

# BENT GRASS SEED

More than 3,000 Acres Devoted Exclusively to the Production of Bent Seeds and Stolons of the Creeping Bent for your PUTTING GREENS, FAIRWAYS, MUNICIPAL PARKS, ETC.

## RHODE ISLAND BENT

(*Agrostis Tenuis*)

If you have a poor turf on your fairways and it looks unattractive—turns brown during the play time of July and August, when you most desire your best turf—now is the time to establish a permanent, closely woven, beautiful turf by sowing a mixture of one part Rhode Island Bent and two parts Creeping Blue Grass or Poa Trivialis. I can furnish this mixture for 55c per pound in one hundred pound lots or more. This mixture costs only slightly more than inferior grass mixtures and the results obtained are much more permanent and desirable.

In the Eastern and Northern States Rhode Island Bent is used extensively on putting greens. Remember, my seed is not Colonial Bent that comes clear from New Zealand, which often germinates poorly, nor is it the German Bent that is a mixture of the different Bents which often produces a mottled, spotted turf of uneven color and texture which is undesirable on a putting green, but it is Rhode Island Bent grown right here on my farms in Rhode Island. Native grown, acclimated, winter hardy Rhode Island Bent will produce much more permanent and desirable turf than any of these seeds of unacclimated grass of foreign origin.

## TRUE CREEPING BENT

(*Agrostis Stoloniifera*)

Creeping Bent is now considered to be the best turf of anything in existence for putting greens, athletic fields, football gridirons, etc.

Up until recently it was generally considered that the only way to produce a Creeping Bent turf was by planting the slips, runners or stolons, as botanists call them, of the grass. I soon noted that this Creeping Bent that I was growing in my nurseries for stolons produced seed in limited quantities here on my farms located in the natural Bent seed producing latitude and climatic conditions. I gradually got larger areas into Creeping Bent for seed production and in 1924 I offered a small quantity of the seed to the golf clubs to plant on their putting greens. I have gradually increased my areas of Creeping Bent and thus my seed production. I have now furnished this Creeping Bent seed to nearly 300 golf clubs to plant on their greens. There isn't any question but that you can produce a Creeping Bent turf

of exactly as fine color and texture by planting the seed for at least one-third the cost of planting the stolons.

## SEASIDE BENT

(*Agrostis Maritima*)

Seaside Bent is a wild grass that grows in low wet areas along the Pacific Coast from San Francisco to Alaska, and on the Atlantic Coast from New York City to Prince Edward Island. Areas where this grass grows naturally are overflow lands, often flooded several feet deep in the winter time. This seed is being sold on the Pacific Coast under registered trade names. The inference has been made that the seed sold under one of these names is of a single strain of Creeping Bent. This is purely sales talk. A pure strain is the progeny of a single plant. Under the overgrown flood conditions where this grass grows in Coos County, Oregon, keeping strains pure as such is absolutely impossible. This "pure strain" swindle has been sung to such an extent that many golf club officials have become suspicious especially in California and are beginning to realize that they have been paying the excessive price of \$2 to \$2.50 per pound for the privilege of purchasing seed under a trade name, while the same species of grass seed could be purchased under the true name of "Seaside Bent" from several sources for around half that price. I harvest a considerable amount annually of Revere Bent which is the name given to the Seaside Bent growing naturally in the vicinity of Revere Beach, Massachusetts. This Seaside Bent is an aggressive grower. Mixed with Poa Trivialis it makes a wonderful fairway turf along the coast. Many have used it on their putting greens with a great deal of satisfaction. I do not offer this seed to be used on clubs inland.

## VELVET BENT

(*Agrostis Canina*)

I have had terrible luck with my Velvet Bent. I had a little clear seed in 1925. In 1926 I lost the crop due to adverse weather conditions, and last year the army worms cleaned up nine-tenths of the crop. I'm still after it! I'll have some for you within a year or two. Ought to have a little for you this coming August, but haven't a pound of it left now. Velvet Bent produces the Rolls Royce of the turf world.

Buy your seed direct from the American farmer who grows it. Remember the bent seed offered you by seed dealers is invariably of foreign origin. Acclimated, winter hardy bent seed grown here at its native home will produce more permanent and desirable results than any unacclimated seed from foreign countries.

# A. N. PECKHAM

KINGSTON,

RHODE ISLAND

certain; and is due only to the contraction of particles of inorganic earth which the grains of sand may separate. It does not make a desirable home or feeding for our very necessary soil bacteria.

All too frequently, improper selection of soils for top-dressings is made. As a rule a dark, rich-looking earth, taken from a low part of the golf property, is considered good enough for this purpose. Before such a selection is made, assure yourself of the organic content of this soil. A fair test may be made by drying a sample thoroughly and noting carefully its "mellowness," or the ease with which it may be crumbled by pressure in the hand. It must be observed that if there exists "mellowness" due to excess of sand, there still may be deficiency in organic matter.

In our virgin soils, Nature, aside from latent, fixed inorganic feedings, insisted that plant life should be self-sustaining through the life-cycle, death and decay of animal- and vegetable-matter. The tropics, where rapid decay, due to climatic conditions, offers the greatest possible amounts of organic matter for future fertility, give us a profuse development of vegetation. In our latitude, the higher lying slopes, hills and clay lands, before being cleared of vegetation, were extremely productive as virgin soils.

Clearing deprived these soils of proper organic matter for future decay and further impoverished them by facilitating a wash of practically all organic matter to the lower valleys. These valleys became dark in color, porous in texture and of the greatest possible fertility largely at the expense of the higher clay soils. These clay soils, unless scientifically replenished by the direct application of the organic matter or the decayed vegetation resulting from the rotation of proper crops, rarely recover more than a trace of their former fertility.

Improper original green construction has forced a great number of our older courses to rebuild their greens through a series of top-dressings with such mixtures of earth and organic matter as will more nearly imitate the best in modern green-construction. This is a slow and expensive process but has proven the only means of correcting an unfortunate error in the original work. The golf organizations who, in their original construction work, properly cared for the organic content of their soils, were very wise, and many, no doubt, acted more wisely than they knew.

## Bent Fairway Planting in Michigan

By HIRAM F. GODWIN,  
*Greenkeeper, Redford (Mich.) Country Club.*

IN a recent issue of GOLFDOM there was an inquiry regarding using creeping bent on fairways. I had the opportunity in the Detroit district last year of planting a complete eighteen-hole course, fairways as well as greens, entirely to creeping bent. It has made a wonderful growth. The soil is stony clay, not naturally easy to establish grass on. Grass on the fairways was planted in rows about 12 inches apart and has almost entirely filled in. By June this year, we will have one uniform mat of creeping bent turf, on soil that it would have taken several years to get even a sparse turf, using seed. The cost, considering that an excellent turf has formed in a year's time, has not been materially above seeding.

While there was ample water available, it was not necessary to use same except about five weeks during the hottest part of the summer. We anticipate some fluffiness the first season but experience has shown that after the second winter the turf knits down to the ground better and the objectionably large divots so noticeable in first year turf do not occur.

## Announce 1929 Chicago and New York Golf Shows

SPEARMAN LEWIS and A. R. Shaffer, managers of the International Golf Show, announce the first New York edition of the International Golf Show will be held at Grand Central Palace February 18-23, 1929. Two weeks later the fourth Chicago show will be held at Hotel Sherman, March 11-16.

Chicago executive headquarters have been moved to 35 E. Wacker drive.

DON'T kid yourself that you will be able to hurry nature. Making that mistake continues to add to the preventable waste in golf.

GET your greenkeeping force in the habit of using plenty of oil on the equipment. Watch the results in reduced costs and increased efficiency of the machinery.



"Grub-proof" your turf *now*. Sherwin-Williams Arsenate of Lead will *control or prevent infestation of greens, tees or fairways*.

Sherwin-Williams Arsenate of Lead is the lightest and fluffiest made, thereby insuring the good mixing necessary for complete coverage. It possesses maximum killing properties, quick action and unquestioned effectiveness in controlling "grubs," worms, earthworms and many weeds.

S-W Arsenate of Lead also stimulates growth of turf grass. No injurious effects. It "agrees" with other chemicals and fertilizers used to promote a healthy turf.

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Send for an informative bulletin that makes it easy to "grub-proof" the turf on your course. Start work at once to prevent or control grubs. For a free copy address Dept. 500

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Before Wilshire staged the Los Angeles \$10,000 Open they performed a "skin grafting operation," taking the turf from one of Hillcrest's greens.

## My Method of Building a New Green

By CAPT. D. L. REESE\*

President, Metropolitan Greenkeepers Association

**Q**UITE frequently in these times a greenkeeper is required to construct a putting green; sometimes because the hole has been lengthened, sometimes because the site of an old green has proved unsuitable for turf culture, and for other reasons.

The first thing to consider about the new green is its location. In this connection the eye will naturally travel to where the green would fit artistically into its surroundings. Utility and upkeep must, however, be very seriously considered as well as beauty, for the site of a green is governed by two factors that can not be slighted: the ease and cost of construction, and the ease and cost of maintenance.

An ideal position for a green is a gentle grade into the face of which an approach shot can be played. Such a site calls for comparatively little construction and as a

rule the necessary guarding traps will be easy to carve out and simple to drain.

### Handling Rocks

Very often the slope is too great to be left as it is and the back of the green has to be raised. This always is expensive, the cost mounting in proportion to the amount of fill required. Where rocks and boulders have to be taken away or buried, considerable money and time can be saved by using the rocks and boulders to form a foundation for the sub-grade. In doing this particular care is necessary in two directions. First, the rocks and stones must be packed so that very few, if any, air pockets or cavities are left among them, causing undue and troublesome settlement later on. Often in the case of a green built in the location now under discussion it is necessary to guard against flooding at the entrance, either by a drain or a gently sloping apron.

\*Address before National Greenkeepers' convention.

# For the Control of Brown-patch on Golf Greens



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TURFCALOMEL is the outcome of experiments to determine the most satisfactory, efficient, convenient, and safest fungicide for both large and small brown-patch. It contains both corrosive sublimate and very finely powdered calomel carefully adjusted in composition with mineral matter. This composition has distinct advantages. It prevents caking, gives bulk, and allows of a more even distribution of the active ingredients—thus reducing to the minimum any possibility of burning the turf. Will also serve to eliminate earthworms.

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A M E R C K P R O D U C T

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The punch-bowl or saucer type of green, considered very useful when the green is blind, makes the constructor strive for adequate surface drainage. He can gain his objective by making use of one side of the green.

## Correcting Soil Conditions

The job of rebuilding a putting green falls on the greenkeeper sometimes by reason of bad soil conditions on an existing green. In the construction of a green on a heavy clay soil the most important object is to improve the mechanical condition of the soil. Most greenkeepers have had experience at some time with clay soils, and it is scarcely necessary to point out that such soils are usually deficient in humus and, although comparatively rich chemically, they may be of such structure as to exclude beneficial soil bacteria. For this reason their chemical contents are practically unavailable. For rectifying clay soil conditions I recommend the following procedure:

1. Strip the soil to a depth of 8 or 9 inches.

2. Pile it nearby where it can be worked on.

3. If remodeling a green you will have to use the subsoil as a foundation. Pack it well down to avoid settling.

4. When the contours are finished, it may be well to lay a system of 3-inch tile piping linking any depressions or hollows in the surface of the subgrade. A fall, of course, is essential.

5. Cover the entire area to a depth of 3 or 4 inches with crushed cinders or breeze screened through a 1-inch mesh screen and pack them firmly into position. A Royer machine comes in handy on a job like this.

6. Next have a quantity of  $\frac{3}{4}$ -inch breeze or cinders and mix it with the top soil previously removed from the site in the proportion of 3 of soil to one of cinders. Apply a layer of this 4 inches thick.

7. On top of this place a second layer, also 4 inches thick, of the same top soil, mixed this time with  $\frac{1}{4}$  inch cinders in the proportion of 2 of soil to one of cinders.

8. For the final layer or seed bed use a 2-inch layer of equal quantities of top soil and sharp sand (or 3/16 inch cinders) into which has been mixed one yard of well rotted manure for each 1,000 square feet of surface. Spread this evenly, and

roll or tread it thoroughly, so that in the end you can hardly see footprints on it.

9. During all of the above work see that the undulations are maintained true according to the plan.

10. It will prove highly advantageous to work into the surface about 100 lbs. or 150 lbs. of good commercial fertilizer and the green is ready for sowing or turfing. In the case of a green to be planted with stolons there will be required a quantity of top dressing of the same composition as the seed bed.

We have provided a firm, smooth foundation with all the hollows adequately piped. Then we have a filter bed that cuts off the cold wet clay, passes the water through rapidly yet retaining moisture, artificially or otherwise applied, during the hottest weather. On top of this we have what may be called two additional filter beds, each capable of conducting surplus water from one to the other, then to the real filter bed, then to the drains. These two filter beds, being composed partly of the top soil, which is warmed and conditioned by absence of surplus water and the presence of air yet kept supplied with water held up by the breeze or cinders, make wonderful rooting media for the finest grasses. The seed bed, composed of soil, sand (or fine cinders), rotted manure and soluble fertilizer, forms a fertile, porous soil rich in humus. The latter is the home of the beneficial nitrifying soil bacteria which work on the chemical constituents of the soil and are largely responsible for its fertility.

I suggest you give thought to the following factors in your green construction:

1. Traps help orient the shot. Try to construct traps so they show the sand.

2. Make surface rolls almost imperceptible and such as can be easily cut by the mower; do not give rolls too much room on the green—leave plenty of room for placing and changing the cup.

3. Take care of flooding from higher levels, either by grassy hollow or by drainage.

4. For a pitch shot, use a narrow opening or an opening to one side, but make it wide enough for economical maintenance.

5. Do not build a terrace where you do not have much more area than an ordinary green required—each terrace should be about two-thirds the size of an average green.

# better turf

## on greens and fairways



THE quality of your golf turf depends upon the quality of your soil. If the soil lacks fertility, good turf will not grow—cannot grow until the soil condition is made right.

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## Drainage Pointers That Have Helped Me

BY ANDREW WHITE,

*Quilchena Golf Club, Vancouver, B. C.*

GOLF courses should be drained so as to permit play immediately after a heavy rainfall. Sometimes one may see pools of water standing on the fairways for two or three days after a heavy rainfall. This, in addition to annoying the players, has a bad effect on the turf. It is sometimes a tough problem to get rid of this surface water, especially when the soil is heavy.

As a rule drains are laid in the low lying ground. When I see hollows where water is likely to stand in pools I fill the trench up to within six inches of the top with rock, cinders, etc. To hollows that are not in line with drain I run laterals, filling up the trench in the hollow with rock and have a tile built end-up in the center. As tractors pack the earth over those rock pits it is necessary to send men after the first heavy rain to loosen up the earth so as the water will get away quickly.

The above method will help to eliminate water standing in pools.

Tile laid at a regulated depth on many courses would be a waste of money. On this course, as on many others, we have hardpan. As the surplus water flows on the hardpan it stands to reason that the tile must be laid there to get at the root of the trouble. If this is not done the water will flow underneath the tile. When one has to cut into the hardpan to get a grade it is essential to fill up the trench to the top of the hardpan with porous material to prevent water from flowing over top of the tile.

Laterals in my idea should never run straight into the main, but at the same angle as the main is running. Connections should be made as near the top of the tile in the main as possible. If this is not done one sometimes finds that the flow of water in the main backs up the water in the laterals and makes them useless, at least for the time being.

Seepage on greens I take care of by draining on the high side just off the green, laying the tile on the hardpan and filling up the trench to within six inches of the top with rock, etc.

I have never had any trouble with seepage on greens that have been drained as above.

When open ditches run into tile I like to have two pits cribbed with small cedar

logs; this checks the rush of water and allows gravel, etc., to sink before reaching tile. The second pit is a safety first idea; one can't depend on the weather, especially in this part of the world when it rains for weeks on end.

I never use less than four inch tile and always leave at least a quarter of an inch between joints, covering joints with any porous material.

Open ditches should be cleaned early in the fall. When one is troubled with leaves those ditches may have to be looked at at least once a week. Special attention should be given to outlets so the water will get a good run away from the tile.

My comments, of course, are not written with any intention of teaching anything about drainage to the experienced greenkeeper, but may interest, and help those who have not had much work in this important phase of maintenance.

## Gas Ground Pests from Courses

BY L. T. PARKER

*Supt. of Grounds, Pasadena Golf Course*

UP until two years ago we fought the gophers and ground squirrels with poisoned raisins, poisoned carrots and traps without diminishing their numbers.

At this time we commenced using cyanogas. In four weeks we had made a 100% kill on the ground squirrels. We haven't seen one on the course since. It took us about six weeks to rid the course of the gophers to a point where they were very little trouble. We found that all that was necessary was to place a spoonful of the cyanogas well down in the burrow, taking care not to disturb the gopher more than was necessary, leaving the hole open, as the gas is heavier than air and will penetrate farther back in the burrow. Then, too, the gopher's natural tendency is to come back to close the hole and is immediately killed by the poisonous gas. Sometimes the opening in the burrow will be plugged. In this case remove the plug before placing the cyanogas. We also found that the work done in the early morning shortly after daybreak was more effective than that done later in the day when the gopher is not so active.

We have entirely exterminated both squirrels and gophers from our course, and now it is only necessary to treat an occasional working where the rodent comes in from adjacent territory.



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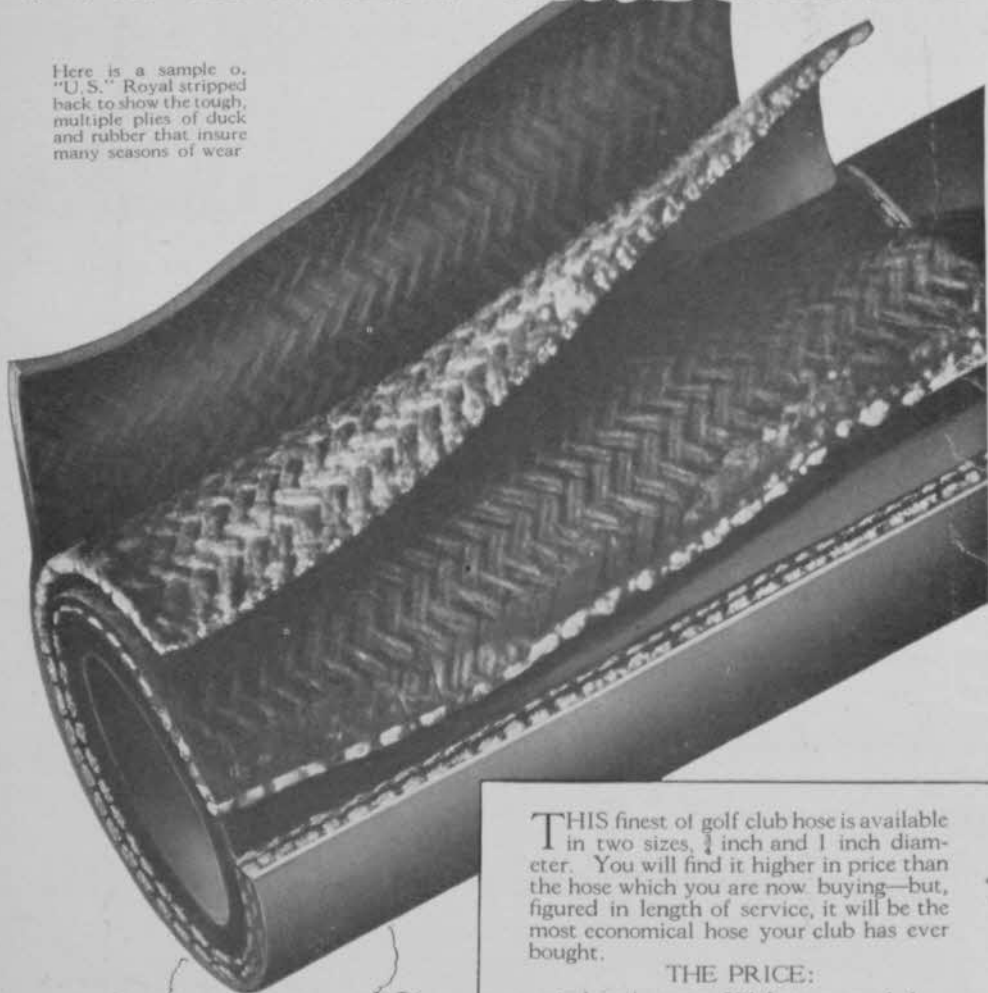
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