

# AS BENTS DIFFER, SO MUST CARE

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**I**T IS A FAIRLY safe bet that there are very few greenkeepers in the northern half of the United States who have not, at some time or other, done some experimenting with vegetated turf. This is particularly true at courses where there have been a few old greens that originally were seeded with South German mixed bent. These greens generally have such a wealth of different type bents that there is an almost irresistible urge to try out some of them. And that "urge" becomes particularly keen when we watch a green go from bad to worse during a spell of bad weather, but find here and there a patch of turf that is good in spite of the beating it is taking. This was the origin of Washington, Metropolitan and a number of strains of creeping bent that have been selected by greenkeepers for use on their own courses.

With increasing use of vegetatively propagated bent has come gradual realization that our maintenance practices must be adapted to the individual needs of the particular type that we are using. Without any intention of becoming involved in endless argument as to the relative merits of vegetated versus seeded turf, it may be safe to suggest that at least a part of the controversy is due to a failure at the beginning of vegetative culture to recognize that our selections needed special handling.

## Can't Handle All Strains in Same Way

During the process of testing the many selections of creeping bent developed in our breeding work at the Pennsylvania experiment station, it soon became evident that we could not get a true picture of the quality of different strains by handling all of them in the same way. In judging the quality of any particular plot we are always troubled by the possibility that a strain might have given a much better account of itself had it been treated differently.

And so, it seemed desirable to lay out larger test plots where each strain could be given a maintenance treatment that

would bring out the best that was in it. No attempt is being made to test at one time all of the hundred-odd selections growing in our nursery. This would require greater facilities in time and budget than are available. Only those strains are given final maintenance tests that have shown some indication of quality in the small test plots.

The first series of these plots were planted in the fall of 1934. The plots are 12 ft. wide by 21 ft. long and have been graded as nearly level as possible. The seedbed was well prepared, with an organic matter content (peat) of approximately fifteen per cent, and a liberal supply of fertilizer and lime to a pH reaction of 6.7. This first series consists of three new selections that have given a good account of themselves in the small test plots together with the Washington and Metropolitan strains and a seeded plot of South German mixed bent.

## Topdressing is Chief Variation in Treatment

An attempt has been made to treat each plot in such a way as would develop and maintain the best possible turf the strain was capable of producing. It was found that it was not necessary the first year to vary treatments on each plot a great deal, except in the matter of topdressing. The soil fertility was very good to start with, and so the matter of fertilizer applications for the first year were not as important as they will probably become later. However, different strains of bent showed a very appreciable difference in quantities of topdressing needed to condition them properly.

The following tabulation shows the amounts of topdressing material per 1,000 sq. ft. used on each strain during the first year after planting. Figures on a strain of velvet and a seeded Oregon colonial obtained on smaller plots are interesting and are included for comparison.

### Dates of Top Dressing and Quantities Applied per 1,000 sq. ft

Grass	May 28 cu. ft.	June 14 cu. ft.	June 30 cu. ft.	July 11 cu. ft.	Aug. 2 cu. ft.	Aug. 29 cu. ft.	Sept. 27 cu. ft.	Total cu. ft.
Strain No. 7(29)3 (vegetated) .....	7.9	7.9	7.9	6.4	14.3	4.8	5.6	54.8
So. Ger. M'x'd. Bent (seeded) .....	9.9	0	4.8	2.8	9.9	4.0	4.8	36.2
Strain No. 2(29)4 (vegetated) .....	7.9	7.9	14.3	7.9	11.9	4.0	4.8	58.7
Metropolitan (vegetated) .....	11.9	9.5	9.5	10.3	15.9	6.4	6.4	69.9
Strain No. 6(29)4 (vegetated) .....	6.4	7.9	7.9	7.9	13.9	4.0	5.6	53.6
Washington (vegetated) .....	9.9	7.9	9.9	7.9	13.9	4.0	6.0	59.5
Oregon Colonial (seeded) .....	9.9	2.0	4.0	4.0	9.9	4.0	4.8	38.6
Velvet (seeded) .....	9.9	4.0	0	4.0	2.0	4.0	2.0	25.9

In studying the tabulation it should be kept in mind that the record covers only the first year after planting and that treatments of the strains under test may have to be varied quite materially during succeeding seasons. Thus, it will probably be necessary to change topdressing applications very drastically on the seeded plots after the turf has reached a greater degree of maturity. However, the tabulation indicates what the situation has been in the first year of the life of a greens' sod and that topdressing practices must depend upon the type of turf used.

Naturally, the question immediately arises as to whether these figures really represent the relative difference in topdressing requirements among the types of turf tested. In other words, has the treatment produced the best possible putting green surface on the various plots? This raises the same old question that has always been with us, namely—what constitutes good quality turf?

#### What Standard Rates Putting Turf?

Now, if turf is to be used as a putting surface it would seem to be only common-sense that any yard stick used to measure quality should include actual putting trials on it. In order to determine whether the treatments given were effective in producing a true putting surface, a series of putting tests were made on each plot with a mechanical putter. The putter used is the one developed by the Green Section of the USGA and was made available through the courtesy of Dr. John Monteith, Jr.

In making the tests five sets of the mechanical putter were made on each plot and five putts were made at each setup. The tests were made over a three day period, from September 10 to 13, just at the end of the hot summer period when turf usually is at its lowest condition. In all cases tests were made on dry turf in the afternoon four hours after clipping to a quarter-inch height. The last previous topdressing had been on August 29. The following summarized tabulation gives the results of the putting quality tests on the large strain plots:

Strain	Average Length	Average Deviation from straight line
Strain No. 7(29)3.....	16'- 1.6"	0.7"
So. Ger. M'x'd. Bent.....	13'- 8.6"	0.5"
Strain No. 2(29)4.....	18'- 6.8"	1.9"
Metropolitan .....	15'-11.9"	2.1"
Strain No. 6(29)4.....	16'-11.7"	0.5"
Washington .....	15'-11.9"	0.7"

The first column of the table represents the average length of the putts at the same stroke by the putter on each strain. The second column gives the distance from the point where the ball came to rest, to the true line of the intended putt.

The tests are of interest because they demonstrate that the treatments given the plots during the season were fairly close to what they should have been to produce a true putting surface. An average fluctuation from a straight line for 25 15 ft. (or more) putts of from only one-half to two inches is a pretty good record.

The figures on length of putts are not



General view of the breeding nursery and part of the testing plot at the Pennsylvania Experiment Station.

so significant. Of the five creeping bent strains tested, only one, Strain 2(29)4 showed any significant difference. This particular strain made a faster surface primarily because it has a rather fine textured hard foliage that held the ball up so that it rolled over the leaves instead of through them. It is possible that it will be necessary to vary the height of cut somewhat for this strain. The apparent slowness of the South German mixed bent turf has no significance. This was, of course, a seeded plot and at the end of the first season still had some of the softness characteristic of seedling plants.

And that brings us back to the original premise that the quality of a putting surface depends upon the maintenance treatment given the particular type of grass used. Practical experience had indicated that this is true and the figures now demonstrate it. The tests will be continued in succeeding seasons with more frequent putting trials as a check on treatments. It will be interesting to see whether the relative differences between the different types of grass will continue as the turf gets older.

“GOLF is more than 300 years old. Golf architecture is only about 40 years old, but the architects are catching up fast. One thing the foremost architects have learned is to be careful about locating greens where aeration will be difficult.”—Perry Maxwell.

#### Northwest Tourney Dates, Purses Announced by Harlow

**T**OURNAMENT Bureau of the PGA considers that a field of sufficient class is now certain to go to the northwest, and puts the following into the schedule as permanent dates:

July 17-18-19, St. Paul .....	\$5,000
July 23-24-25, Vancouver.....	5,000
July 27-28-29, Victoria.....	3,000
July 31, Aug. 1-2, Seattle.....	5,000
August 7-8-9, Portland.....	5,000

Bob Harlow, PGA Tournament Bureau Manager, is negotiating with Spokane, Salt Lake City, Denver, and Omaha with expectation of filling week-ends of August 14-15-16, and August 21-22-23 so that the western tour will be even more attractive to players, and they will have events on the return trip between Portland and Chicago.

The Tournament Bureau of the PGA will not sanction between July 13 and August 26 any competitions other than those on this northwestern tour. Schedule will be resumed in the East with the Glens Falls Open on August 28-29-30.

Fourth annual Hershey Open will be played Sept. 3, 4, 5, 6, total of 72 holes. Prize money is increased to \$5,000, a jump of \$3,500 from the purse of the 1933 Hershey event.