

REG. U. S. PATENT OFFICE

 JULY
 1936

 Vol. 10
 No. 7

COLLEGE GOLF SURVEYED

By RAY HALL

Pro, Pullman GC and Golf instructor, Washington State College

FOR some time serious-minded men in the business and game have realized the potential possibilities in young people as the means of building interest in golf. These young people are the solution to the problem of

filling vacancies in club membership ranks, the foundation of income for public courses, and a valuable source of revenue to all branches of the game. The PGA is well aware of this fact and has taken the initiative in promoting junior golf instruction. Much has already been done in this line and more complete plans are in the making. In fact, this is one of the major promotional movements of the PGA.

Being actively engaged in golf instruction in one of our major colleges, I am naturally very much interested in this phase of development and have been studying the golf situation in American colleges. And so, working in conjunction with



RAY

GOLFDOM, a survey of colleges was made covering many angles of golf interest and activity, with the result that some very beneficial information has been secured. As a whole, executives in charge of this college activity showed a fine appreciation of our efforts and aim in making this survey. They gladly responded with the data requested. Over 600 questionnaires were sent out covering all classes of college institutions and from those returned, I have been able to compile some significant information.

It is not my intention to go into the details of statistics and figures, but rather to give a summarized opinion of the golf situation in colleges, with the hope it may awaken those interested from various angles to the possibilities in this field. May I add here, that while I am dealing with colleges, the same conditions hold true to some extent in high schools, and especially those in the larger cities.

In studying these returns, I grouped them as major institutions, smaller schools and women's colleges. Obviously, each group presents different conditions; yet in general their problems and desires are much the same. In the major group are placed state universities and colleges and other schools with a large enrollment. Naturally we would expect this class to lead in the facilities and program of golf promotion because of their financial resources

STATISTICS COLLEGE GOLF SURVEY

(Based on 200 returns from 75 major colleges, 25 women's colleges and 100 smaller colleges.)

Type of School	Major	Smaller	Women's
Schools owning courses	21%	8%	16%
Now constructing courses	2	2	0
Employ pro as in- structor	17%	4%	4%
Have playing arrange- ments at other courses	48%	35%	32%
Need better golf fa- cilities			36%
Offering golf in physical education program	53%	30%	50%

and large enrollments. We find that federal aid has been used by several institutions in constructing courses, but is not available to other colleges.

The depression years, cutting in on revenues and attendance, have caused curtailment in athletic and physical education programs, while all the time a growing demand for expansion in these programs has been apparent. In many cases the minor sports, and golf is classed as one of these, has suffered most. Because the initial cost of properly constructing courses is always a serious problem, colleges have been forced to put this item on their calendar as a future development. Only a small portion of schools in all classes own and operate their own golf courses, but there is a very definite desire and hope with a great many others that some means can be devised to provide the facilities for this development.

Several School Courses Rate A1

In the major group we find about an equal number of 9 and 18-hole courses, and several of these rank right up with the private clubs of the country. In the other two groups the courses are almost without exception 9 holes or less. Several colleges are now constructing courses or are formulating plans for construction.

One very encouraging fact is that there is a quite general realization in the minds of physical directors that golf has a very definite value as a carry-over activity after the student has finished college. The greater part of the present-day college

athletic and physical education program is useful during the students college years, but none too valuable in later life. In many instances the carry-over value seems to be lost in the minds of those in charge of physical training. From this standpoint, golf ranks at the top as having the most value to all ages and classes of people.

The recreational problem in the college today is causing much head-scratching by many administrations. The modern co-educational institution is a community in itself, and the proper recreational activities for students outside of class hours is a matter for serious consideration. A college golf course is a fine step toward the solution of this problem.

Students Want Golf as Physical Education Credit

The manifest interest in golf is proved conclusively by the demand in all classes of colleges for golf instruction as a physical education course. A large number of the schools are attempting to offer some sort of golf instruction, and wherever this is done, golf interest is reported as medium or high and on the increase. But this fact is outstanding: too many colleges are lacking in proper instruction. In too many instances those in this important work are students, instructors in some branch of physical training, or some faculty member. In any case, the main interest and training of these people lies in some other field, and they can not be expected to get proper results as golf instructors. In no way am I reflecting upon these people, and their purpose and efforts command nothing but praise. But that does not solve the problem of giving students sound and practical training in the fundamentals of golf.

Golf instruction is a science, and experience has proven that satisfactory results call for special training and study before the instructor is truly qualified for such work. Many schools spend large sums for efficient instruction in the major sports and other courses in physical education, but have little or nothing to spend on an activity like golf that has by far a greater permanent value to the student. But the signs point to a change in this respect, and improved facilities for golf is in the minds of progressive administration heads.

As an intercollegiate sport, golf is fast becoming one of importance. Practically every major school and a good number of the smaller colleges sponsor golf teams that participate in a regular schedule of college tournaments. Some of the nation's best amateur players today are from college golf teams. An interesting point in this connection is that these outstanding college players generally come from schools that have their own courses and have the facilities to offer their golf teams the proper training and experience to become ranking players.

This survey shows that a good many schools are situated too far from any golf course to be accessible for the students. Others are unable to make satisfactory arrangements with club officials for student play. In some instances playing rates are so high as to be prohibitive for the average student. Still others are badly in need of adequate instruction and classroom facilities to carry on the work as they would like.

Naturally the best solution to these and the many other angles of the situation is the college-owned golf course. The schools so equipped are well satisfied and successful in the venture. Others are in the process of development and many more have expressed the desire for this expansion, but so far have been unable to solve the problem. These institutions are desirous of working out a solution, and I am sure will welcome the suggestions and cooperation of manufacturers, course architects, professionals and the PGA alike.

Whole Golf Industry in Line to Benefit

All of these groups of the industry should be interested in promoting this movement. When golf becomes a universal activity in colleges, each branch of the industry will benefit materially. As I see it, this situation affords one of the greatest possibilities for the growth and development of the game. The interest, yes demand, for golf activity in colleges is apparent. The value of golf in their programs is quite generally recognized by the physical directors of these institutions, but their problem is to create the facilities to place golf in the position it deserves in their student activity program.

In this connection I see some opportunities for the various branches of the golf industry to expand their activities. As new college courses are constructed the manufacturers will come in for their share of increased business, and it is to their interest to give this movement all the support possible. Many of the schools

SUMMARY COLLEGE GOLF SURVEY

College heads recognize value of golf as a carry-over activity.

Better playing facilities urgently needed in the majority of our colleges.

Need of a higher standard of golf instruction in many colleges.

Need of better facilities for offering golf as a physical education course.

Placing golf on a par with other college sports.

Better supervision and promotion of golf in the schools.

Making golf opportunities general in colleges is a problem that concerns all branches of the industry.

are in need of professional instruction and in some cases have expressed this desire.

Professionals in these college centers should endeavor to make a connection for themselves or their assistants. By so doing they will increase their teaching income, and at the same time will be giving these students a practical and sound knowledge of the game.

In many instances, club officials and public course operators have right in their locality the material for an increase in playing revenue for their clubs. Encouraging student play will not only materially help themselves, but will be assisting in the further promotion of golf interest.

College administrators must face this proposition squarely, and wherever feasible and practical, should include in their future plans means to provide their students with the facilities for playing golf. Their main purpose is to equip the student with the fundamentals for a successful career in life after college is completed. In the present day, recreation and health are a part of that success, and these college heads can get behind no finer or more valuable movement than golf.

JUNE, in the family of Willie Ogg, veteran Worcester (Mass.) pro-supt., was a month in which joy and sorrow mingled. Willie's son, Wilfred Robertson Ogg, was married on June 12, at Grafton, Mass., to Miss Frances Ware McGarry.

On June 15, Willie's father, a well known old-timer in greenkeeping, died after a prolonged and painful illness. He was 76 at the time of his death.

FILLED UP

Winter Membership Drive Based On Old Ideas, Arouses Town and Fills Roster By BRUNO MINKLEY (Golf's Ali Baba)

DARNDEST thing I ever saw in the golf business, and I have seen a plenty, is the way the Corry (Pa.) CC filled up its membership during last winter and its pro, Tony Joy, kept busy enjoying himself and making some dough for himself and his club while the snow was thicker than a wrassler's head.

It was the old "suit club" idea applied to golf membership. I remember the idea because I used to pay my 50 cents a week and hope to be lucky and have my number drawn for a suit before I had gone 30 weeks and paid in the full \$15 for which I got a fine all-wool two-pants suit. But if the suit club idea has been used in golf before I never heard of it.

Tony went around Corry, which is a live little town, selling the right folks chances on a golf club membership at one dollar a week. Every Sunday afternoon the ticket buyers and the club members met in the hotel lobby at Corry and had the drawing. If a fellow's number wasn't drawn before he had paid in \$25, he got a membership anyway.

The memberships were at a bargain price for a darn nice club with a swell pro (a customer of mine), and with only a buck a week as the rap there were no suicides when a guy's number wasn't drawn.

It got 100 new members, and it got the right kind of members-fellows who are live enough to take a chance and meet and enjoy each other in the winter as well as at the golf club in the summer. It was a sort of a spark plug idea to get the membership solicitation business going and get names on the dotted line. You know how it is with fellows about golf club memberships in the winter. They keep putting off and putting off and blowing their dough on other things so that when spring comes and they are kind of itchy to join up, the wife and kids need a couple of hundred dollars worth of clothes, so the guy says I guess I will pass it up for a while.

Now a hundred members at \$25 is \$2,500 and it is something for a small club to start the year with \$2,500 nice fresh dough in the kitty. In the ordinary old way, they



COURSE NEAR YOU No matter where in Detroit you are located you will find an M. G. A. course near you. If you're not present for time, play each causer this season at least once or most

Improve Your Game—Practice
Play golf often. It's healthy to walk and do light exercises of some sort, so practice daily
... the one sure way to improve all shots and your health. Makes reducing a pleasure.

Clubhouses Open to All - Good Food
Every clubhouse serves excellent food and refreehments of all kinds, Dance floors, etc. Just
the place to hold your paries year Yound. Play Golf this week-end and Description Day.

Be a Member of Some Club . . . Cut Costs in Half
Membership cards to M. G. A. course, are very reasonable. Enjoy golf to the fullest. A fine
Member for the engine family to enjoy the cold of unumer remines.

Members of Michigan Golf Association

WEST SHORE GOLF AND COUNTRY CLUB - On West

TOTAL ALTONS ... On Boom of Anna Arthur ... On Boom of Anna ... On Boom o

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This advertisement appeared in Detroit newspapers after the close of the successful public golf school conducted by the Detroit News. It's a fine example of co-operative follow-up of a promotion that interested more than 8,000 in golf.

would work to beat hell trying to sell fifty members at \$50, with a lot of hooie and hurry, hurry, hurry neighbor, and the chances are they'll flop. But when you have a hundred of the right kind in a club you get action. With the club operated on a cash basis, as most smaller clubs are, you don't have any credit risks. After the boys are in and their families are using the club and enjoying its social life and influence, they'll pay dues all right.

It is a grand idea of Tony's, getting live fellows into a club, including some very fine younger men who haven't much dough in a lump but who can carry their load going along.

I think it's something that will help many other smaller clubs, whether the idea is used in the summer or winter.

Iowa 1937 Short Course—Iowa State College at Ames will hold its 1937 Greenkeepers' conference on Monday and Tuesday, March 1 and 2.

PLAN COURSE POLICY - IT PAYS!

By WILLIAM PRINCE SMITH

Green-Chairman, CC of Pittsfield, Mass.

THE first requisite of a successful long term policy, it seems to me, is proper selection of the green-committee. This should be composed of a small number of responsible men keenly interested in their club and its

course; men of various ages so that the younger ones may be learning from experience and be ready to step in at a later date, as chairmen, to carry on the policy, if it has proved successful. Because, without a doubt, the chairman of the group must be the key man and upon him must depend, to a large extent, the carrying out of the plan.

Next, you might have one whom I will call an advisor; for I do not believe it to be possible that anyone on your committee will have the necessary education and time for this position. If your greenkeeper has all of these technical qualities, he will probably cost a small club more salary than it can afford to pay. A greenkeeper, such as our club has, with the necessary technical knowledge of soils, fertilizers, drainage, etc., to follow the advisor's long term policy, plus an excellent technique in his methods, and a further ability to handle men, will not add such a large annual cost to your expense budget.

We find an advisor profitable. Ours is Lawrence F. Dickinson, of Massachusetts State College, to whom I give unqualified

This address was briskly debated at the Massachusetts State College conference because of its suggestion of an advisor to the green-committee of the smaller club.

For the idea, greenkeepers said that a sound, skilled authority who would work with the greenkeeper and "front" for him would work out fine—whenever it was possible to get this rare person.

The difficulty of getting a properly qualified advisor and the expense which might be questionable in view of the club's greenkeeper's present salary and the general scantiness of the maintenance budget were arguments against the idea. Smith finds a long term program of budget planning and course maintenance is proving a success at his club.

credit for greatly improved playing conditions at our club.

The greenkeeper must, of necessity, be in full sympathy with the ways and ideas of the advisor. This is absolutely necessary, because men of all kinds are constantly bringing pressure to bear on the greenkeeper to get him to try this and that, and if deviations are made from your adopted plan, certainly it is most unfair to your advisor.

Plan What You Want to Accomplish

If you have organized as above, the next step, it seems to me, is to draw up a plan, showing what you desire to accomplish. At our club naturally greens come first, and I believe every club aspires to have perfect putting surfaces. When drawing up your greens policy you must start at the bottom—construction.

Have your subsoil and surface drainage been properly constructed and your seepage taken care of? If not, should they be repaired or should the green be rebuilt? Which work will be cheaper in the long run and which will give you the better conditions more quickly, and hence inconvenience your playing members the least? Is the grass on your greens suitable for your locality? Also what kind of a putting surface is desired, taking the texture into consideration? For example, stolons or seeded greens. Draw up your plan so as to get your greens into the desired condition as speedily and economically as possible and then follow closely the advisor's instructions for their maintenance.

Tee Revision Is Common Major Problem

Tees come next and here the initial construction is fully as important as in the green. Too many courses find that their tees have been poorly located and poorly

constructed. The average golfer likes to play from large and well turfed tees and if these conditions are not fulfilled, your long term policy should contain the corrected ideas to be carried out after your greens are put in shape. Also try and have all your tees low enough and in a location so that they can be moved by the fairway tractor. This will save a great deal of money in labor, as it costs money to send men out to mow 18 tees by hand. You will find, also, that no matter how careful you are, some tees will have to be completely returfed from time to time, or constantly have the scars plugged. To this end, a tee nursery is almost as necessary as a green nursery, to insure the proper kind of good grass for this purpose, since the use of portions of ordinary fairway turf will usually result in doing the job over again. Here, too, large tees, especially on the par-three holes, and constant shifting of the markers, will cut the above plugging and returfing to a minimum.

Perhaps the long term fairway policy can be carried out in conjunction with the tees. This is undoubtedly true as regards general upkeep, but reconstruction and drainage should await the completion of your tee program. However, the fertilization of your fairways must planned regardless of anything else. There is little doubt but that in the majority of golf clubs the fairways have seldom been fertilized. It is so easy to neglect them until they are practically filled with dandelions, crab grass and weeds. comparatively easy in a long term program to feed three to six fairways a year until all are done. It is nice to do all of the surface from tee to green, but not absolutely necessary.

Machinery Saves In Rough Maintenance

The fourth item in our long term policy combine the rough, traps and surroundings in general. There isn't much that can be done or planned as regards rough. There it is and it must be cut at least once, and in the heaviest areas, twice a year. Try to eliminate dead and deformed trees, boulders and such so that the rough may be cut by machinery. If not by horses or tractor, purchase some good machine to be run by motor and guided by hand. It will soon pay for itself. There is nothing more irritating to golfers than long, heavy rough. It costs them money

in lost balls and holds up the course while they are searching for them. The planning here is to know the time of year most suitable for cutting and have your decks cleared for this action. That is, don't let it conflict with topdressing and other necessary work, and when you go at it, finish the job as speedily as possible.

Plan Financing On Long Term Platform

Since the hard part of carrying out any long term policy such as I have outlined is the usual lack of money, it becomes absolutely necessary that the grounds budget shall be very carefully planned and lived up to. Obviously, money should be made to go just as far as possible, for usually this is the only way your long term policy can be carried out. Since the biggest part of most course maintenance budgets is labor, machinery should be purchased and used where it can be shown the job can be done more economically and as well. However, don't use a machine if it is harmful in any way in the long run; because dollars saved now will have to be spent repairing the damage later.

Having outlined briefly the high spots in a long term policy, may I now point out what I believe to be the definite val-The primary object of a golf club is to play golf. Especially in the north where winter comes all too soon and lingers all too long, the days of playing are all too limited. Therefore, with the days and hours for topdressing greens definitely planned; with weeding and plugging worked out so that it is accomplished as speedily as possible; with as much new construction and repair work as possible completed in the off season, your greencommittee has interfered with golf play only a minimum.

With a long term policy your eyes are fixed on a goal and you continue to carry the ball toward that goal instead of spending all your money in one year in building one green or one tee to please the most boistrous, or to please, perhaps, the green-committee itself.

It gives the committee and the green-keeper courage to stand back of their ideas as proven by the comparison of the records; courage to stand out against the board of directors when they want to take money from your budget for ideas foreign to golf. But above all it has proven, in our own case, that we can have a better course, at much lower expense and with more days of golf than ever before.



TULSA OPENS NEW

\$500,000 CLUB

By M. E. SHANKLIN

WOTHERSPOON

MES poilous, le guerre est finis, just to remind you in the old patois there may be another bonus because the latest war that's signed off is the Six Year Shambles of the depression which left things in such bad shape

that the poppies grow over many a pro's once valient bankroll.

There can be no doubt of the panic being over because private golf club construction appears again in the official opening of the new Southern Hills Country club, at Tulsa, Okla. Tulsa, the nation's oil capital, can be down deeper than a driller record when times are tough. It has seen millionaires one week gazing hungrily at a bowl of chili the next. Tulsa had had bitterly banged into it the folly of its old-time policy, "plunge and t' hell with it." Now when Tulsa blows its dough, you can ride along in confidence that the days of misery have vanished for some years to come.

Tulsa has gone for a half-million dollar family club in the new Southern Hills establishment. Official opening of the club-house is July first, but play has been in progress on the course since late in May. Swimming, tennis, skeet and equestrian activities have been in full swing for almost two months.

The course was designed by Perry Maxwell of Ardmore, Okla., and built under his supervision. Early on the job was the club's greenkeeper, M. L. DeParlier, formerly greenkeeper of the famed and beautiful Gulf Stream course. There are three sets of tees on the course, giving yardages of 6,763, 6,323 and 6,130. These measurements are made from the middles of the tees. The course can be extended to a back-tee length of 6,900 yards.

Fairways are Bermuda and greens are Seaside bent. The last job of fairway watering Wendell Miller designed and put in is the Southern Hills job. Miller died in the Tulsa hospital right after the job was completed. Water is supplied from a well drilled into the former bed of the Arkansas river which now runs about two miles from the clubhouse. Well water is

first discharged into the club's beautiful swimming pool, from which it flows into a lake constructed for storage.

Don Bothwell, green-chairman of the new club and well known in Midcontinent golf, has been the club official responsible for the outside plant. His experience with local conditions as well as with operations of other first class club green departments, greatly facilitated work of the architect, constructors and greenkeeper.

Due to the policy of emphasizing the family factor to the utmost, the pro selection called for one who was not only a first class instructor but an organizer of golf interest and activities. Choice from a big field fell upon Wm. Wotherspoon, highly regarded in national pro circles as an instructor and pro business man. Wotherspoon, formerly operator of the Old Mission course in Kansas City and with other details of fine performance record behind him, is being kept busy on the Southern Hills lesson tees. Bill, long rated as an expert tutor, took several sessions in the winter tournament post-graduate school of instruction.

Southern Hills clubhouse is of stone and is featured by unusually large and light locker-rooms. Among other noteworthy clubhouse facilities are a boys' locker-room detached from the men's quarters and ample provisions for women golfers and swimmers.

The dining room overlooks the T-shaped Olympic-length swimming pool.

On club grounds and adjacent property there are eight miles of bridle paths through wooded hills and to provide facilities for this feature, the club has stables accommodating about 80 horses.

Greensman Ask Consideration When Jobs Are Open

FROM New Jersey Golfdom receives the

following letter:

"The greenkeeper has me on the payroll as a 'laborer' but I have confidence in myself and my future in golf so I call myself a greensman.

"I'd like to know what my fellow workers and I have to look forward to.

"Now the most we can expect is an escape from a bawling out from the boss whenever greens go bad and he has sleepless nights. We, too, worry about our greens but there's seldom one of us promoted to greenkeeper at our courses when the greenkeeper moves on to a better job, or is discharged, with or without just cause. Some man who has never seen the course before is selected. Still, greenkeepers make much of 'local conditions' and how important it is that these peculiar conditions be considered when budgets are made up.

"When the new man comes, the greensmen who have nursed each blade of grass affectionately and know it from the ground up, wonder whether they are going to be

able to keep their jobs.

"Isn't it one of the good greenkeeper's many jobs to consider this neglect of the future for his staff and to see that a well-trained man who knows the course from experience is given at least the endorsement of his chief, whenever a greenkeeper job is going to be open?

"I'd like to hear what some of the leading greenkeepers have to say about this

condition."

Sincerely,

J. H.

Revival Week at Battle Creek Stirs Golf Interest to a Peak

THE boys are still talking about the biggest thing in a golf way that ever happened to Battle Creek. Called "Revival Week" the schedule of events held recently ran the gamut of golf promotional ideas. Included in the festivities was an exhibition by Spalding's missionary troupe of Horton Smith, Lawson Little, and Jimmy Thomson. The idea had the enthusiastic backing of all the clubs and civic bodies in Battle Creek, but to E. W. Harbert and Art Kennett, golf pros, and Arch Flannery, president of the chamber of commerce, goes most of the glory for making the party a success.

The week was sent off to a flying start

on Monday with a pro-amateur best ball affair, won by Art Kennett, Chic Harbert, and J. Weisner with a score of 66. Chic Harbert had low medal honors with a 74 over the Marywood CC course.

Riverside CC played host to the juniors the following day, and J. Kneer with a gross 58 for 9 holes was the winner. The ladies had their inning on Wednesday at the Battle Creek CC, and Mrs. Reed Orr showed the way with a gross total of 100. Mrs. Orr also won low net honors. In a long driving contest held in conjunction with the tournament, Mrs. Orr won with a combined yardage on three strokes of 432 yds. The shortest drive against a stiff head-wind went to one contestant with a 30-inch effort.

A four-man team play held at the Marywood CC occupied Thursday's spotlight. The 20 teams entered were from industrial plants and the Kiwanis, Lions, and Rotary clubs. The Kiwanis entry captured first honors with a net 306.

A gallery of more than 2,000 saw Lawson Little and Jimmy Thomson finish their 18-hole match all square against Horton Smith and Chic Harbert at the Marywood CC. Smith was low scorer with a 72. Harb showed he could hit balls right along with the best of them and took second honors with a 75.

An invitational dance at the Marywood CC following a big day's play at all of the city's courses featured the Saturday program. A mixed foursome tournament at the Battle Creek CC was the highspot on Sunday. The tournament was won by Chic Harbert and Mrs. Reed Orr. Pat Haines scored a hole-in-one during the week, sinking his tee shot on the 8th at Battle Creek CC.

All together, it was a big week for Battle Creek, and a "revival program" such as this turned out to be has certainly gotten some of the pseudo golfing addicts thinking and talking their favorite sport again.

PLANS are progressing for this year's \$3,500 Glens Falls Open, August 28-30, dates officially assigned by Bob Harlow of the PGA Tournament Bureau.

From advance commitments, it appears that the field for the event will include practically all of the topnotchers among the tournament players, which in itself assures the success of the event.

DON'T ARGUE WITH NATURE

At Mass. State College Conference

PRODUCING and maintaining turf that will provide the desired playing conditions for today's golfers may seem to require growing turf under very abnormal conditions, but we need not be alarmed when we consider what nature has to offer. Nature provides a great many species and varieties of grass, each having a great range of different qualifications as turf producing plants.

The wrong selection of these plants means endless trouble as nature never changes her habits and resents interference. She will, however, gladly cooperate if given the opportunity.

By CLINTON ROBINSON

This being true, why argue? Nature controls the deciding vote which means success or failure.

The greenkeeper has to produce turf, having the following qualifications:

- 1. Longevity.
- 2. Fine texture.
- 3. It must stand close clipping.
- 4. It must be mechanically strong.
- 5. It must provide a closely knitted even surface.
 - 6. It must be disease-resistant.

In the accompanying comparison of our three species of basic grasses for golf courses, I attempt to explain why, how

COMPARISON OF BASIC GRASSES

Plant Characteristics and Cultural Conditions	Blue Grasses	Grasses Bent Grasses Fescue		
Soil preference	Rich garden loam	Medium to light well drained	Light to medium	
Food requirements	Heavy	Moderate	Light	
Moisture requirements	Heavy	Moderate	Light	
Root system	Coarse	Fine	Very coarse	
Depth of root	Very deep	Shallow	Deep	
Range of pH tolerance	7.5 to 6.0	6.5 to 5.5	7.5 to 5.0	
Compact soil tolerence	Tolerant	Not tolerant	Decidedly not	
Loose soil tolerance	Tolerant	Tolerant	Very tolerant	
Disease resistance	Medium	Very susceptible	Resistant	
Aggressiveness	Medium	Very aggressive	Very aggressive	
Recovery from disease	Slow	Very fast	Very slow	
lant	Medium	Very fast	Slow	
Response to fertilizer on habit			C	
of growth	Causes tillering	Will grow taller	Causes tillering	
Response to tonic	More tillering	Stooling or tiller- ing	Causes branching	
Effect of tonic on maturity	Speeds up much	No effect	No effect	
Matures	Early in June	Late July	Very late August	
Growth after maturity	Late	Late	Very late	
Time of first growth in spring	Very early	Very late	Late	
Speed of seed germination	Medium	Fast	Slow	
Turf becomes established	2 yrs.	1 yr.	2 to 3 yrs.	
Type of turf produced	Reproduces by tillering and rhizomes, giving an even turf	Reproduces by tillering and stolons, giving a dense even turf	Reproduces by tillering and stolons, giving a tufty growth	
Effect of clipping	Causes tillering and production of denser turf.	Causes tillering and production of dense, even, fine textured turf	Rather bunchy, may cause a bald crown	

and where the varieties of these grasses

can be successfully grown.

The majority of our grasses tiller high and this should be one of our first considerations when selecting plants for golf course purposes. Tillering is the process by which grass plants produce additional shoots. The point of tillering is where the new buds appear in the shoot and their height above the ground varies greatly in the different species of basic grasses. Obviously this governs the height of cut and we are inviting trouble the moment a plant is clipped below the point of tillering.

Some of our grasses reproduce by stolons, surface creeping stems which produce roots, stems and leaves at the nodes or joints. The distance between nodes has a direct bearing on the density of the turf and governs to some extent

the height of cutting.

Some of our common lawn grasses reproduce by rhizomes. These are underground stems which root at the nodes, very similar to stolons. This type of reproduction develops stools and some of our slowest spreading grasses are those which reproduce only by stolling. To vie with nature repeatedly means poor or completely destroyed turf. Nature, however, tries to be patient and often is so patient we do not recognize our own mistakes.

Cultural practices will slightly change the habits of some plants but they will never grow satisfactorily if placed under improper environmental conditions.

With these points in mind it is very easy to understand that turf producers must consult nature and avoid arguing because nature has already made her decisions.

If It Ain't Raining It's Too Dry; Weather Is Woe

LARGE areas in the central states and New York sector have been seriously deficient in rainfall this year. In the Chicago area precipitation since January 1 was 9.11 inches up to June 29 against the normal 16.13 inches. Turf is suffering and trees, shrubs and perennials injured last winter are requiring large amounts of water for preservation. Considerable damage by chinch bugs is reported in Illinois areas.

In the New York metropolitan district the most serious drought in years prevailed to almost the middle of June. Lawns, flowers and garden crops have been imperiled in this territory, and many truck farmers face bankruptcy. Hay, berry, peach and apple crops in sections of New Jersey and New York are expected to be poor because of the drought.

Unwatered golf courses have been badly

parched.

Wherein the Outside Gang Sings the Blues

HERE'S something that came into us from an anonymous source. The fellow writes in travail and isn't submitting to any handicap of rhythm so we throw it in as it landed. The manuscript is signed "The Outside Gang."

GOLF CLUB PERSONEL

The outside gets the labor and the inside gets the dough

When you go into the clubhouse there is help to take away your frown

But when you go on the outside hardly a man is found

And still yet a perfect green and fairway is what they want to see around

In years gone by the outside had 20 men or more

But when you go on the outside now your lucky to find 4

The members of the golf club play golf without a hitch

But the gang in the clubhouse always get the tip

When the grass don't grow and things are bad the fairway is not neat

Perhaps the tractor is old and worn, the mowers are antique

"Oh no that's not the trouble, it must be our greenkeep"

The president buys a caddie for others and himself

But never for the greenkeeper who does the job himself

Now just a little tip for the chairman and the rest

Get some help for the man outside who keeps you out of the red.

As you will agree, the effort is earnestly written, but as a job of verse it seems to depend more on the soul's plea than on professional polish which could have gone native smoothly, at least in making out a rhyme for "hitch."

Tillinghast Up Again—A. W. Tillinghast, consulting architect for the PGA, recently spent two weeks in the Mayo clinic at Rochester, Minn. Tilly's legs went bad after carrying him umpty million miles over golf courses. He's now O.K. again.