of the green. I would like to topdress all of my greens with Mr. Smith's humus this fall. It's certainly different."

We believe we have discovered a method of preparing our natural hardwood humus that will revolutionize putting greens maintenance and do away with costly chemicals and dopes.

*Do you want to know about it?*

THE OHIO HUMUS PRODUCTS COMPANY—BOX 95—LONDON, OHIO  
James A. Smith, President



thousand square feet as I believe in a heavy compost for spring and fall.

From James Muirden, Greenkeeper,

Ridgewood Golf Club, Cincinnati, Ohio.

Expect to topdress fairways about same time as seeding around September 1 to 15. Greens will be topdressed every two weeks from about September 1 to end of playing season at which time they get a heavy topdressing of fifty per cent good soil, fifty per cent sand good and sharp, plus one-half ton for green of Fertiluvia fertilizer.

From Herbert E. Shave, Greenkeeper,

Oakland Hills Country Club, Birmingham, Mich.

On our South course as you know we hold the Women's National Open commencing September 30. Our greens will be topdressed the fifteenth of August or twentieth with two and one-half yards of dressing composed of humus and sand, fifty per cent of each just to give them a little color and true them up. I am going to add fifteen pounds arsenate of lead as a check for chick weed and worms. On each green where we used arsenate of lead in the spring we had no worms.

From Chester Mendenhall, Greenkeeper,

Sim Park Golf Club, Wichita, Kansas.

We will topdress our greens the first of September and again the first of October. Our topdressing is made up of equal parts rich soil and sand. We will use one yard topdressing per five thousand square feet for each application, to which we will add twenty-five pounds sulphate of ammonia per yard of topdressing mixing same well with the topdressing before putting it on the green.

From James W. Bolton, Greenkeeper,

Berkshire Country Club, Reading, Pennsylvania.

We will start our fall topdressing about September 26. The compost is prepared from sods, leafmold from the woods, and good top soil and is not used until it is over two years old. We use one part compost, one part mushroom soil and two parts sand. It is applied at the rate of three cubic yards to the green averaging from five thousand to six thousand square feet in size.

Read what one of the leading Greenkeepers in Canada has to say regarding the MacGregor Compost Distributor.

Long Branch, Ontario, Canada.

June 8th, 1929

MacGregor Compost Distributor Company,  
Wheaton, Illinois, U. S. A.

Gentlemen:

I am pleased to state that I am using one of your Compost Distributors this season, I find it a great labor saver in top-dressing my greens. One great feature of the machine is the evenness of distribution.

I am getting another machine so that I will be able to get my greens top-dressed within two days.

My opinion is that no Golf Club can afford to be without one of these machines.

Yours truly,

W. J. Sansom, Greenkeeper

Toronto Golf Club.

MACGREGOR COMPOST DISTRIBUTOR COMPANY  
P. O. Box 717, Wheaton, Illinois

From A. E. Arnold, Greenkeeper,

Masonic Country Club of Western Michigan.

I have already started to topdress our greens using about two-third cubic yards per one thousand square feet of surface with sand top soil run through a screen, and following up after topdressing each green with five pounds sulphate of ammonia per one thousand square feet in liquid form. I plan to topdress again in September with compost made of barnyard manure, sandy top soil and muck which has been prepared six months ahead of use and to follow with Milorganite using about twenty-five pounds per one thousand square feet.

From John Gray, Greenkeeper,

Essex Golf and Country Club, Sandwich, Ont.

September, October and November. Four year old organic fertilizer, loam and sand, equal parts at the rate of seven cubic feet to one thousand square feet. November topdressing, sand only at the rate of five cubic feet per one thousand square feet.

## FOR FALL DRESSING

Use

CLEVE-BRAND SOIL IMPROVEMENT

## CHARCOAL

Makes the soil porous, retains moisture and assures fine healthy turf

We also sell Coarse Lump, Hardwood Charcoal for broiling steaks, chops, fish, etc. and for Clam Bakes, etc.

Send for a sample order

THE CLEVELAND CHARCOAL SUPPLY CO.

3905 Jennings Road

Cleveland, Ohio



## 3--Have You Planned a Fall Fertilizing Program?

From Joseph Valentine, Greenkeeper,  
Merion Cricket Club, Philadelphia.

I have not planned any fertilizer program for this fall, as in the past I have used so much of it that my grounds are a bit overfed, so perhaps I am going to lay off for a year.

The spring of 1930 I may use some inorganic fertilizer in order to stimulate quicker growth.

From Herbert E. Shave, Greenkeeper,  
Oakland Hills Country Club, Birmingham, Mich.

We always fertilize in late fall and early winter. We intend to close our North course in October and spread rotted cow manure on our sand. This we have had to do every fall on this course as it is very sandy and cow manure sure does help it along. I try to get some heavy soil to help out, but don't have much luck getting any after play has thinned

down. I usually go over our greens with a dressing of sharp sand about two yards per green. It has all winter to work into the ground and helps protect the grass from players who like to tramp around the course and think they are enjoying their game of golf.

From Alex Binnie, Greenkeeper,  
Shoreacres Golf Club, Lake Bluff, Illinois.

We plan to topdress or fertilize a number of fairways each year and seed whenever necessity demands. The type of fertilizer used is governed entirely by an analysis of our soil. We are, at this time, awaiting an analysis report on samples submitted a few weeks ago.

From James Muirden, Greenkeeper,  
Ridgewood Golf Club, Cincinnati, Ohio.

Where fairways are thin I generally use barnyard manure applied with manure spreader late in fall.

From Thomas Galvin, Greenkeeper,  
Rhode Island Country Club, West Barrington, Rhode Island.

During the months of June, July and August I topdress with about ten pounds of sulphate of ammonia and morate of potash (five pounds each) every two weeks. I get very good results.

From John Gray, Greenkeeper,  
Essex Golf and Country Club, Sandwich, Ontario.

I intend fertilizing all fairways. One hundred yards from tees to greens at rate of eight hundred pounds per acre with Milorganite.

From Joe L. Mayo, Greenkeeper,  
Pebble Beach Country Club, Del Monte, California.

Every two months one hundred and fifty pounds of sulphate of ammonia and three hundred pounds of gypsum and eight yards of fine loam per acre, using a lime spreader for distribution. We fertilize the year around.

From James W. Bolton, Greenkeeper,  
Berkshire Country Club, Reading, Penna.  
We have planned to put about seventy-five

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