

# Greenkeepers Putting Golf on Business Basis

By A. D. PETERSON

UNTIL quite recently the very important position the greenkeeper fills was not generally realized by club officials. He was underpaid or not sufficiently well paid to make the profession of greenkeeping particularly attractive to ambitious men, neither those holding positions, nor the younger element wishing to enter a line of work giving promise of being not only interesting but offering fair remuneration as reward for honest effort and efficiency.

It is now recognized, however, that the greenkeeper is one of the most important cogs in the machinery of golf club management. He probably spends, or supervises directly or indirectly, the spending of 50 per cent of the total annual dues received by a club from its members. He can waste or misuse a very appreciable percentage of club funds, or he can fill his position conscientiously and efficiently as most greenkeepers do today—protecting in every possible way the interest of the club.

Largely through habit formed in the past when their position was not properly appreciated there still are greenkeepers who expect commissions or gratuities of some kind on purchases which they influence. But this type is very much in the minority and with the coming of greenkeepers' associations, guided by honest and intelligent officers, they are bound, eventually, either to adjust their ideas or disappear entirely from the field.

If a competent greenkeeper is to be held responsible for results, he should not be interfered with in his work. He should be the judge of the various materials, equipment, etc., which he uses, for his experience has taught him to know value received. Being fair, he also realizes that the dealer in golf course supplies is entitled to a legitimate margin of profit, and those soliciting golf course business whose slogan is "price alone," cannot long meet the just demand for honest quality and service.

## Golf Buying No "Game"

The past few years have been a period of readjustment which was inevitable with the tremendous growth of golf and the constantly enlarged field for business with golf

clubs—business which now runs into several million dollars per annum. As a result there is the keenest sort of competition. Golf, until a few years ago, was only a game, and those responsible for purchasing supplies apparently also considered this function as a game. But now it has become a business, and rightly so, considering the amount of money involved—and greenkeepers promoting an interchange of ideas will do much towards establishing an equitable trading basis.

Unfortunately a happy medium in purchasing generally has not yet been struck. Too frequently club officials have gone from one extreme to another—from careless laxity to practices of downright perniciousness and lack of sound judgment in striving for economy. They have gained just sufficient knowledge in many cases to make its value very questionable, but a greens committee fortified with the services of a trustworthy and efficient greenkeeper, cannot go far astray in properly performing its duties. And as the functioning of greenkeepers' associations continues to improve, fewer mistakes will be made and less money wasted in all matters pertaining to the maintenance of our golf courses.

It is interesting to note the influence of the Westchester Greenkeepers' association during the past year. A large percentage of Westchester greenkeepers have a keen interest in its affairs. The greenkeepers in this association make sure that their clubs purchase supplies and equipment of the right quality at the right price, and the earnest endeavor shown to keep their own course in a little better condition than the one nearby at a little lower cost, should be a source of genuine gratification to the greens committee chairman.

Monthly and special meetings are held by the Westchester association, and on these occasions different methods pertaining to golf course maintenance and construction are discussed as well as the results which the association members are getting from various supplies and equipment. In addition, papers are read by members on subjects designated by a director of lectures.

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# What "Dose" Best for Brown-Patch?

By C. R. ORTON

THE number of inquiries regarding brown-patch indicates that this disease continues to be one of the real problems of the golf course. A great many remedies have been tested but only a few have shown any real promise of fulfilling the requirements which are as follows:

1. Any treatment must quickly destroy the fungi which cause these diseases.

2. The treatment must not injure in any way the healthy or weakened grass but on the contrary should act as a stimulant to restore quickly the weakened grass to its normal condition.

3. Any successful treatment must permit of ease and economy of application.

This problem seemed so important that experiments were initiated in 1924 at the Boyce Thompson Institute and have been continued. The first publication by Dr. G. H. Godfrey outlined experiments conducted on the greens of the Hudson River Country club and were published by the Institute as Professional Paper No. 1.

The writer began active work on this problem in 1926 and was fortunate in having a series of 10 plots of 9 different species and varieties of grasses used in golf greens as plots upon which to conduct the experiments in addition to the greens of the adjacent Country Club. It may be of particular interest to many greenkeepers to have a record of these grass experiments since they are the only tests so far as I know of comparative chemical treatments on several different grasses under the same condition.

The arrangement of the plots together with the treatments each received are as shown in Table 1. (*See opposite page.*)

Most of these grasses were secured through the courtesy of the Pedigreed Seed Company. Treatments started May 13 and were continued every two weeks throughout the season ending August 23, when the 8th treatment was applied with the exception of plot No. 7 (ammonium sulphate) which received only 4 treatments at 4-week intervals.

## Why So Many Treatments

Naturally the question may be raised

why so many treatments were given. We were anxious to ascertain the toxic dose in one season of the various fungicidal chemicals in the case of each grass and we were able to do this with one exception, viz., treatment No. 3. The Green Section of the Westchester County Golf Association met at the Hudson River Country Club after the last treatment and inspected the plots as well as treatments on the greens. It was evident under these conditions at the end of the experiment that Metropolitan Bent was the best looking plot from all standpoints. This grass is the most resistant to mercury injury of all those in the test. It also made the best turf.

Corrosive sublimate followed by ammonium sulphate was the most injurious of all the materials used and practically killed Acme velvet bent, putting green mixture, European red fescue, and red fescue No. 2 at both concentrations. Its effect upon Virginia and Columbia Bents was also severe. Uspulun followed by ammonium sulphate caused slight yellowing in Acme velvet, Columbia and Virginia bents.

The most striking effects were produced by "Uspulun Nu-Green." This compound which is an organic mercury combined with nitrogen caused no injury to any of the grasses when applied at normal strength and only produced injury at the 8th application when applied at double strength.

In tests on the golf course "Uspulun Nu-Green" controlled brown-patch perfectly and brought the grass back to normal green about two days sooner than straight organic mercury and ammonium sulphate when used separately. There seems to be a decided advantage in this combined treatment as many greenkeepers witnessed last season. There is also a distinct saving in cost of materials and time through the use of "Uspulun Nu-Green" since it is less expensive than straight chlorphenol-mercury and one application produces better results than were for-

Table I—Extent of Injury to Putting Green Grasses by Various Treatments

TREATMENTS	<i>Wash. Bent.</i>	<i>German Creeping Bent.</i>	<i>Red Fescue No. 2.</i>	<i>European Red Fescue</i>	<i>Putting Green Mixture</i>	<i>Acme Velvet Bent.</i>	<i>Columbia Bent.</i>	<i>V'a. Bent.</i>	<i>Metv. Bent.</i>	<i>Wash Bent.</i>
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10
1. Check (No Treatment)..	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.
2. Uspulun Nu-Green 2 lb. per 1000 sq. ft. ....	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	Slight Aug. 28	Slight Aug. 28	No inj.	Slight Aug. 28
3. Uspulun Nu-Green 1 lb. per 1000 sq. ft. ....	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.
4. Uspulun 1 lb. per 1000 sq. ft. followed by ammonium sulphate .....	Slight June 3	Slight June 3	No inj.	No inj.	Slight June 3	Slight June 3	Slight June 3	Slight June 3	No inj.	Slight June 3
5. Corrosive sublimate 6 oz. per 1000 sq. ft. applied in 1-1200 solution and followed by ammonium sulphate ...	Sev. June 3	Sev. June 3	Sev. June 3	Slight June 3	Sev. June 3	Sev. June 3	Sev. June 3	Sev. June 3	Slight June 3	Sev. June 3
			Practically killed in July	Practically killed in July	Practically killed in July	Practically killed in July				
6. Corrosive sublimate 3 oz. per 1000 sq. ft. applied in 1-2400 solution and followed by ammonium sulphate ...	Mod. June 3	Sev. June 3	None June 3	None June 3	Sev. June 3	Sev. June 3	Sev. June 3	Sev. June 3	Slight June 3	Sev. June 3
			Sev. in July	Sev. in July	Practically killed in July	Practically killed in July				
7. Ammonium sulphate 2½ lb. per 1000 sq. ft. in solution .....	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.	No inj.

merly secured by two operations—mercury followed by ammonium sulphate.

1. Inspect greens every morning.

2. Apply disinfectant immediately upon the first indication of brown-patch. Treat the entire green—do not depend upon treatment of just the spots which are visible.

3. Do not limit the treatment to the putting surface. Brown-patch is generally present in the fairways, approaches and borders. At least treat the approaches and borders in order to prevent the fungus from being constantly tracked back into the green. This extra precaution will well repay the extra expense and time.

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# T a l k i n g I t O v e r

## Budget Battle Reaching Hottest Stage

Another few weeks and every golf club operating on the budget system will be confronted with many temptations to spend beyond the budget limitations. If the budget is one of those few operated successfully on a monthly basis the crisis will be passed with the committees lashed to the mast and protected from the sirens. With annual budgets, the committees often weaken in the manner of mortals and the end of the season finds urgent demands for more money than can be supplied without going into debt.

Mid-summer is the time when the budget is put to the most severe test and a little reminder of this fact, before the crisis comes, may help to avoid many collapses of worthy budget systems.

## If They Must Kick, Have It Done Right

Each month we receive the club publications of many of the representative clubs in the United States and Canada. In reading them we are impressed by the effort being made to properly control complaints. The evil of the chronic kicker who broadcasts each of his imaginary or real complaints, or unburdens them on the club employee he holds responsible, is being combated by announcements that all complaints are to be registered with the committee heads held accountable for the operation of the department found at fault.

Many a good employee has had his efficiency completely ruined by the kicker who does not take up his complaints in the proper manner, through the committee heads. The employee is bewildered by an apparent oversupply of bosses. Such club publicity as these house-organs are giving to the subject is certain to result in smoother management.

## What Price Tournament Golf?

Now that the winter tournament swing has been completed and prizes of a record total have been divided, many of the professionals are wondering if the campaigning is worth the candle. Even those whose aggregate winnings put them on top for the season have expressed some misgivings as to the strain and risk of the tournament swing being justified by the return.

With constantly increasing prize lists and the urge of the competitive spirit it need not be expected that there will be any dearth of brilliant professional performers to attract a gallery, but in noting the names of the absent stellar professional players the thoughtful student of golf trends may see plenty of evidence of the extension of sound business principles in the professional golfing realm. The man with a good club in the north

# Pacific Coast Has Unique Greens Problems

**P**ROBLEMS confronting the greenkeeper in the extreme West are quite different from the ones his professional brother along the Atlantic seaboard has to solve. One thing they have in common and that is the critical player. The demand for perfect turf, impatience with anything which interferes with the game and a keen delight in making the green committee or the greenkeeper the "goat" when shots go wrong, is not confined to any particular locality. The western golfers have remanded, and now have, courses which represent the last word in architecture and maintenance. It would be an easy matter to pick a dozen courses on the coast which will compare not unfavorably with an equal number of the best which the East has to offer.

Fifteen years ago it was thought that good grass putting greens were beyond the reach of the Pacific golfers. Now some of the newer courses have the most perfect putting turf to be found anywhere in the world. This change illustrates what determination and intelligence can do in overcoming difficulties. Much is said about the western climate, but a few in the East who have never visited the coast really understand what it all means.

## Great Gap in Rain

The distance from San Diego to Vancouver, B. C., is about the same as from Palm Beach to Boston, but there is nothing like the wide range in seasonal temperatures along the Pacific as along the Atlantic. The principal difference from south to north is a matter of rainfall. Southern California has an average annual precipitation of less than a foot. There is a gradual increase towards the north until the Puget Sound is reached, where the rainfall is sixty or seventy inches. Practically all this rain comes during the winter months. Nowhere along the coast can good turf be maintained during the summer without water and lots of it. Water is the key to the situation. Many of the California golf courses spend more for water than the entire maintenance cost of some of the eastern courses. In picking the site for a new golf course,

the first and all important question to be answered favorably concerns the availability of an adequate water supply. Excessive evaporation checks the growth of grass at the line reached by the sprinklers. A shot off the fairway may land amid desert conditions.

Climate has much to do in determining the character of the vegetation. In the East practically all the turf grasses have dormant or resting stages. There are no idle periods for turf grasses along the Western Coast. Except in the extreme north where it is too rainy in the winter for playing, golf is an all-the-year-round sport. Grass growth must be continuous. This no doubt explains why so many of the best grasses of the East have not produced satisfactory turf in the West. Everything in the turf line known to greenkeepers has been tried.

Rhode Island bent and the German mixed bent seed have been used freely and found lacking in ability to make permanent satisfactory turf. They soon become coarse, sparse and infested with weeds.

Fescue has also had its champions. Except in the Puget Sound region, red fescue has been no more successful as a putting green grass in the West than it has in the East. Some of the courses in the Seattle District have splendid red fescue putting greens—probably the best to be found anywhere in this country. Just why this grass does so well in that particular locality is difficult to explain.

## Bent Performance

The creeping bents and vegetative planting next came in style. As far as growth alone is concerned the creeping bents do remarkably well under western conditions. But the turf from a playing standpoint leaves much to be desired. One trouble has come from trying to adapt the varieties put out by the U. S. Department of Agriculture to this new environment. Probably better results could have been secured if local strains had been developed. But there was no U. S. Department of Agriculture on the coast to do the work.

Carrying a large number of selections through a test in order to eliminate unde-

sirable sorts is no job for a greenkeeper with his many other duties demanding attention. Nevertheless, several western greenkeepers of late have been developing strains of creeping bent of their own selecting which give promise of superiority over the varieties imported from the East. Joe Mayo of Del Monte, Sam Whiting of the Olympic Courses of San Francisco, Herbert Wilson of the Lakeside Course at Hollywood and Mr. Stewart of the Hillcrest Club of Los Angeles have been pioneers in vegetative planting in California and deserve a great deal of credit for the successes they have achieved and their contributions to the fund of knowledge of grass growing in that State. At the present time, however, vegetative planting on the Pacific Coast is practically at a standstill. This is due not because turf of the vegetated greens is not superior to that of the old seeded greens for it certainly is, but because of the remarkable results obtained on a number of the new courses from the use of Cocos creeping bent seed.

Cocos seed is harvested in southwestern Oregon from a native strain of creeping bent and is therefore already adapted to an all-the-year-round climate. It grows naturally under the two extremes of excessive rainfall in winter and excessive drought in summer. It is also winter hardy and shows less ill effects from frosts and freezing than do the eastern strains of creeping bent. It is almost as fine in texture as velvet bent and has an upright habit of growth which makes ideal putting turf. It comes mighty near being what has long been desired—the turf grass without a serious fault.

### Problems in Fairways

So far this discussion has been about putting greens. The production of satisfactory fairway turf in the West offers almost as serious difficulties as do the putting greens. This may be appreciated when it is understood that the natural grasses in most cases are short lived winter annuals. In Oregon and Washington the rye grasses have been seeded quite extensively and they make a coarse, rank, bunchy growth during the winter. Kentucky bluegrass is much better and should be the one most seeded there.

In Southern California Bermuda is the dominant species. It grows freely along irrigation ditches and is easily spread, either by seed or pieces of the live grass,

in the water. It is scarcely possible to keep Bermuda out of fairways if water from the general supply is used for irrigation. As Bermuda turns brown with the first frost and then fades out to a light straw color, it offers an unpleasant drab appearance at a time of the year when play is at its maximum and bright colors most to be desired. If *Poa bulbosa* possesses all the merits its sponsors claim for it, it may correct one serious draw-back to Southern California golf courses.

The customary fairway seeding is the usual mixture of blue grass and redtop. Bluegrass does as well as should be expected but redtop is an inferior turf grass for the west. Many are now trying to find a substitute for the redtop. The bents are being used in some cases and red fescue is also being seeded although it is difficult to find any results to justify it.

A new grass in this country but one of the oldest in European agriculture is attracting lots of attention and that is *Poa trivialis*, sometimes called rough-stalked-bluegrass. *Poa trivialis* makes a turf in some respects similar to that of the creeping bents. It is finer and grows in more of a mat than does its first cousin Kentucky bluegrass. In the East it has been quite extensively used for shady nooks. From Colorado westward it makes a better growth out in the open than it does in the East. It is a little too soft and tender to withstand rough usage when alone but it combines well with the bents. A combination of *Poa trivialis* and Cocos has given very satisfactory results where it has been tried. This mixture appears to be the coming fairway seeding over much of the western country. This combination is also a source of delight to the divot diggers on tees, and as both are creeping grasses the damage of these destructive "birds" is most easily and rapidly mended.

The principal problem around Portland and points north is to find an umbrella big enough to cover an entire golf course during the winter, as they call it when it begins to rain. The "Oregon mist," sixty inches strong, is a little too damp for winter golf but it makes for good turf and the summers are so delightful that the showers of winter are soon forgotten.

Golfing is penetrating the Rocky Mountain region where new conditions bring to the fore new difficulties. It is to be hoped that the greenkeepers there will tackle their own problems on their own grounds.