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An excellent modern tee at Indian Creek GC, Miami Beach, Fla.



One of the creeping bent tees at Milwaukee Country Club.

Maintenance of Tees, Roughs and Traps Needs Attention*

By O. J. NOER

Tees are an important feature of the golf course, yet they receive scant attention in the literature devoted to golf turf maintenance, and on the programs at conferences. Greens are emphasized first, which is as it should be, then come fairways. Other features, such as tees, traps, and roughs are ignored or dismissed briefly with a few generalities.

Poor tees are accepted as a matter of course by many golfers. They become aroused and demand better ones after greens and fairways approach perfection, or after their eyes are opened by playing a course where the tees are good and the turf in fine condition throughout the playing season.

Tees on most of the older golf courses are small in size and elevated above the surrounding landscape. The steep banks make them unsightly and difficult to mow except by hand. Scything is often necessary. Some tees are terraced to provide shots from different elevations. The steep slopes are waste space and hard to maintain. They dry out and the mowers scalp along the top edge. Par four holes usually have two or three separate tees. The one out in front is for the ladies, the back one is for tournament play, and the main tee is for everyday use.

The women's and the championship tees usually have the best coverage of grass

Note: This is the last of three articles. The others appeared in the January and February, 1951 issues of GOLFDOM.

because they are not heavily played. The everyday tees are frequently so small that there is bare ground on the playing space during much of the season. When heavily played tees are of postage stamp size, more area is the only answer to the query "What grass can we use to provide all season coverage". The hackers tear out turf faster than the grass can repair itself. Growth can be speeded with fertilizer and water, but there is a limit beyond which one cannot go even with the most aggressive growing grass.

Modern Course Tees

The tees on new modern courses are adequate in size. Where the play is never heavy, the area is about half the size of the greens. On heavily played courses the tees equal the greens in size. Tees on the par three holes are about one-third larger than the others because of the added wear from iron shot play. The distance from front to back is sufficient to provide a variety of shots and eliminates the necessity for building more than one tee. The slopes have gentle gradients to fit the tee into the landscape picture and make it possible to mow the banks with a three or five-gang fairway unit. The playing area of the tee is cut close by power mowers in most cases with a triplex mower. The cutting width of these machines is almost 80 inches.

Whenever old tees are replaced, the new ones should resemble the modern kind described above. They should be from onehalf to equal the size of the greens and the ones on par three holes should be at least one-third larger. The playing area should be at one level with the front slightly elevated. The slope from front to back should be one-half per cent, or six inches for each one hundred feet of length. The tees should be elevated slightly and the banks should be long ones with gentle slopes to facilitate mowing. Besides simplifying maintenance, tees of this kind look as if they are a part of the landscape and are far more pleasing in every way than the old antiquated type.

The best soil for tees is a loam, or a silt loam. Either one provides the kind of surface desired by golfers. When addressing the ball on tees the player must have a



A large practice green provides amusement for older members and holds their interest in the club.

firm stance. The surface is too loose when the sand or organic matter content of the soil is too high. For greens it is best to err on the sand side to make sure surfaces will hold a pitch shot, but on tees it is better to lean toward the heavier silt fraction so the player can put power into the shot.

Best Tee Grass

Bermuda is the best tee grass for Southern courses. It makes a tight firm surface and repairs divots quickly, provided the soil is well supplied with food and moisture. The Tifton 57 Selection developed by Dr. Glenn Burton looks much better than common bermuda.

Shade is bermuda's greatest enemy. It is the reason why turf is bad on many tees. Clubs in the transition belt from Washington to Kansas City should not overlook this fact. Trial plantings should be on tees which are out in the open. Zoysia is much more shade tolerant than bermuda grass. Some selections of this grass may be the answer to shade in the South.

In the North, especially in the region south of a line through Chicago and New York, choice of grass for tees is not easy. There is need for a better grass than anything now available. Kentucky bluegrass

and fescue are used, but have serious limitations for tee use. Kentucky bluegrass will not persist under the close mowing demanded by players, and does not make a dense enough turf to resist clover and crab grass. Fescue is ideal for play, but cannot be cut close. It lacks aggressiveness, so recovery is too slow on heavily played courses.

Merion bluegrass alone, or in combination with zoysia or bermuda, may be the answer to turf cover in the transition zone between Northern and Southern regions. Farther north, Merion bluegrass only, or mixed with bent may be the answer.

Zoysia Matrella is being used in the Louisville area for tees and is liked by players and the golf course superintendent. Turf must be grown in a nursery first and transferred to the tee. This grass spreads too slowly to make turf from plugs planted on tees which are in play.

The use of bent grass on tees is on the increase. Some sow seed and others plant stolons. Both Colonial and Seaside are used alone or in combination. Many of the older stolon planted tees are of the Washington strain. In recent years other selections have been tried. Arlington looked like the ideal grass because of its resistance to most diseases, and the fact



Small tees seldom have good grass. Crab grass and goose grass take possession in midsummer.

that leaves are almost like fescue in toughness. It has not lived up to expectation under heavy play because it does not grow fast enough to repair divots quickly and prevent infestation by poa annua and crab grass. Other strains have performed better. Cohannsy, Collins, and Congressional have been good. Toronto is a fast, aggressive grower which repairs divots rapidly and is very satisfactory when properly maintained. Dr. Grau is enthusiastic about some of the newer Green Section selections because of their lower moisture requirements.

Some bent tees have been in play for

many years, and have been very satisfactory when properly maintained. The tees at Brynwood and Milwaukee Country Club were built and planted with Washington bent stolons in the late Twenties, and have been in continuous play ever since. The Brynwood tees are smaller than average, yet they have never been renovated. The tees are cut close at both clubs, with a power greens mower. They are fertilized generously and top-dressed occasionally. Milwaukee Country Club has a nursery of Washington bent alongside each tee. It is two mower widths wide, and as long as the tee. It is mowed each time the tees are cut. After plugs are used to repair divots, the holes are filled with soil so the bent can cover-over before more plugs are needed. Brynwood relies upon fertilization to keep good turf.

Treating Divot Scars

The simple way to treat divot scars is to seed with domestic rye grass once or twice a week. The seed is mixed with damp soil and carried in a twelve quart pail. The workman drops a handful into each fresh divot scar. Then he steps on the spot to press the seed into the soil. Some peat should be used in the soil to hold moisture and speed germination. The rye grass provides cover until the bent heals the scars.

The importance of close cutting cannot be over-stressed for bent grass tees. It is the only way to keep the turf satisfactory for play. Divot scars are bad where the bent is long, and players cannot control the ball because of grass between the face of the club and the ball. Keeping the turf tight simplifies maintenance and minimizes disease.

A moderately dry soil provides a finer surface, and makes disease a less trouble-some problem.

Most tees do not get enough fertilizer. Its use is important to foster aggressive growth to speed healing where play is heavy. Rates should be a third to a half more than on greens. Nitrogen is most important because it is the growth promoter. The requirements for phosphate and potash are midway between fairways and greens because clippings are seldom removed. Where catchers are used, the fertilizer program should provide larger amounts of phosphate and potash than otherwise. Lime should be applied when the soil is moderate to strongly acid.

Shade is pleasing to players during hot weather. Some plantings are too dense. They serve as a barrier preventing the free movement of air across the surface, and they exclude sunlight all day. Good grass can never be maintained under these conditions. Besides too little light, the mass of tree roots in the tee deprive the grass of food and water. There should be

enough open space around all tees to provide good air drainage and insure sunlight during a good part of the day. Then trenching to cut tree roots, or root pruning once or twice a year, will do much to help keep good turf.

Little thought is given to placing benches and ball washers. They should be well away from the tee, otherwise the wear from constant traffic is sure to produce ugly bare spots.

Turf for Roughs

Roughs receive scant attention as to quality of the turf. Emphasis is placed upon cutting height because players are most interested in that feature. It is generally agreed that the penalty should be one-half stroke. More thought should be given to the plant population of grass and weeds. Bluegrass or fescue make the best rough in the North. Creeping bent is not desirable because of its fluffy character. The best roughs are not cut closer than three inches.

At one time Chicago Golf Club had exceptionally fine roughs. The turf consisted of a good cover of sheep fescue. These roughs required very little mowing or other attention. The stand of fescue was sufficiently dense so the bunch growth habit of this grass did not unduly penalize the off-line player.

There is not enough grass on many roughs. Impoverished soil is one reason,

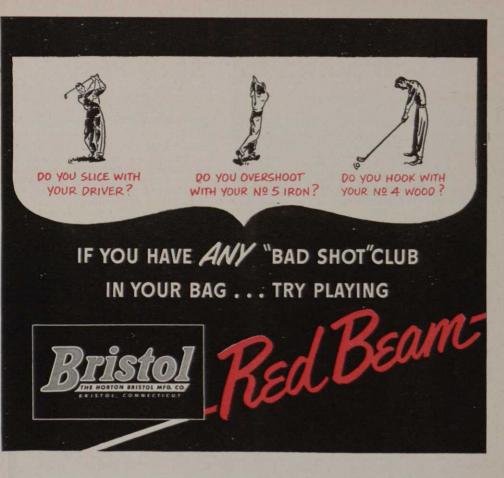


Dense bluegrass rough and bent fairway. High cutting of the rough stops the bent along the edge of the fairway.

and grub damage is another. After the grass dies, weeds take possession. Before the discovery of 2,4-D, dandelion, plantain, and buckhorn were bad. Crab grass and chickweed have taken their place and have become the potential source of infestation in the adjoining fairways.

On courses where white grubs cause damage, the roughs as well as the fairways should be treated with Chlordane to control them. The rate of application

(Continued on page 69)



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"Spring Training" Opens Campaign for More Play

Ted Woolley, president of Golfcraft, Inc., is chairman of the Sports and Pastimes committee of Butterfield CC in the Chicago district. As a golf club manufacturer and an official at a first class club he gets an accurate close-up on the need of promoting more play at golf clubs as a first requirement of clubs, manufacturers and pros.

There won't be any marked increase in the number of golf courses for a while;





"Spring Training" night staged at Butterfield CC, Chicago dist., under the direction of Sports and Pastimes committee chairman Ted Woolley (top row, second from right) to get golf play off to an early start had an all star cast of golf talent and other sports celebrities on the job. Among those present were: (top row, L to R) Herb Graffis, Golfdom editor, Bob MacDonald, teaching professional, pres. Barnhart of Butterfield CC, Woolley, Bill Gordon, Ill, PGA pres., (Bottom row, L to R) Joe Kirkwood, Jr., Shirley Spork, Golfcraft advisory staff, and Butterfield professional, Dick Grout.

that's certain with government restrictions now applied. The private clubs in metropolitan areas are nearly to capacity of membership. There is a shortage of public and fee courses in several districts. With limitations of golf facilities in areas where there are the most people the problem, especially at private clubs, is that of encouraging greater use of facilities.

The broad statistical picture of golf is shown by the latest carefully compiled estimates of the number of active golfers (those playing at least 20 rounds a year) and the number of rounds played. These figures were determined for 1949 by GOLFDOM with the National Golf Foundation

and the cooperation of private, public and fee course officials. The figures reported are shown below and on the accompanying page.

Figures for 1950 are not yet available as in many cases they're not compiled at courses until spring and returns can't be secured from the cooperating clubs until the rush of opening the season in the central states is out of the way. Early indications are that the 1950 increase over 1949 exceeded 5% and may have come close to 10% with the playing weather having been rather good.

Figures from the Card

Woolley figures that in the cases of the private clubs there is ample room for increasing play by establishing a quota of three more rounds per year per member. That will amount to a very worthwhile increase in play at the private clubs and reduce the members' cost per round which is an item some members are going to examine thoughtfully in periods when net income may be diminished. The average of rounds played by men, women and juniors at 18-hole private clubs in 1949 was only about 16 and that could stand plenty of an increase without taxing the capacity of the plants.

Of course golf play is dependent on weather but not to the extent most people realize. The improvement in drainage at

Number of Golf Players in U. S. Year Ending 1949

At Private Clubs:	
Men	710,000
Women	200,000
Juniors	78,000
	988,400
At Fee Courses:	
Men	628,300
Women	153,000
Juniors	57,000
	838,300
At Public Courses:	
Men	895,000
Women	207,000
Juniors	182,000
	1,285,300
Total for the U.S.	3,112,000

Number of Rounds of Golf Played Year Ending 1949

	- On 9-Hole Golf Courses -	
Public 9-Hole (Ave.)	19,246 rounds or Total for	416 8,006,336
Daily Fee 9-Hole (Ave.)	10,266 rounds or Total for	656 6,734,496
Private 9-Hole (Ave.)	5,931 rounds or Total for	1,920 11,387,520
	On 18-Hole Golf Courses —	
Public 18-Hole (Ave.)	35,090 rounds or Total for	327 11,474,270
Daily Fee 18-Hole (Ave.)	21,112 rounds or Total for	426 8,972,600
Private 18-Hole (Ave.)	13,342 rounds or Total for	1,225 16,343,950
	Total	62,919,172

golf courses, the maintenance practice of clearing away leaves in fall and the great improvement in comfortable weather-proof golf apparel make it possible for golf to be enjoyed in northern and central states throughout a longer season. About the only time when a course should be out of play is during bitterly cold weather, or when the course is covered with snow or when the spring thaws make it inadvisable to play on regular greens. In the latter case temporary greens can be played.

Woolley maintains that failure to develop more use of the courses and clubhouse facilities is the fault of the Sports and Pastimes committees. They often muff the job of stirring up golf interest to bring the golfers out early after a winter indoors in the central and northern states. This winter may be interrupted by a golfing vacation in the south or southwest but there's no reason why it shouldn't be ended as early as possible by steaming up early golf play at one's own club north of the Mason-Dixon line, Woolley declares.

So, as a test of his idea, Woolley and his committee team-mates staged a "Spring Training" dinner party at the club. The first one of these affairs, which are to be scheduled annually, was very well attended but not as well as the committee had hoped, for the reason — later discovered — that some members just couldn't realize it was going to be an all-star golf show. But the dinner did get big play started earlier than usual at the club and got week-day play out when weather permitted, rather than let the season's play coast in on the usual week-end pattern.

Woolley got Joe Kirkwood, Sr. and Joe, Jr., and Shirley Spork of his own staff putting on instruction sessions and shot-making demonstrations in a net put up in the club lounge. Joe, Sr. presented his trick shot show. Dick Grout, Butterfield's pro; Johnny Revolta, Bill Nary, who now is assistant to Babe Zaharias at Skycrest and Bob MacDonald also gave instructive performances with Bill Gordon, president of the Illinois PGA as ring-master. Other sports celebrities — Johnny Lujack, Jack

Manders, Ray Apolskis and Gabby Hartnett — were introduced, as was young Joe's charming wife, Cathy Downs of the movies. Pres. Barnhart of Butterfield, Woolley and other club officials briefly outlined plans for club activities and got across the idea that always needs to be emphasized in club operations — that the club is a place to enjoy oneself often instead of being a place thought of as where a fellow and his family may spend too much money.

Locate Displays in Shop Traffic Paths

Orville W. Chapin, pro, Ft. Wayne (Ind.) CC says that too many pros may beat themselves out of sales and discourage customers from seeing and examining goods they need, by putting the displays against walls instead of where they'll be in the path of traffic.

Chapin tells of his own shop:

"I build a rack or stand, 15" square with tray or base shaped octagonally, to display putters, wedges, etc. The top rail is notched so that clubs won't slip sidewise. I use the hollow inside for displaying umbrellas. This rack is placed close to front entrance, right in the line of entering traffic. It tripled my sale of clubs.

"I also put a good looking table with sportswear displayed on it and where customers would come against it. It was amazing to see how many members would handle and buy the merchandise. These same people, 9 times out of 10, would resist being shown merchandise even though they showed interest by looking towards cases with the same merchandise under glass.

"Another job I do is to check over club storage rocks for sets which are obsolete or not well fitted to the player. I get plenty of leads for business from this."

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When You NEED Supplies - page 77



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Planning A Business Career in Professional Golf

By VICTOR EAST

(Address at Illinois PGA Spring Meeting)

This year is my silver anniversary in professional golf and to record some of the experiences I've had in this business so they may be helpful to others I'm writing a book on "A Half Century of Golf." Some of its material I want to present here in suggesting what the assistant professional might do to improve his status.

When a man looks at professional golf as a career he must consider:

The advantages and disadvantages of the game of golf.

The changed and ever-changing pattern of the golf profession.

The over-all purpose of professional golf.

The advantages of the game for the most part consist of an enjoyable recreation for the amateur and an enjoyable occupation for the professional, within a healthful environment for both.

How the professional can best capitalize and obtain a substantial reward for his part in this happy set-up requires much objective thinking. The fact should be recognized that golf is an all-absorbing and fascinating game and is apt to throw the professional-to-be off guard, in that, as the caddie of today, he all too frequently gets into the game without getting enough education to fit him for his chosen vocation and he thus has a continuing handicap to worthwhile advancement. Therefore, it is my suggestion to the assistant that he give serious consideration to taking extension courses of instruction embracing business training and English — both are of vital importance.

Actually, I could have put the subject of English first for, in an everyday way, here's how it more generally works: The probabilities are a youth gets started as a shopboy. He keeps the place clean and helps in the arrangement of merchandise according to his employer's direction. He cleans the members' clubs and, in doing so, keeps track of their locations by the numerical and alphabetical storage charts and at intervals he is brought in contact with his boss' customers, the club members. It is right here where the pattern of his future takes shape, for, if he speaks well, the individual members become impressed, and more generally make comment to others of the impression.

The further probabilities are the young man, in spite of the long hours necessarily

used in his employment, will find the time to practice and from this he could probably develop into a good player. Provided the quality of his club-cleaning and shop work have been well done and he has shown ability in keeping track of such things as 'phone or other messages and his records have been well kept, he will unquestionably be put in the way of making sales of minor items, from where he, sooner or later, advances to becoming an assistant professional and, as such, will in all probability take on the overload of instruction at the club, included in which will more generally be the teaching of juniors.

This matter of prescribing and directing the efforts of others is the next important step—where his knowledge or lack of it will determine his prospects of becoming a graduate professional.

Making Words Work

With the juniors he, for the most part, will rely more on demonstration than explanation, but with the adults it will be necessary to describe what is best to do any why it has to be done. Here's where words and their meaning will be of the utmost importance because ,dependent upon them, the responses of the individual pupils will be either good or bad. Almost needless to state, if the words used do not produce the desired reactions from the respective pupils, their progress and attendant pleasure will suffer, as will the reputation of the teacher.

Hence, the suggestion made of being well schooled in English. In making this suggestion, kindly do not think I have any claim to being a paragon of good English. Perhaps the suggestion arises from knowledge of my shortcomings on the subject. In obtaining the fulfillment of possibilities in a professional golf career my counsel, particularly to the younger men, would be to avoid the disadvantages that can come from any neglect in becoming trained in good business principles and to make certain of becoming well schooled in the understanding of words.

At about the turn of the century, if one wanted the classification of a professional, it was first necessary to become a club-maker. To that end mention might be made of how lame my back became from sawing shafts from planks of hickory shortly after starting my apprenticeship,