

Turf Round-Up

By O. J. NOER

Revisions in construction, grass selection, turf treatment and machinery use studied in light of 1955 experience.

(Conclusion of a two part review of turf maintenance in 1955)

THE bent grasses fared badly during the summer of 1955, both on greens and fairways. Even the best looked bad during periods of hot, humid and wet weather.

There have been few complaints about mixed German bent. Most greens of it are in the East. The season was hot and dry until late summer. The heavy rains in August caused trouble, but there was little complaint because nobody expects anything else following hurricane weather. Recovery was good by late September and early October.

Polycross, now named Penncross, is another seeded type of creeping bent. Plots of it developed from the original small lot of seed looked good in most instances. In Milwaukee, Wis., and in Dallas, Tex., Polycross (Penncross) was especially good all season. Penncross seems to have great possibilities and is deserving of further testing when seed becomes available again.

Makes Comeback

Among the vegetative strains, good old Washington strain came back into its own. It is a good hot weather grass. Its chief drawback is a tendency to go off-color and stop growth when weather turns cool. Nevertheless several supts. have expressed satisfaction in having this strain on the greens at their clubs.

Old Orchard and Toronto have their champions. Toronto is least resistant of the two to disease, but it makes a fast comeback and seems to resist mechanical wear better than some of the other strains. The true strain is a good performer and keeps good color in cold weather.

Arlington and Congressional alone and in combination gained stature. Both performed remarkably well. Arlington was outstanding in the belt from Washington across to Kansas City. Greens containing it in Nashville and Chattanooga came through the summer without much trouble. There are 18 bent greens of these grasses at Durham, N. C. Richland of Nashville will have all bent greens in 1956. The last ones were planted this fall. Congressional has been good farther north. It resists snow mold remarkably well and is one of the first to start growth in the spring. Congressional holds its color well in the fall.

Criticism of Separation Questioned

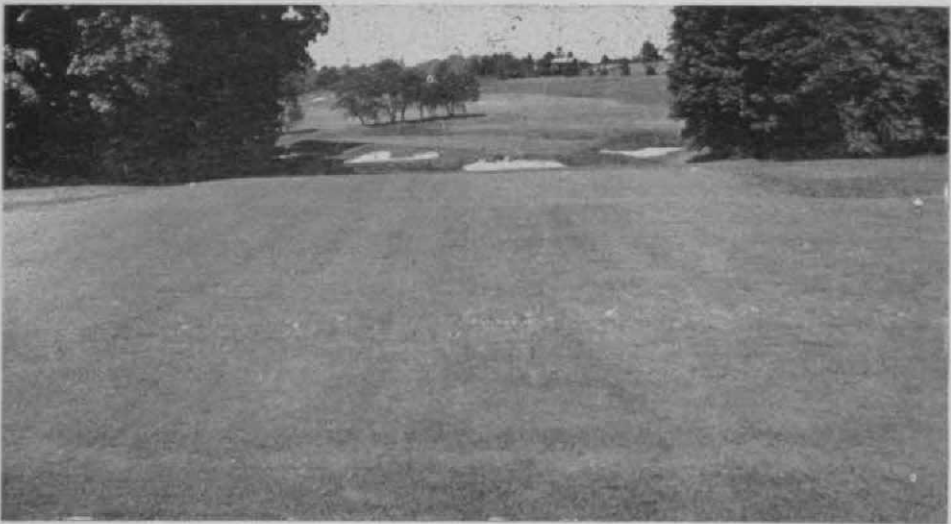
Criticism of separation on greens planted to the Arlington-Congressional mixture is not justified even though there are examples of supposed separation. Poor mixing before planting or the use of an off-type strain of Congressional would seem to be the reason.

After seeing signs of separation in Kansas City several years ago, the writer went to Fairfax, Va., to see the original plantings made by William Glover. There was no evidence of separation on greens which were then 12 years old. Glover planted generously and used an extra bushel of Arlington in the mixture. He mentioned a figure of 5 bushels Arlington and 4 bushels Congressional per 1,000 sq. ft.

The greens at Fairfax planted with equal parts Arlington, Congressional and Collins always have been very good and show no evidence of separation. Glover spoke highly of these greens and said the turf



2 4 D injury to Tiffine (Tifin 127) Bermuda during spot treatment to kill penny wort.



U-3 Bermuda has thrived despite heavy play from this tee of a par-3 hole in Wilmington, Del.

performed well during all seasons of the year.

The greens at the city course in Sioux Falls, S. D., were planted several years ago. A mixture of equal parts Old Orchard and Arlington was used. There was no evidence of separation this year. The greens were good all season despite bad summer weather.

Mixing of vegetative strains of bent is a precarious undertaking and should not be done lightly. The results may be disappointing. Some of the old original supposedly pure Washington strain of bent greens testify to that fact. The odd bit of Metropolitan bent got into the nursery. The amount was insignificant and not detected. For a year or two the newly planted greens looked like pure Washington bent. Then the Metropolitan started to assert itself. Before long sizable patches of blue-green matted Metropolitan bent developed because of the more aggressive nature of this grass. Then it became well nigh impossible to keep good putting surfaces because of inherent differences in the two grasses.

Superior Turf Mixtures

Creeping bent grasses used in mixtures for vegetative planting should be alike in color and in growth habits. Under these conditions a mixture is apt to provide a turf superior to one from any member of the mixture. Each grass in the mixtures makes its own contribution to the turf.

For example, in the Arlington-Congressional mixture, the Congressional overcomes the objectionable swirl so characteristic of Arlington when grown alone. Congressional asserts itself in cool weather because it grows best then and keeps its color when other bents lose color because of cold. Arlington carries the load in mid-summer because it seems to like heat better than Congressional.

Cohansey is one of the newer grasses from the standpoint of use. It was one of the selections used on the USGA pie greens. At the start it did not get deserved attention because of its light yellow-green color in cool weather. Cohansey caught the eye of several Oklahomans. There are a number of good greens in Oklahoma and elsewhere, but this strain was not as resistant to disease in 1955 as it was supposed to be. Some Oklahomans think Cohansey can withstand a higher soil concentration of soluble salts than other creeping bents.

Good and Bad Features

Pennlu is the newcomer among the vegetative bents even though the plot of it has been outstanding and the best at Penn State University for ten years or more. Pennlu has done well at Purdue both on the plots and on a test green. The grass on some Pennlu greens showed marked puffiness, which was never in evidence at Penn State. Puffy turf is frowned upon by the golfer. Pythium was very bad on some new Pennlu greens in southern Illinois. Overwetness probably aggravat-



The right half of this fairway in St. Louis got a heavy dose of sodium arsenite (30 lbs. per acre) before it was planted in U-3 Bermuda.

ed the attack. Other bent greens in that area had pythium but less severe. Despite the fact that there has been disappointment in the behavior of Pennlu on some greens, the grass has a good record behind it. The final answer will be its behavior under use.

Collars Took Beating

Turf on the collars of the aprons around bent grass greens took a terrific beating during the hot weather. The grass was mostly poa annua. It has a bad time at best during hot weather — and is doomed when cut with a power greens mower especially if the grass is at or near a state of wilt. A power driven drum bruises the grass and spells its doom especially when turns are short and quick. A smooth drum is bad enough, but the sure way to kill poa annua is to use a corrugated drum. This type drum may be needed for Bermuda, but it is bad for bent or poa annua in hot weather when the grass is on the verge of wilt. A corrugated roller is not desirable for use on Bermuda greens overseeded with rye grass. Rye is tender and bruises easily.

The permanent grasses have been disappearing from the aprons of bent greens over a period of years. Some blame compaction and others accuse the modern power driven greens mower. Both are contributing factors. Oldtimers remind us that the problem was never serious in the days of hand mowing.

Turf on the collars will be bad during hot midsummer weather so long as poa annua is the sole or principal grass on the aprons. Aerifying, spiking, and re-seeding with bent, fescue or bluegrass never seems to work. Poa annua seedlings

get the jump and smother the other grasses. Some think resodding is a better answer. It can be done quickly with a modern power sod cutter from a nursery of good grass. Several clubs have used bluegrass sod from the rough and overseeded with bent because bluegrass will not persist indefinitely under close cutting. The old poa annua sod from the apron is laid back in the rough. Under high cutting there the poa annua disappears and Kentucky bluegrass regains possession.

Wider Aprons Help

Wider aprons would go a long way toward solving the vexing problem on aprons. They should be provided on new greens and narrow ones should be widened if at all possible when aprons are resodded. Slower mowing speeds and the elimination of quick, abrupt turns will help the overall problem of maintenance.

The problem of power mowing was emphasized in 1955 at one club on the southwest side of Chicago. Grass was never good on two badly located greens. Coverage had been sparse and algae rampant every summer since the greens had been rebuilt unsuccessfully. The soil was loaded with peat. Soil and air drainage were bad.

After trying everything else, it looked like another rebuilding would be the answer. As a last resort, hand mowing was tried in 1955; sprinklers were discarded and these greens were watered carefully by hand in the early morning and watched closely during the day for wilt. To the surprise of some, both greens came through 1955 without a blemish. Turf density was good all year and algae was no problem.

A unit combining the desirable features of the hand and power greens mower would be useful. It may be powered by



The left half of this fairway in St. Louis shows a strong growth of U-3 Bermuda which is being seriously considered as substitute for bent grass fairways in this area.



Carl Springer, Congress Lake GC, Parksville, O., is well satisfied with fairway turf produced by using sodium arsenite to kill weeds and poa annua before re-seeding with Bent.

electricity. In the meantime, a good hand greens mower is needed for emergency use.

Thatch Increase Alarms

Thatch on greens is increasing at an alarming rate. Infrequent mowing, the solid scalping roller on the mowers, and failure to topdress are cited as contributing causes. Excessive thatch can be prevented by the use of the various machines now on the market. Incidentally, the use of these machines has made vastly better putting surfaces on Bermuda grass greens. They have solved the surface runner problem.

Every green should have a sole of turf to help hold the ball and provide a true surface. That does not mean a thick mat. Turf of that kind footprints badly and scuffs around the cup. A heavy thatch fosters shallow root development and the mat stays overly wet after rains or after watering because of its peat-like character. Then iron chlorosis, leaf spot, and every kind of disease may take their toll. Fungicides do not stop them or prevent loss of turf. Topdressing buries the mat, hence is not the answer. Its use should wait until it can make contact with the soil. Some have solved the problem by providing aeration and using a little lime periodically to speed decomposition. The greens are aerified in four or five directions the first time, followed by verti-cutting to shatter the plugs along with a light dusting of lime.

Pythium Stubborn in '55

Every known disease and possibly some new ones were prevalent in 1955.

Pythium was most stubborn. The use of a little hydrated lime applied dry seemed to be as good as anything for it, and for algae.

Leaf spots of various kinds got the big

play. When they were the primary cause of trouble fungicides stopped them, but not when they were secondary to something else such as iron chlorosis, excessive thatch, improper fertilization, etc. Then, underlying faults had to be corrected. After that leaf spot usually became a problem no longer. Howard Beckett expressed himself very aptly in this way: "Why all this fuss about leaf spot? We have a little trouble with it at Capital City. Our aim is to give the grass a bland diet and be careful about everything else we do."

Great changes are in the making in the South where common Bermuda was the universal golf course grass. Better, finer textured Bermuda selections are finding favor for use on greens. The Gene Tift and Everglades strain has behaved well in Florida, along the Gulf Coast, and is liked by C. S. Smith in Guadalajara in Mexico. The Everglades selection has been used by some Florida clubs. Pinehurst and Charlotte (S. C.) C. C. have some good greens of selected Bermuda grass. It looks as though Tifton 328 will supercede Tiffine. It makes a better textured turf and has all the virtues of Tiffine. One city course in Dallas has 18 good greens of T 35 A, which is one of the better Texas selections.

Finer Bermuda Management

The finer Bermudas must be managed more like bent grasses than like common Bermuda. Solid scalping rollers on mowers must be discarded. They develop mat. Feeding should be at light rates when needed.

Improved strains of Bermuda are replacing common Bermuda in Florida for use on tees and fairways. There is no question about the superiority of the turf.

Many have expressed concern about the



New, fine Bermuda green (Everglades 1 strain) sprig was planted a month before this picture was taken. Sprigs, set in 8 to 10-in. centers, were 4 to 5-in. long. They were planted in holes with only 1-in protruding above ground.

bent grass fairways in the North. The bent on some of the watered fairways fared badly during the bad weather in midsummer. There was brown patch on many courses, and others were plagued with localized dry spots. As a result, U-3 Bermuda is being considered seriously as a substitute in the belt from Washington to St. Louis and Kansas City. With it the problem will switch to winter survival. Farther north the use of Bermuda is not feasible. It has winter-killed each of the past two winters in Milwaukee. Both were comparatively mild. Until something better is found or developed, bent grasses are bound to predominate on watered fairways in the region north of a line from New York to Chicago and beyond. The problem is to learn how to live with them.

Bent was not abandoned for use on greens following the disastrous summer of 1928. Management practices were overhauled instead. Approaches on watered courses seem to be the big headache. The cover is mostly poa annua. Plugging rather than reseeding with bent is the solution urged by some.

Life Magazine Out As Golf Day Co-Sponsor

After originating National Golf Day in 1952 and participating as co-sponsor with the PGA since the start of the event, Life magazine has announced its withdrawal from the golf promotion that has raised \$477,000.

J. E. King officially disclosed the Life decision at the annual meeting of the National Golf Fund, Inc., Dec. 20, at Lake Shore Club, Chicago. The National Golf Fund is the disbursing agency for approximately half of Golf Day revenue. The other half went to the USO in 1952, 1953 and 1954. Forty per cent went to the Red Cross in 1955.

PGA Got National Advertising

Life paid practically all the expenses of National Golf Day, including the cost of medals awarded for entrants who beat the various men and women National Open champions. The magazine's generous promotion budget plus the services of its star staff put Golf Day strongly on the golf calendar and resulted in excellent national advertising for the PGA.

Harry Moffitt, PGA pres., at the Dec. 20 meeting, expressed gratitude to the management of Life for its National Golf Day achievements and announced that the PGA

would continue National Golf Day as sole sponsor, if no acceptable co-sponsor volunteered.

Disbursements Listed

At this Fourth annual meeting of the National Golf Fund the following disbursements were made from the approximately \$160,000 realized from the "Beat Ed Furgol" - "Beat Patty Berg" National Golf Day of 1955:

To the National Amputee Golf Fund of Possibilities Unlimited, Inc.	\$5,500
To the U. S. Blind Golfers' Assn.	3,000
To the U.S.G.A. Turf Research and Educational Programs at Colorado A. & M., Kansas State College, University of California, Purdue, Rhode Island, Penn State, Georgia Coastal Plain Experiment Station, Texas A. & M. and Rutgers	15,000
To the PGA	
Benevolent Fund	\$ 3,000
Relief Fund	3,000
Educational Fund	12,000
Total PGA	\$18,000

To the U. S. Junior Chamber of Commerce—Jr. Golf Program	\$ 8,000
To the American Women's Voluntary Services	2,000
To the United Voluntary Services	2,000
To the U. S. Olympic Committee	1,000
To the Caddie Scholarship Funds	39,640.44

In addition to the above disbursements, the American Red Cross' 40 per cent amounted to approximately \$63,000.00. The favorite charities of Ed Furgol and Babe Zaharias each are to receive one per cent of the total proceeds - amounting to approximately \$1500 for each. Babe Zaharias has designated that her share is to be appropriated to the Cancer Research Fund which she is establishing. Ed Furgol is donating his share to the Crippled Children's Institute of which he is Honorary Chmn.

At the same meeting the following National Golf Fund officers and directors were reelected: Fred L. Riggan, Sr., pres.; J. E. King, vp.; Thomas W. Crane, sec-treas.; Herb Graffis, and Milton Woodard, directors.

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