

# Bulletin of the Green Section of the U. S. Golf Association

Vol. V.

Washington, D. C., July 16, 1925.

No. 7

## A MONTHLY PERIODICAL TO PROMOTE THE BETTERMENT OF GOLF COURSES

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Published by the Green Committee of the United States Golf Association at Room 7213, Building F, 7th and B N. W., Washington, D. C.

Address all MAIL to P. O. Box 313, Pennsylvania Avenue Station, Washington, D. C.

Send TELEGRAMS to Room 7213, Building F, 7th and B N. W., Washington, D. C.

Subscription Price: To golf clubs that are members of the Green Section of the U. S. Golf Association, \$4.00 per year (included in membership fee).

Entered as second-class matter December 16, 1921, at the postoffice at Washington, D. C., under the Act of March 3, 1879. Copyright, 1925, by the Green Committee of the U. S. Golf Association.

### **Metropolitan Green Section and Service Bureau**

At a called meeting of the Metropolitan Golf Association held at the Waldorf-Astoria Hotel, New York City, June 23, there was formed the Metropolitan Green Section and Service Bureau. Its objects are essentially identical with those of other district green sections now operating at various centers throughout the United States and as detailed in two articles in the BULLETIN of April 16, 1925, concerning the work of the Cleveland and Philadelphia district green sections and service bureaus. Thus some of the important features of the work are to maintain readily available trade-lists of course-maintenance commodities, arrange for quantity purchases and discounts, advise with member clubs on turf problems, distribute information through bulletins, and hold monthly all-day meetings of greenkeepers on the respective golf courses of the organization. It is also contemplated to cooperate with manufacturers in carrying spare parts and service in connection with their equipment, in New York City. During the three or four months of the formative stage of the Bureau it will be under the immediate direction of Mr. J. K. Bole who, it will be recalled, is accredited with having brought the Cleveland District Green Section up to its present high state of efficiency.

A separate office for the Metropolitan Green Section and Service Bureau is being opened in down-town New York. Information received from the President of the Metropolitan Golf Association under date of July 2, indicates that 22 clubs have to date enrolled in the Metropolitan Green Section and Service Bureau and a dozen more have promised to enroll soon.

Further information may be obtained from the Secretary, Metropolitan Golf Association, 294 Madison Avenue, New York City.

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### **Creeping Bent Nurseries**

A larger proportion of the nurseries planted to creeping bent at various golf clubs are sadly neglected. There is really little use in planting a nursery unless it is properly cared for. This involves cultivation to keep down weeds at least; and a much greater growth can be secured by fertilizing and irrigating. If any club proposes to establish vegetative greens it can grow its own material much cheaper than any commercial dealer can possibly supply it. At the present time there are only two strains of creeping bent that the Green Section can confidently recommend, namely, the Washington and the Metropolitan. There is little to choose between these two. Both make turf of beautiful color and of the very highest quality. Both are almost immune to brown-patch. Do not risk any other variety at present except in a purely experimental way, especially in the brown-patch belt. Any club can grow its stock in a nursery much cheaper than it can be bought. Be sure, however, you have pedigreed stolons to start with. The Green Section will be glad to furnish a start of either the Washington or the Metropolitan bent.

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**Twenty-Ninth Amateur Golf Championship of the United States.**—This will be held August 31 and September 1 to 5 inclusive, 1925, at the Oakmont Country Club, Oakmont, near Pittsburgh, Pa. Full details may be obtained from the United States Golf Association, 110 East 42d Street, New York City.

## June Experiments at Arlington Experimental Turf Garden with Chlorophenol Mercury Compounds (Semesan and Uspulun)

By O. B. Fitts

Brown-patch appeared unusually early this year at Arlington. It also appeared about the same time as far north as Boston, and at St. Louis it was more serious than at Arlington.

Small brown-patch appeared on some of the more susceptible strains of bent at Arlington the latter part of May, but the injury was very slight and the grass soon recovered without any treatment other than watering early in the morning. However another attack of small brown-patch appeared about June 5, which was more severe than the earlier attack, and large brown-patch began to show up about the same time.

A number of treatments were started June 5 and 6, including chlorophenol mercury (Semesan and Uspulun), Bordeaux, potassium permanganate, Sulco-V. B., Corona, topdressing with compost and ammonium sulfate, and early morning watering. The treatments which have showed evidence of effectiveness up to date are the chlorophenol mercury preparations, Bordeaux, and topdressing with compost and ammonium sulfate. The early morning watering has been effective in lessening the injury from the disease; however, its results have not been as pronounced as those of the mercuric compounds in checking the disease and limiting the injury. These mercuric preparations have been more effective this summer in checking the large brown-patch and bringing about recovery of the grass from attacks of both large brown-patch and small brown-patch than has Bordeaux powder; and they are apparently effective as a preventive of small brown-patch for several days at least after the application is made, while Bordeaux does not seem to prevent it at all.

For mild cases of brown-patch the topdressing with compost and ammonium sulfate has been very effective in checking the disease and bringing about quick recovery, but in the case of a severe attack the mercuric compounds are more effective, and these should be applied as soon as possible after the disease is in evidence. The application should be followed the next day with the topdressing, as this insures a more rapid and thorough recovery.

Better results have been obtained at Arlington from light applications of chlorophenol mercury than from heavy applications; moreover, much less burning of the grass has followed the light applications. For dusting, the material was used at the rate of approximately 1 pound to 6,000 square feet. For sprinkling or drenching, 1 pound dissolved in 50 gallons of water was applied to 2,000 square feet, followed by an application of 50 gallons of water in a fine spray. For spraying, a solution of  $\frac{1}{4}$  of 1 percent was used, applied at the rate of 50 gallons to 3,000 square feet.

In the control of the disease, there is apparently no difference in the effectiveness of either of these two mercuric preparations, and very little difference in the effectiveness of any of the three methods of application mentioned above. However, the dusting seemed to burn the grass more than the sprinkling or spraying. Additional tests with still lighter applications of these compounds are under way and the results will be published later.

When turf is injured by brown-patch, or is injured by burning with remedial preparations, a topdressing of compost is recommended to be applied at the rate of 1 cubic yard to 5,000 square feet. To this compost should be added and thoroughly mixed in, 15 pounds of ammonium sulfate or ammonium phosphate to each cubic yard of material. This treatment has proved to be effective in hastening the recovery of the grass.

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### Paper-Board Peg-Shaped Tees

By Earl B. Kent, Highland Country Club, Attleboro, Mass.

We think we have made one of the longest steps forward in green-keeping that has been made for a long while. After much effort we persuaded one of the manufacturers of tees or pegs to make a special tee for us to be furnished in bulk at a very low price. Our object was to obtain better teeing grounds by doing away with the sand kill in the turf, to eliminate the carting of the sand and the upkeep of the boxes, and to keep the hands and clothing cleaner. Another important point was to save time for the golfers and thus stop the crowding and long waits. We have accomplished every object far beyond our hopes. These tees are paper-board pegs 1 $\frac{1}{4}$  inches long. We bought 50,000 of these tees and placed them in a small box beside the score cards and pencils. The players take as many as they like as they go out to play. We asked the members to use them and not to pick them up but to go right along. We took away the sand boxes, and our results are worth while. We now find the players ready to chip in and pay for them. We have already saved the cost of the pegs in expense of the upkeep. We have eliminated all sand carting and box upkeep. We are now in a way to have some good grass tees. We find that on our heaviest days, while our tees show the wear the roots of the grass are not affected, and a few days of rest and plenty of water brings the turf right back. We do not have to sod at all, and we find our tees are kept in good shape and with much less work. We find the time saved in playing is marked. Foursomes playing 18 holes save from 15 to 30 minutes. We now have no long waits, and every one goes along fast. In fact, with the time saved some foursomes are able to play an extra 9 holes. This is hard to believe, but it is really so. As caddies, greens men, and players pick up stray pegs as they see them, and return them to the club, very few are found left on the course. Moreover, as they are made of paper, they go to pieces when wet and so do not bother the lawn mowers. We call our experiment 100 percent perfect, and pass the idea along as a real time and money saver.

When we took away our tee boxes which carried the hole number and yardage we had to get a new idea. So we had made for us metal signs with a metal post. These posts are about 18 inches long and the signs are about 4 by 6 inches. These are made of metal and enameled in glazed finish. The background is blue and the figures white. Of course each one was different and the price was higher than on a standard item, but we thought it very reasonable. Since our first lot was made, however, we have found a source from which we can get them cheaper and also better.

## Tile Drainage for Greens of Clay Soil

By Wendell P. Miller

This article is prompted by an inquiry made of the Green Section with regard to the system most generally used for draining putting greens, especially those of clay soil.

What is a clay soil? The Bureau of Soils classifies soils as clays, silts, loams, or sands, and as combinations, like clay loams, sandy silt loams, sandy clay loams, depending upon the percentage of each of the soil separates sand, silt, and clay which a given soil contains. Grains of soil having a diameter ranging from .05 mm. to 1 mm. are called sand; those with a diameter of from .005 to .05 are silt; and those with diameters of less than .005 mm. are clay. The Bureau further classifies the combinations of soil separates and calls those soils which contain between 20 percent and 30 percent of clay particles clay loams; while those soils that contain more than 30 percent of clay particles are called clays.

The determination of the drainage requirements for any given situation therefore resolves itself into a determination of the soil type and the structural characteristics of the soil particles making up the particular body of soil under study. Why will water run out of a burlap sack as fast as poured in, but seep through a canvas bag very slowly? The reason is the presence of large spaces between the fibres in the burlap but minute spaces between the fine threads making up the canvas. Similarly water runs through a sandy soil quickly because the spaces between the individual particles are large, while the spaces between particles in a clay soil are relatively as small as the clay particles. Water moving downward or horizontally through a clay soil therefore encounters much greater friction than water moving through sand. In other words, it will take two or possibly 10 times as long for a given drop of water to move 2 feet downward and ten feet horizontally through a clay soil as it would take to move the same distance through a sand soil. The reason for this lengthy time element in clay soils can be visualized if you imagine a drop of water spread out several times thinner on a sheet of paper and then having to travel a distance of perhaps 100 or even 200 feet to enter a tile 10 feet from its starting point. Clay soils, therefore, require tile lines placed closer together than sand or silt soils, if we are to get rapid drainage. When the tile lines are covered with stone or coarse cinders, there is no reason for making the trenches more shallow for clay than for sand soils. The water moving to deep tile will gradually open up channels in the heaviest clay and increase the depth of dry soil ready to receive a heavy rain.

Luckily not all soils present a homogeneous structure; the channels left by earthworms and the decaying roots of trees and plants, and the cracks in the soil due to contraction on drying out, provide large-size and direct channels through which large amounts of water move rapidly from the surface downward to the plane of the permanent water-table.

With this slight understanding of soil structure, we are ready for a few general fundamentals of drainage engineering:

1. In a humid region no water which is of benefit to turf grasses is removed from soils by tile drainage.

2. The greater the depth of the tile, the larger the dry soil reservoir above the tile waiting for a cloudburst.

3. Theoretically, drain tiles can never be placed too deep; practically, the permissible depth is determined by the outlet conditions and by the factor of economy between a few deep ditches and a larger number of shallow ditches.

4. No tile should be installed less than 2 feet deep unless bedrock or lack of an outlet forces shallower depths.



No. 10 green, Columbus Country Club. On the reader's right is seen the foot of the hill and the shallow open ditch between the hill and the green.

5. No connections of one tile line to another under the putting area should be allowed if they can possibly be avoided. If trouble develops in a line of tile, it can not be remedied without getting at both ends of the tile line, which means digging up the junction point. With all junctions outside the putting area, the surface of the green will not be marred, should uncovering be necessary.

6. All green drainage lines should be installed in straight lines to permit running of cleaning rods through them in case of stoppage.

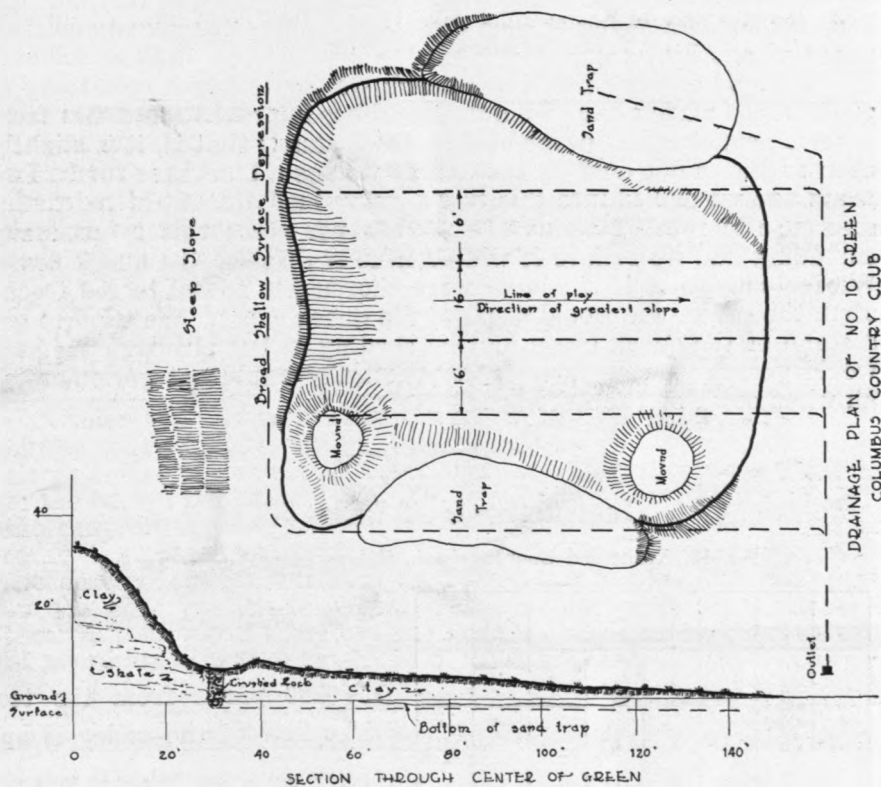
7. The space between the individual joints of tile should be at least  $\frac{1}{4}$ -inch for hard burned tile and a little more for soft clay tile.

8. In clay or silt soils, the tile should be covered with coarse cinders or crushed stone to within 6 to 12 inches of the finished green surface. In sand or muck soils, the top half of the joints should be covered with strips of burlap, heavy asphalt roofing, inverted strips of sod, straw, shavings, or sawdust.

9. A minimum fall of 1 inch in 20 feet should be used on green drainage lines, with as much more as it is possible to get.

10. The tile lines on clay soils should be spaced from 10 feet apart when 2 feet deep to 18 or 20 feet apart when 3 feet deep, twice this distance apart being sufficient for sandy soils.

11. The tile lines should be parallel and cross the green parallel with the direction of greatest slope of the surrounding ground, but most generally parallel with the line of play.



The accompanying diagram shows the plan of drainage on No. 10 green at the Columbus Country Club. Before installing the shallow surface depression and deep tile ditch at the foot of the hill the green was always soggy and without turf. When the surface of a green is entirely elevated above the surrounding ground and is not subject to seepage water from a hillside, one or two lines of tile installed 2 feet deep in the original subgrade is usually sufficient. Greens subject to seepage or runoff from higher ground should be protected by shallow surface ditches to catch the surface runoff and by tile placed deep enough to intercept the lowest plane of seepage.

**Bluegrass and Lime.**—Our experiments have not indicated that lime is beneficial to bluegrass. What bluegrass needs most is a rich soil. Most of the limestone soils are naturally rich and thus well suited for bluegrass, and it is apparently on this account that the idea prevails that bluegrass needs lime. Lime, moreover, promotes the growth of white clover and the summer grasses, such as crab grass, and a great many weeds.



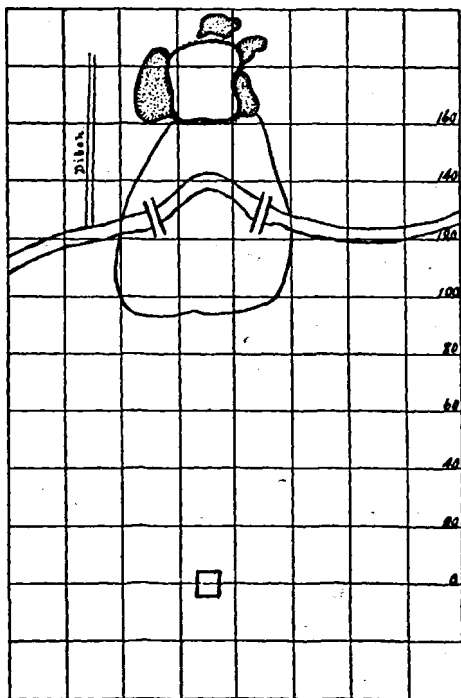
### Fairway Grasses on Sandy Soils

The course of the Escanaba Golf Club, Escanaba, Mich., is on practically pure sand. Mr. George M. Mashek, Chairman of the Green Committee of the Club, has been experimenting with quack grass and red fescue on the fairways. On some northern golf courses quack grass makes for a time very satisfactory fairway turf, but under continuous mowing it soon disappears. Mr. Mashek summarizes the results of his experiments, under date of May 28, 1925, as follows:

"The one and one-half acres which we planted with rootstocks of quack grass made a very solid turf, and has improved somewhat from year to year, but has never made a thick stand; that is, it is slightly open and does not hold up the ball as well as a bluegrass turf. Two years ago we drilled into this turf a very small amount of red fescue seed at the rate of about five pounds per acre; this is gradually spreading and we believe it will eventually displace the quack grass. We feel sure that if this area were thoroughly sowed to red fescue seed, the red fescue would displace the quack grass. We tried to get a stand of the quack grass first by seeding it, but although the seed would germinate well in tests, it practically would not germinate at all when sown on the fairways."

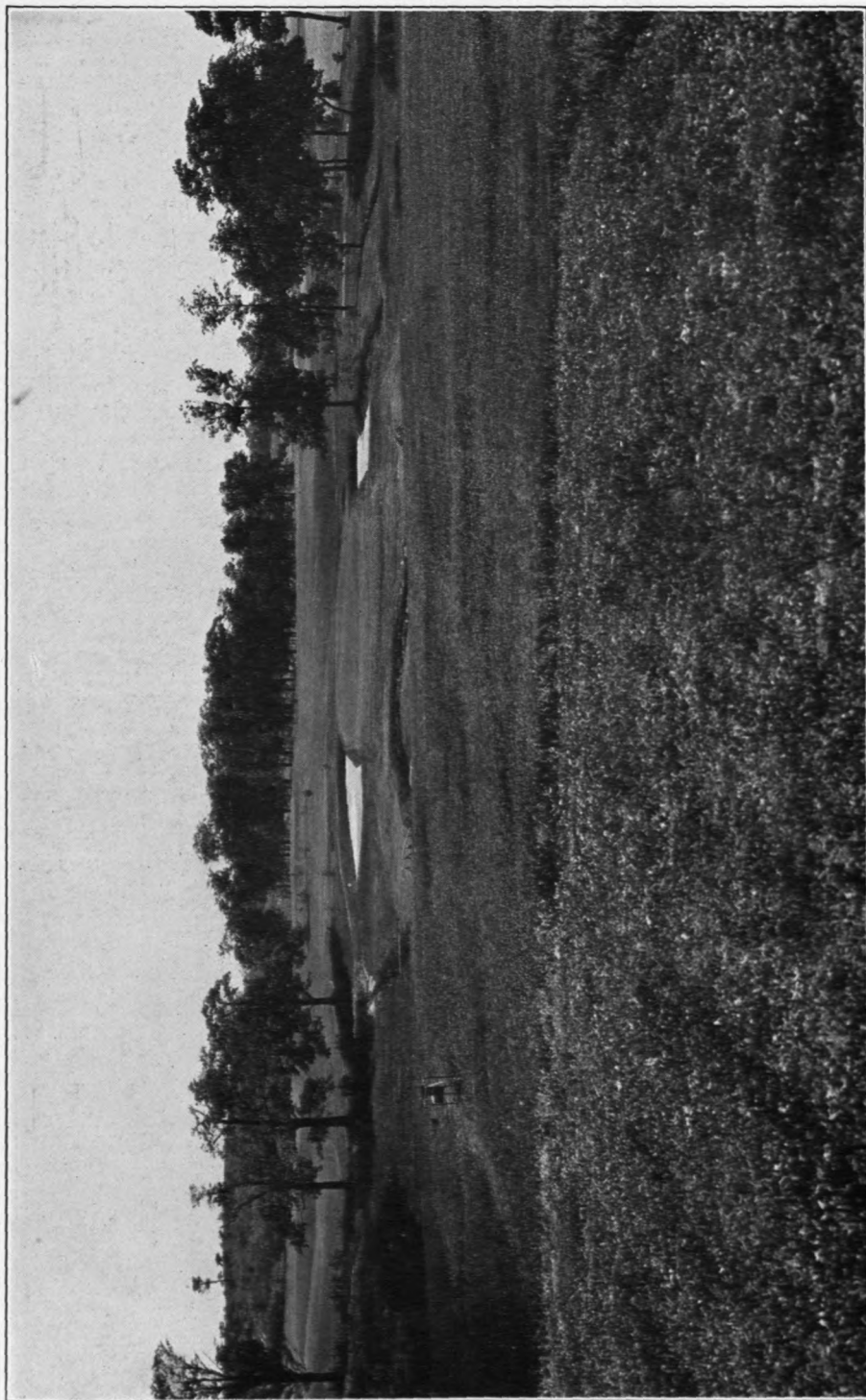
### Instructive Golf Holes XVI

No. 12, Kernwood Country Club, Salem, Mass. (175 Yards)

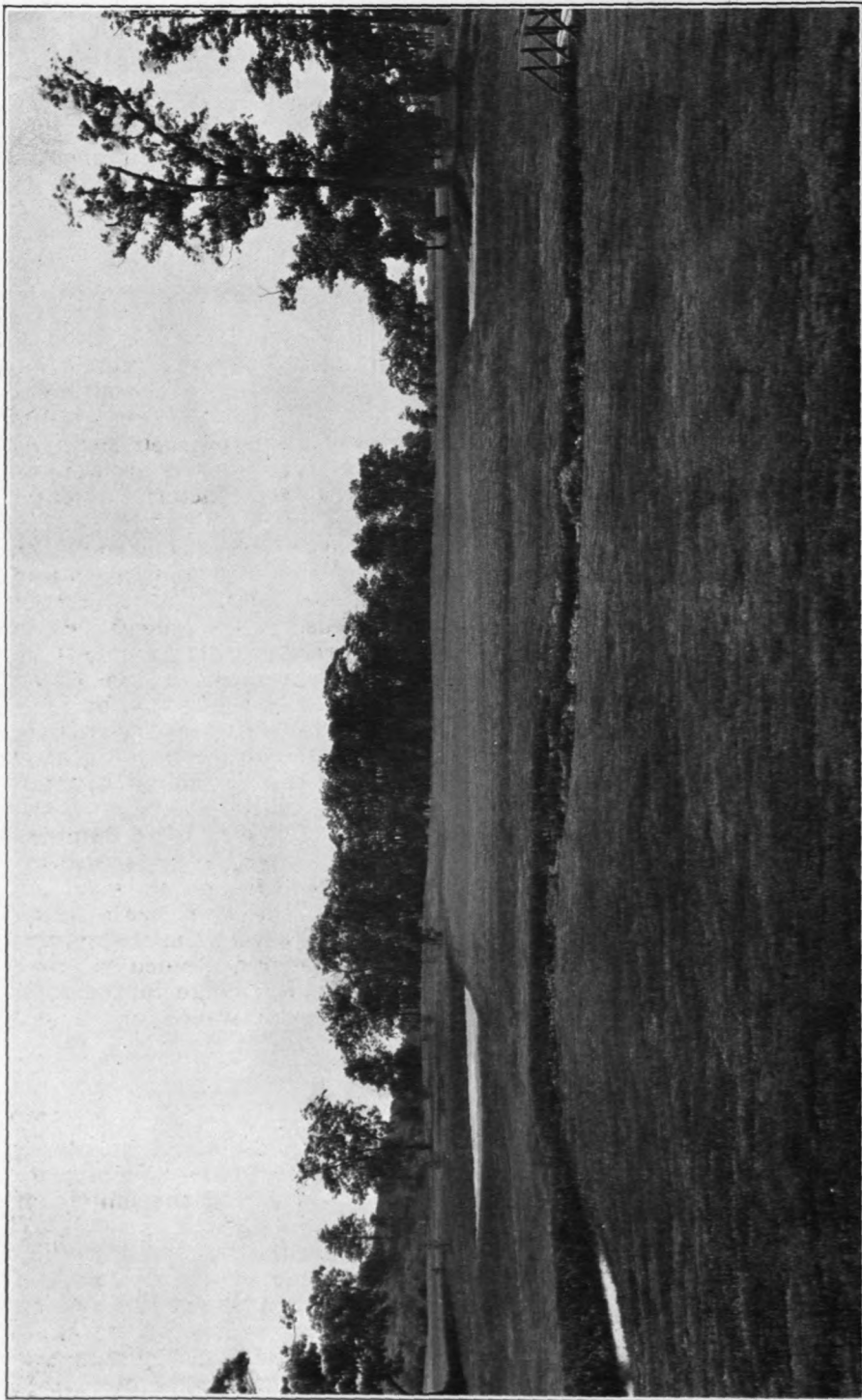


A beautiful hole of 175 yards over a broad brook 120 to 130 yards from the tee. The flow of the valley is approximately level, but the tee is elevated on the slope, so that every feature of the hole is clearly visible. The putting sward is about 6,000 square feet in area, and the surface excellently undulated. The slope from the brook to the green is upgrade, so that a ball played short of the green is not likely to get much roll. The only artificial hazards are those about the green.





Hole No. 12, Kernwood Country Club. View from tee.



Hole No. 12, Kernwood Country Club. Close-up view of putting green.

## Bacterial Inoculation Useless For Growing Grass

By K. F. Kellerman

Alluring advertisements of bacterial inoculants of bacterial fertilizers for quickly and cheaply stimulating the growth of grass and other plants have become rather frequent recently. Because scientific studies have shown that every good soil owes its productive quality in part to certain groups of bacteria, and because inoculation, with nodule-forming bacteria, of clover and other leguminous plants has improved and increased their growth, the advocates of these new products claim that any kind of plant may be benefited by inoculation with other special kinds of bacteria.

These theories have been carefully investigated for many years, and more recently tests of these bacterial inoculants or fertilizers have been under way. The results of this thorough work all point the same way: Except for the special case of clover and other plants able to develop nodules of nitrogen-fixing bacteria on their roots, no benefit to plant growth on either good or poor soils is secured by adding cultures of bacteria no matter what kind of bacterial preparations are used.

Usually these bacterial preparations urged for stimulating the growth of grass or other non-legumes have been found to contain appreciable quantities of phosphates, lime, potash, and animal manure, compost, or other forms of humus. These substances in themselves have a fertilizer value, and if relatively large quantities of the product are applied in small plot tests apparently beneficial action is noted. This benefit is not the result of the special bacteria in the inoculant, however, for any bacteria that may be present will exhibit little if any effect when added in pure culture to soil that is deficient in these bacteria. The reason for this is that no agricultural soils in any part of the country are entirely devoid of the desirable groups of bacteria which are found in such large numbers in unusually fertile soil. If the proper food supply and satisfactory conditions of moisture and tilth are provided in the poorer soils, the desirable bacteria multiply very rapidly. On the other hand, if the conditions for the growth of these bacteria are very unsatisfactory, the addition of the comparatively small number contained in these preparations will not result in any appreciable change in the total number present in the soil or in the general productiveness of the soil.

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## Controlling Ants

Mr. Earl B. Kent, of the Highland Country Club, Attleboro, Mass., writes that they are driving ants from their greens by sweeping up the hills each day and watering all night. Treating the individual nests with carbon disulfid he finds expensive.

Sweeping and the use of carbon disulfid are the best methods thus far developed in the control of ants. In using carbon disulfid the hole in the ant hill is enlarged with a sharp instrument and two or three drops of carbon disulfid are injected into the hole by means of a spring-bottom oil can. The hole is then at once closed by plugging with earth. As great care must be exercised in the use of carbon disulfid as in the use of gasoline, as it is equally as explosive. In using

the sweeper, a special sweeper is generally used, such as illustrated on page 89 of the BULLETIN, Vol. III. The ants and other litter swept up are burned by treating the pile with gasoline.

Constant attention to ant hills is necessary where the insects are abundant. When once killed or driven out they are certain to return. In any case, if the hills are swept or washed away each day the damage to the turf should be negligible.

## Growing Grass Turf and Raising Crops

By C. V. Piper

It seems to bother a lot of green committeemen to be told that principles and practices used by farmers in raising crops do not apply equally to growing turf on a golf course. Particularly is this true in regard to soil treatments. Perhaps a few simple statements on the reasons for certain farm practices will clarify matters and indicate why general agricultural treatises are poor guides for golf course management.

First, it is to be borne in mind that farmers grow most of their crops in rotation, which usually involves plowing the fields once or twice a year. Clearly such a practice is not desirable on a golf course; so the tillage methods used and the fertilizers applied to the different crops bear little if any relation to golf turf culture.

Lime is used by farmers primarily because it has such a marked effect on clovers and alfalfa. A good clover crop commonly insures a good corn crop following. But clover is not particularly desirable anywhere on a golf course, and corn crops are not ordinarily raised on golf courses. Lime also has a marked tendency to favor weeds, a thing the farmer well knows; but to him a good clover crop is of far more importance than the additional weed trouble.

The meadow grasses used by farmers are those which, under their conditions, will give the best crops of hay. They are practically all different grasses from those used to produce turf. If maximum hay crops are desired on the fairways or in the rough, the farmer's methods may well be followed; but golfers usually feel irritated if even the rough is a sort of hayfield. There is no reason to believe that the methods which will grow the best hay crops will also grow the best fairways.

Farmers use cultures of certain bacteria to apply to seeds of legumes in order to be sure that the nodules will develop on the roots, as these have much to do with the growth and yield of the crop. For any other purpose as regards crops, cultures of bacteria have never been found useful. At the present time golfers are being urged to buy bacterial cultures, touted as being wonderful stimulants of turf. This game has played out with the farmer, as abundant investigations and experience show these cultures to be worthless.

Permanent pastures are the only fields on the farm that in any way resemble a golf course. Indeed, the game of golf began on such pastures. The results of pasture investigations do have a direct bearing on golf course management, but unfortunately less research has been devoted to pastures than to any other phase of farming. However, some of the findings in pasture investigations are perfectly clear:

1. In any given region some permanent pasture grasses are much more valuable than others; thus bluegrass and white clover on rich

lands in the northern half of the United States; Rhode Island bent and fescue on the acid soils of New England; Canada bluegrass on poor gravelly soils in the North; Bermuda grass on clayey soils in the South; carpet grass on low-lying sandy soils in the South; and many more cases might be cited.

2. Continuous heavy grazing keeps the pasture in better condition than does light grazing. If grass is allowed to grow tall or remain ungrazed, the pasture deteriorates, weeds increasing greatly.

3. Surface applications of nitrogenous fertilizer increase the amount of growth greatly. Similar applications of phosphates greatly increase the amount of white clover. Lime helps clover less than the phosphates, but it stimulates various weeds.

4. Harrowing or disking has little if any beneficial effect.

5. Old run-down pastures can be greatly bettered by plowing, fertilizing, and reseeding.

6. Sowing seed of the same kind on old turf is never beneficial. If a new grass is introduced which under the conditions is efficient, it may increase the pasturage greatly.

All of these things apply to golf courses, at least to fairways. Use the grass or grasses best adapted to the conditions; keep the turf closely mowed; fertilize with nitrogenous fertilizers, such as tankage, cottonseed meal, and ammonium sulfate, but do not use phosphates unless you want more clover; avoid the use of lime; disking is not advisable; sowing additional seed is useless, unless you sow a different kind of seed. Bent will catch on any other kind of turf. So will redbud to some extent. Most other turf grasses must be sown on a well-prepared, firm seed bed, to be of any use.

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### Some Decisions On the Rules of Golf

A and B are playing a match in the second flight of the local city championship. At the fifteenth hole A outdrives B many yards. B played his second shot; and while A is addressing his ball to play his, B drops another ball and plays it in practice. A claims interference by B, which caused him to lose the hole. Regardless of interference, has B the right to play a practice ball in competition?

Decision (*United States Golf Association*).—B loses the hole. A player has no right to play another ball in a competition. In stroke play a player is disqualified from the competition.

In a bogey competition a competitor played his second stroke at the sixteenth hole into a bunker. Disgusted at the shot, he dropped another ball and, saying "This is how it ought to be done," drove it over the bunker and over the green. He holed out with his original ball. Did he incur any penalty?

Decision (*Royal and Ancient No. 266*).—The player is disqualified for that hole.

In a stroke competition, a competitor missed an approach shot, dropped another ball, and played it toward the green. He holed out with the original ball. The committee disqualified him. Was the decision correct either under Stroke Rule 4 (2) or any other rule? What, if any, is the limitation upon the playing of practice shots other than "before starting" in stroke competition?

Decision (*Royal and Ancient No. 267*).—By the custom of the game the competitor should be disqualified. After teeing his ball for the first stroke in a stroke competition, a competitor may not play a practice stroke at any tee or during the play of any hole.

**Depth of Top Soil For Putting Green.**—Three inches of top soil is ample for growing turf. Even if this soil is too poor for ordinary purposes, it can be made to produce excellent turf if fertilized from above.

### New Member Clubs of the Green Section

The following new clubs have been added to the Green Section since September, 1924, at which time the publishing in the Bulletin of the names of new member clubs was temporarily discontinued.

Total Green Section membership June 30, 1925, was 846 clubs

#### California

Contra Costa Golf Club, Crockett  
Ojai Valley Country Club, Ojai  
Stockton Golf and Country Club, Stockton

#### Colorado

Cherry Hills Club, Englewood  
Pueblo Golf and Country Club, Pueblo

#### Delaware

Newark Country Club, Newark

#### Florida

Cleveland Heights Golf and Country Club, Lakeland  
Gulf Stream Golf Club, Delray  
Hollywood Golf and Country Club, Hollywood  
Lakewood Estates Country Club, St. Petersburg

#### Illinois

Beardstown Country Club, Beardstown  
Bunker Hills Country Club, Niles  
Sinnissippi-Ingersoll Parks Golf Club, Rockford  
Vernon Ridge Country Club, Deerfield  
Harold Wright, Chicago

#### Indiana

Country Club of Logansport, Logansport  
Country Club of Terre Haute  
Miami Country Club, Mishawaka  
Ulen Country Club, Lebanon  
Valparaiso Country Club, Valparaiso  
Woodstock Club, Indianapolis

#### Iowa

Council Bluffs Country Club, Council Bluffs  
Davenport Country Club, Davenport

#### Kansas

Hutchinson Country Club, Hutchinson

#### Kentucky

Bellefonte Country Club, Ashland  
Twin Oaks Golf Club, Covington

#### Louisiana

Broadmoor Golf Club, Shreveport  
Marine Hospital Golf Club, Carville

#### Maine

Megunticook Golf Club, Camden  
Penobscot Valley Country Club, Bangor

#### Maryland

Burning Tree Club, Bethesda  
Congressional Country Club, Rockville  
Cumberland Country Club, Cumberland  
Fountain Head Country Club, Hagerstown  
Gibson Island Club, Pasadena

#### Massachusetts

Berkshire Hills Country Club, Pittsfield  
Cohasse Country Club, Southbridge  
North Andover Country Club, North Andover

#### Michigan

Burt Lake Golf Club, Indian River  
Duck Lake Golf Club, Albion  
Gull Lake Country Club, Richland  
Hastings Country Club  
Hawthorne Valley Golf Club, Dearborn  
Jackson Country Club, Jackson  
Otwell-egan Country Club, Allegan  
Saginaw Country Club, Saginaw

#### Minnesota

Country Club, Minneapolis

#### Nebraska

Country Club of Lincoln, Lincoln  
Highland Country Club, Omaha

#### New Hampshire

Manchester Country Club, Manchester  
Waterville Valley Association, Waterville Valley

#### New Jersey

Braidburn Country Club, Madison  
Jumping Brook Country Club, Bradley Beach  
Newark Athletic Country Club, West Orange

Oak Valley Country Club, Woodbury Heights	Pennsylvania Golf Club, Llanerch
Teterboro Golf Club, Hasbrouck Heights	Somerset Country Club, Somerset
New York	Rhode Island
Ardley Club, Ardley	Sachuest Golf Club, Middletown
Binghamton Country Club, Binghamton	Tennessee
Dunwoodie Golf Club, Yonkers	Cherokee Country Club, Knoxville
Lawrence Country Club, Lawrence	Chickasaw Golf Club, Memphis
Oquaga Lake Country Club, Deposit	Green Meadow Country Club, Maryville
Shepard Hills Country Club, Waverly	Memphis Country Club, Buntyn
Southward Ho Country Club, Bay Shore	Texas
Sullivan County Golf and Country Club, Liberty	River Crest Country Club, Ft. Worth
Timber Point Club, Great River	Virginia
Women's National Golf and Tennis Corporation, Glen Head	Newport News Golf and Country Club, Newport News
North Carolina	Winchester Golf Club, Winchester
Elizabeth City Country Club, Elizabeth City	Washington
Escola Golf Club, Linville	Ranier Golf and Country Club, Seattle
Ohio	Spokane Country Club, Spokane
Athens Country Club, Athens	Walla Walla Country Club, Walla Walla
Elmwood Country Club, Massillon	West Virginia
Lost Creek Country Club, Lima	Clarksburg Country Club, Clarksburg
Troy Country Club, Troy	McDowell County Country Club, Gary
Willow Bend Country Club, Van Wert	Wisconsin
Wooster Country Club, Wooster	Ozaukee Country Club, Thiensville
Oklahoma	Ontario
Enid Country Club, Enid	Lakeview Golf and Country Club, Port Credit
Oregon	Summit Golf and Country Club, Jefferson
Oregon City Golf Club, Oregon City	Quebec
Pennsylvania	Manoir Richelieu Golf Course, Murray Bay
Brinton Lake Club, Concordville	Foreign
Elk County Country Club, Ridgway	Le Touquet Golf Club, Le Touquet, France
Kennett Square Golf and Country Club, Kennett Square	Golf Club Argentino, Buenos Aires, Argentina
Media Heights Golf Club, Lancaster	
Meadville Country Club, Meadville	

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**Shortage of Kentucky Bluegrass Seed.**—A report issued by the United States Department of Agriculture June 23, 1925, indicates that this year's crop of Kentucky bluegrass seed is much smaller than last year's and that for this reason higher prices may prevail. Higher prices for this seed will, of course, depend upon demand as well as supply. It is suggested, nevertheless, that clubs contemplating large purchases of this seed, may find it profitable to close contracts at an early date.

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**A New Department of Agriculture Bulletin on Grasses.**—Farmers' Bulletin No. 1433, entitled "Cultivated Grasses of Secondary Importance," has recently been issued by the United States Department of Agriculture. It illustrates and describes 19 different grasses, several of which are important on golf courses. This bulletin may be obtained free upon application to the Department of Agriculture, Washington, D. C.



## A Tribute to Grass

By R. A. Oakley

Of the many tributes that have been offered to grass there is none that exceeds in literary brilliancy that from the pen of John J. Ingalls, for many years senator from Kansas, the State which he once referred to as "a land of great extremes and no golden mean," "where the appetite of the community demands the stimulus of revolution," and "where a traveler if he listened to the voice of experience would not start upon his pilgrimage at any season of the year without an overcoat, a fan, a lightning rod, and an umbrella." In the Kansas Magazine in 1872 under the caption "Bluegrass," Ingalls not only gave free rein to his poetical and philosophical imagination, but he also applied the lash, with the result that a classic was produced, parts of which have been quoted and misquoted until they have become almost an essential feature of calendar, text-book and bulletin. Some of the best parts of Ingalls' essay, however, have been allowed to remain in obscurity probably because they are too local in their scope to be generally appreciated. A few of his readers have been captious enough to say that his dissertation was written more to advertise Kansas than to glorify bluegrass; but this is unfair criticism. He simply used Kansas as an example of base metal, and bluegrass as the great alchemist; although it must be admitted that it was in Kansas that he received his inspiration. Other readers object to his philosophy and science and facetiously contend that there could have been no philosophers, biologists, or meteorologists on the board that issued him his poetical license. This is probably true; certainly he never could have attained the heights he reached with any considerable load of technical ballast. Imagination was his impelling force, and to have throttled it would have killed it entirely. Ingalls' regard for grass was unbounded, and it was its utility as well as its beauty that stirred his enthusiasm and drew from him the following sincere and incomparable appreciation of its worth to mankind:

"Next in importance to the Divine profusion of water, light, and air, those three great physical facts which render existence possible, may be reckoned the universal beneficence of grass. Exaggerated by tropical heats and vapors to the gigantic cane congested with its saccharine secretion, or dwarfed by polar rigors to the fibrous hair of northern solitudes, embracing between these extremes the maize with its resolute pennons, the rice plant of southern swamps, the wheat, rye, barley, oats, and other cereals, no less than the humbler verdure of hillside, pasture, and prairie in the temperate zone, grass is the most widely distributed of all vegetable beings, and is at once the type of our life and the emblem of our mortality. Lying in the sunshine among the buttercups and dandelions of May, scarcely higher in intelligence than the minute tenants of that mimic wilderness, our earliest recollections are of grass; and when the fitful fever is ended, and the foolish wrangle of the market and forum is closed, grass heals over the scar which our descent into the bosom of the earth has made, and the carpet of the infant becomes the blanket of the dead.

"As he reflected upon the brevity of human life, grass has been the favorite symbol of the moralist, the chosen theme of the philosopher. 'All flesh is grass,' said the prophet; 'my days are as the

grass,' sighed the troubled patriarch; and the pensive Nebuchadnezzar, in his penitential mood, exceeded even these, and, as the sacred historian informs us, did eat grass like an ox.

"Grass is the forgiveness of nature—her constant benediction. Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass, and carnage is forgotten. Streets abandoned by traffic become grass-grown like rural lanes, and are obliterated. Forests decay, harvests perish, flowers vanish, but grass is immortal. Beleaguered by the sullen hosts of winter, it withdraws into the impregnable fortress of its subterranean vitality, and emerges upon the first solicitation of spring. Sown by the winds, by wandering birds, propagated by the subtle horticulture of the elements which are its ministers and servants, it softens the rude outline of the world. Its tenacious fibres hold the earth in its place, and prevent its soluble components from washing into the wasting sea. It invades the solitude of deserts, climbs the inaccessible slopes and forbidding pinnacles of mountains, modifies climates, and determines the history, character and destiny of nations. Unobtrusive and patient, it has immortal vigor and aggression. Banished from the thoroughfare and the field, it bides its time to return, and when vigilance is relaxed, or the dynasty has perished, it silently resumes the throne from which it has been expelled, but which it never abdicates. It bears no blazonry of bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air, and yet should its harvest fail for a single year, famine would depopulate the world."

While his preferatory tribute was to grass generally, the author has made it clear that he chose bluegrass as the subject of his theme because it was to him the acme of the Great Agrostologist's handiwork. In his estimation, grasses were not all of equal rank but possessed degree of aesthetic and economic value. Bluegrass in his regard was the greatest of them all. "One grass," he says, "differs from another grass. One is vulgar and another patrician. There are grades in its vegetable nobility. Some varieties are useful. Some are beautiful. Others combine utility and ornament. The sour, reedy herbage of swamps is base-born. Timothy is a valuable servant. Redtop and clover are a degree higher in the social scale. But the king of them all, with genuine blood royal, is Blue Grass. Why it is called blue, save that it is vividly and intensely green, is inexplicable, but had its unknown priest baptized it with all the hues of the prism, he would not have changed its hereditary title to imperial superiority over all its humbler kin." Surely here he has awarded it the highest medal of honor!

Changing from the poetical to the philosophical, Ingalls announces his doctrine of the effect of physical environment upon individuals and nations. "Give the philosopher a handful of soil, the mean annual temperature and rainfall and his analysis would enable him to predict with absolute certainty the characteristics of the nation." This line of reasoning leads him to observe that "what a man, a community, a nation can do, think, suffer, imagine, or achieve, depends upon what he eats. Bran eaters and vegetarians are not the kings of men. Rice and potatoes are the diet of slaves. The races that live on beef have ruled the world, and the better the beef the greater

the deeds they have done." Thus he fixes a function of grass in the making of a nation, for surely there can be no beef without grass. "Grass feeds the ox: the ox nourishes man: man dies and goes to grass again; and so the tide of life, with everlasting repetition, in continuous circles, moves endlessly on and upward, and in more senses than one, all flesh is grass. But all flesh is not blue grass. If it were, the devil's occupation would be gone."

The bluegrass region of Kentucky is cited as exemplifying the wonder-work of bluegrass. In what other environment could Henry Clay, the statesman, have been produced, or Lexington the horse? Virile men and beautiful women are accounted by Ingalls among the products of that Eden. "All these marvels are attributable as directly to the poetical influence of blue grass, as day and night to the revolution of the earth. Eradicate it, substitute for it the scrawny herbage impoverished barrens and in a single generation man and beast would alike degenerate into a common decay." The great Kansan here takes occasion to criticize the attitude and course of action of the moral and social reformers "who attempt to ameliorate the conditions of the degraded order by commencing with the Bible, the didactic essay, the impassioned appeal." These, he claimed, would be accepted when the work of reformation was accomplished. "These are the results, not the cause." Conditions must be made more congenial before reform can be hoped for. "Men can not become learned, refined and tolerant while every energy of body and soul is consumed in the task of wresting a bare sustenance from a penurious soil; neither can women become elegant and accomplished when every hour of every day in every year is spent over the washtub and the frying pan. There must be leisure, competence and repose and these can only be attained where the results of labor are abundant and secure." As a contrast to the bluegrass region of Kentucky, Ingalls pictures another section of the country not far removed from Kansas as a horrible contrast where the plane of human existence was then considerably below the level of the moral and social sea. But such distressing conditions, he maintained, are the results of physical environment and are "susceptible of relief." "In the moral pharmacy there is an antidote."

"The salutary panacea is Blue Grass.

"This is the healing catholicon, the strengthening plaster, the verdant cataplasm, efficient alike in the *Materia Medica* of nature and of morals." Here he named the curative agent, and immediately following, in a succinct statement, prescribed a course of treatment and outlined the progressive steps of the patient's recovery. "Seed the country down to blue grass and the reformation would begin. Such a change must be gradual. One generation would not witness it, but three would see it accomplished."

Touching again on Kansas, the author notes, and with a show of pride, that she had then no serious moral handicaps to impede her progress, but he realized that her career, which had started on a very high plane and which had been "constantly upward," could not be indefinitely continued on "prairie grass." This, he admits, "would nourish mustangs, antelope, Texas cattle, but not thoroughbreds. It is the product of an uncultured soil, alternately burned with drought, drenched with sudden showers, and frozen with the rigors of savage winters. Already it is deteriorating under influences that should be

favorable to its improvement. Armies of rank weeds have invaded its domain in the neighborhood of our chief cities, and are encroaching upon its solitudes. If we would have prosperity commensurate with our opportunities, we must look to Blue Grass. It will raise the temperature, increase the rainfall, improve the climate, develop a higher Fauna and Flora, and consequently a loftier attendant civilization."

Bluegrass, to Ingalls, was the greatest of all moderating influences, which in its quiet but effective way improved the climate as well as social and economic conditions. He observed that it was then in 1872 already ameliorating Kansas. "The rains which were wont to run from the trampled pavement of the sod suddenly into the streams, are now absorbed into the cultivated soil, and gradually restored to the air by solar evaporation, making the alternation of the seasons less violent, and continued droughts less probable. Under these benign influences, prairie grass is disappearing. The various breeds of cattle, hogs and horses are improving. The culture of orchards and vineyards yields more certain returns. A richer, healthier and more varied diet is replacing the side-meat and corn-pone of antiquity. Blue grass is marching into the bowels of the land without impediment. Its perennial verdure already clothes the bluffs and uplands along the streams, its spongy sward retaining the moisture of the earth, preventing the annual scarification by fire, promoting the growth of forests, and elevating the nature of man." This is what blue grass had done for the climate and general welfare of Kansas, and with this change Ingalls saw others that came as a direct consequence. For, he says, "Supplementing this material improvement, is an evident advance in manners and morals. The little log school-house is replaced by magnificent structures furnished with every educational appliance. Churches multiply. The commercial element has disappeared from politics. The intellectual standard of the press has advanced, and with the general diffusion of blue grass, we may reasonably anticipate a career of unexampled and enduring prosperity."

Take it from first to last, where can there be found such an evaluation of grass in general, or of blue grass in particular? Surely the author was inspired by sincere admiration and regard rather than by a desire to advertise his State or to create a literary masterpiece! Those who have not read Ingalls' "Blue Grass" in its entirety are urged to do so. In it there are sarcasm, humor, poetry, and description that are unsurpassed in modern writings. Readers in passing from the winter scene along the north fork of the Wildcat which produced the inspiration, on through the many scintillating tributes to grass to the breath-taking picture of a Kansas thunder shower, finally to the vision of the future which bluegrass had made possible for that great State, have but one regret—that Ingalls had never seen a modern putting green with its broad expanse of turf with which nothing in the agrostologist's realm can compare. For had his eyes once gazed upon a perfect green of fescue or creeping bent, or better still of velvet bent, he would have found it necessary to go outside his lexicon for words to express his enthusiasm.

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**When to Roll Putting Greens.**—If the soil of your putting green is firm enough so that heel prints are not made in it, there will be nothing gained by rolling. As a rule, rolling is necessary only in spring.

### QUESTIONS AND ANSWERS

All questions sent to the Green Committee will be answered in a letter to the writer as promptly as possible. The more interesting of these questions, with concise answers, will appear in this column each month. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Committee.

While most of the answers are of general application, please bear in mind that each recommendation is intended specifically for the locality designated at the end of the question.

**1. Adverse effects from the lime contained in Bordeaux mixture.** Our greenkeeper tells me that Bordeaux mixture contains a large percentage of lime and says he has heard that if it is used regularly for three years the effect upon the greens will be decidedly adverse because of the lime content, in the encouragement of weed growth. Is there any danger of Bordeaux encouraging the growth of weeds? (Nebraska.)

**ANSWER.**—It is true that Bordeaux mixture contains lime, and it should therefore not be used in such quantities that the lime can exert any particular effect. As a matter of fact, all that is required in the treatment for brown-patch is the lightest possible spraying or dusting when Bordeaux mixture is used.

**2. Creeping bent greens that are too slow.**—Some of our greens, which were planted with creeping bent stolons, certainly look beautiful, having a very vigorous, dense turf, but they are too heavy and offer too much resistance to the ball. Is there any way in which this turf can be made faster? (Pennsylvania.)

**ANSWER.**—Whether a creeping bent green is slow or fast is simply a matter of cutting. They can be made as slow as desirable or as fast as desirable according to the frequency and closeness of mowing. The general tendency in the care of vegetative putting greens seems to be not to cut them close enough. We would suggest that you try cutting your greens closer.

**3. Buffalo grass for fairways and rough without irrigation.**—The typical western short grass, commonly called buffalo grass, seems to make an ideal sod for our rough. Do you think it would be possible to transplant sod of this buffalo grass to our rough? Is it possible to purchase seed of such grasses? (Colorado.)

**ANSWER.**—We think it would be quite possible to transplant buffalo sod, if done at times when rain may be expected. Seed of none of these native short grasses is available. You could, however, gather the seed yourselves and scatter it over the fairways and rough, and this would probably help considerably. If your fairways are not irrigated, the different short grasses would probably be the best you could use on them. Bluegrass and redtop are excellent for fairways where there is moisture enough for them to grow, and bluegrass will grow in any place in Colorado where there is a little seepage water or where the land is irrigated. If you sow bluegrass and redtop on your fairways we would recommend a mixture of 4 pounds of the former and 1 pound of the latter, sown at the rate of 150 pounds to the acre.

**4. Changing fescue greens to bent by broadcasting stolons; using creeping bent sod produced in the nursery.**—Our greens, which are three years old, have fescue as their base. Last year they were in good condition, although they contained considerable clover. This year they deteriorated badly and are most unsightly, notwithstanding we seeded them several times during the year. In fact, there is little left but clover and dandelions, with the latter predominating. Five of the greens have been taken up, about one-half a carload of sand disked into the soil of each green, some drainage defects remedied, and creeping bent stolons broadcast. We also have a creeping bent nursery which we planted as a putting green which will give us turf for sodding two more greens next spring. This will make a total of seven greens in creeping bent. We are proposing to plant about two acres of putting green surface in the spring, maintaining it as such and transferring the sod to the balance of the eleven greens next fall. Do you think well of this idea, or would you recommend that next fall we broadcast stolons rather than transfer the actual turf? (Illinois.)

**ANSWER.**—Three methods have been used with very considerable success in converting mixed turf or turf of any other grass into creeping bent turf by the vegetative method. These are as follows: (1) Cutting gashes into the turf and putting in each gash a piece of bent stolon three or four inches long. The objection to this method is that it is very laborious and costly. (2) Plugging. This method is all right, but the plugs spread slowly. (3) Broadcasting cut stolons. This method has proved to be a great success and has been employed on a number of golf courses. The turf on the green is first cut short, preferably after having raked it both ways so as to cut off as much of the old turf as possible. Cut stolons are then broadcast, topdressed, and rolled. It is best to leave the green out of play for two or three weeks, although play can be allowed to proceed right on if there is serious objection to leaving the green out of play. Creeping bent will entirely replace any other grass on a green when treated in this manner. Best results are obtained when the work is done in late summer, although it is practicable at any time of the season. Do not forget the benefit that will be derived from light and relatively frequent topdressings of the stolons after they are planted; this practice, together with relatively close cutting, helps materially in hastening the development of good bent turf.

**5. Use of seed and fertilizer in improving fescue fairways.**—Our course was built four years ago on light sandy soil. The soil was completely run down, all its vegetation being ferns, running brier, and a little bunch grass. In the construction, about 30 carloads of horse manure were applied to the soil. The greens are in very good condition, but the fairways, which were seeded with creeping fescue, are in bad shape. The fescue is inclined to bunch, and was such a bad catch that there are hollows between the tufts of grass where nothing is growing. Last fall we put 200 tons of good, well-seasoned cow manure on 75 acres of fairway. Notwithstanding this, due to the unfavorable season the results are disappointing, especially so as hard winds have blown the sand from the holes, leaving the fairways rougher than before. Our people want to cart muck from a swamp and spread it on the fairways in October and November, as a top-

dressings after sowing a mixture of timothy, redtop, white clover, and Kentucky bluegrass. I am of the opinion, however, that this will be very costly. We should appreciate your opinion as to the best course to pursue to improve our fairways. (New York.)

ANSWER.—The only seeds that will catch satisfactorily in established turf are redtop, white clover, and South German mixed bent. The redtop is comparatively short-lived, largely disappearing in two or three years, but the seed is cheap and it is a good filler in the meantime. Assuming that you have about two-thirds of a stand on your fairways, we would suggest that you seed the following mixture: 6 pounds redtop, 1 pound white clover, and 1 pound South German mixed bent. The white clover may be left out if you object to it, but in general it is considered all right on fairways. This mixture should be seeded at about the rate of 30 pounds per acre. It would be useless to seed timothy and bluegrass, as these grasses will not catch on old turf. In regard to fertilizers, barnyard manure, considering its cost, is the best material for you to use. The muck from your swamp will probably prove useless. Most mucks, after they once get dry (as will be the case when used as topdressing), become waterproofed and will not again absorb moisture. Consequently most of the muck would blow away. It has practically no fertilizer value and is often positively harmful. We advise against the use of muck of any kind except in small proportion in compost heaps. If you cannot get barnyard manure, then we would recommend topdressing with the best soil you can get, reinforced with tankage, bone meal, or a similar fertilizer. Our advice would be for you to put most of your money into manure if it can be obtained at a reasonable price.

**6. Correcting tendency of bent to grow coarse.**—I am sending you a box of the sod of our bent greens, in which you will notice that the texture of the grass is very coarse. When we planted this bent on the green we did so with the understanding that it was a strain of creeping bent of the finest texture. Do you think it possible in any way to treat this bent so that it will produce a fine turf, or would you consider that it will always be this coarse no matter what treatment is given? (West Virginia.)

ANSWER.—One thing is very evident about the sample of bent sod you send, and that is the large percentage of organic matter in the soil, possibly rotted manure or leaf mold. It is soil of this character which makes bent grass become coarse in texture. We would recommend that when you topdress this green you employ a compost containing a relatively small percentage of rotted manure or other organic matter, certainly not over 15 percent, and that the bulk of your compost topdressing consist of sand. Another factor which induces bent grass to become coarse is lack of sufficient cutting. Keep your turf cut very close, and continually so during the growing season.

**7. Bare spots in the fairway.**—Two of our fairways are located on a hillside where there is considerable grade. The ground is very hard, being mostly clay, and although the turf is fairly good in places there are a large number of bare patches upon which so far we have been unable to get the grass to grow. It is impossible for us to water these fairways, and they dry up seriously in July and August. Of course this condition is more or less to be expected in midsummer, but never-



theless during the remainder of the year the bare spots are certainly unsightly. (New Jersey.)

**ANSWER.**—Probably the best means of correcting your trouble is to scratch up the bare spots about the middle of August, sow seed, and cover with a light topdressing of good loam. This should at least give you a good turf until the next summer, and probably throughout the summer, since grass sown in August should be well established by the following spring. Of course, if heavy rains come, the seed may be washed away, and in that case the spots should be reseeded at once. During early winter it would help also to topdress thin and bare spots on your fairways with manure, if it is obtainable, and in the absence of manure, good top soil may be used to advantage as a dressing. When you once get these bare spots well covered with grass it is almost certain to endure.

**8. Comparative costs of producing creeping bent turf from seed and from stolons.**—From time to time the question arises as to the relative practicability of planting greens from creeping bent stolons or from German mixed bent seed, viewed from the standpoint of the course with limited means. Which, in your judgment, is the cheaper and more satisfactory method, when bent seed of about 50 percent purity may be obtained for \$1.00 or \$1.25 a pound? What also is the length of time that will be required to get the turf fairly well established? (Oregon.)

**ANSWER.**—Ordinarily bent turf can be produced more cheaply from seed. If, however, a club has its own nursery of creeping bent the additional cost of planting stolons is not great, and the quality of turf produced by the stolon method is much better, particularly as regards uniformity. If you use seed, your turf will be mostly Rhode Island bent, some velvet bent, and a little creeping bent. It is the common experience that the expense of upkeep for a creeping bent green planted vegetatively is less than for a green grown from mixed bent seed. If seed or stolons are planted in September the turf should be perfect by the following May, and sometimes it will be in good condition even the same fall.

**9. Rye and vetch as soil-improving crops.**—We are preparing to build a new fairway on some very poor land which is quite gravelly in places and which is now covered with weeds, wild grass, bushes, and scrub trees. In your opinion would it pay us to plow this land and seed it to rye and vetch this fall, turning these crops under next spring, rather than to prepare the land for seeding to permanent grass, and seeding this fall to grass? (Michigan.)

**ANSWER.**—We believe it will be much better for you to grow rye and vetch on your land this fall, and turn the crop under next spring. This will improve the soil greatly and will give you an opportunity to get a fine seed bed prepared next summer for seeding in the fall to grass. To do well, grass seed needs a well prepared seed bed. We would advise you to plow the rye and vetch under in the spring as early as possible, so that it will rot thoroughly before the grass seed is sown in the fall.

## **Meditations of a Peripatetic Golfer**

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**It is a mistake to use any bent vegetatively other than Washington or Metropolitan, until a better one is discovered.**

**Some states have laws which prohibit disfiguration of the landscapes. Golf architects, take notice.**

**Beware of the salesman who tries to sell you a product with a fancy name, such as Super-Humus, Grass Joy, Soil Vigor, Turf Restorer, etc.**

**A hole with a blind tee shot, a blind second shot, and seven blind bunkers. The architect deserves a medal of some sort.**

**It is hard to acidify soil if a lot of lime was put in it during construction work.**

**The other day we asked an architect why he built a particular hole in the way he did. His answer was an illuminating "Damfino."**

**Fescue sown alone is rarely satisfactory. Sown in mixtures it is usually worthless, as the other grasses swamp it.**

**Every bunker on an 18-hole course concealed or more than half "blind." Consistent, at least.**

**Sow your putting greens with McMurphy's Mysterious Mixture and fertilize them with Goober's Grass Goulash. Later call for help from the Green Section.**

**A stitch in time saves nine. Cutting out the first pearlwort plant will save you from cutting out nine thousand later.**

**Why do summer rains fall? Because it is their normal behavior. Why do putting greens go to pot? Because of fool greenkeeping.**

**A putting green built like a St. Andrews Cross. Too much hero worship.**

**Boost a good thing. Knock a bad one. But be sure you are right.**